**U.S. Department of Housing and Urban Development**
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

# Environmental Assessment
# Determinations and Compliance Findings for HUD-assisted Projects
# 24 CFR Part 58

An Environmental Assessment (EA) was revised and completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 (*see* **Attachment 1B** for NCHFA EA checklist, HUD Waiver and correspondence, AUGF, RROF and FONSI, and individual sections for NCHFA attachments). This document represents a compilation of NCORR's review, update and its adoption of the EA in response to a request for Community Development Block Grant-Disaster Recovery (CDBG-DR) funds for the project allowed under 40 CFR 1506.3. No significant additions to the November 27, 2023 EA were required by NCORR. The updates made by NCORR are included in the checklist below and the attachments. On January 11, 2024, HUD issued the Departmental Policy for Addressing Radon in the Environmental Review Process. As of June 24, 2024, HUD's Federal Flood Risk Management Standard (FFRMS) compliance is required for new projects reviewed under the updated 24 CFR Part 55. The attached pages provide updates to 24 CFR 50, 24 CFR 51, 24 CFR 55, and 24 CFR 58 and related laws and regulations.

## Project Information

**Project Name:** Balsam Edge

**Project Location:** 333 Howell Mill Road, Waynesville, Haywood County, NC 28786

**Federal Agency:** U.S. Department of Housing and Urban Development (HUD)

**Responsible Entity:** North Carolina Office of Recovery and Resiliency (NCORR), P.O. Box 110465, Durham, NC 27709

**Grant Recipient**: Balsam Edge, LLC

**State/Local Identifier**: B-21-DF-37-0001 and B-22-DF-37-0002

**Preparer:** Andrea Gievers, Environmental SME, NCORR

**Certifying Officer Name and Title:** Tracey Colores, Community Development Director, NCORR

**Direct Comments to:**

Andrea Gievers, Environmental SME
NCORR - Community Development
Andrea.L.Gievers@Rebuild.NC.gov
(845) 682-1700

**Background:**

An EA was completed by the NCHFA for the Balsam Edge project on November 27, 2023 (**Attachment 1B**). HUD granted the Authority to Use Grant Funds (AUGF) to NCHFA to use HOME funds for the project on July 17, 2024 (**Attachment 1B**). Before the HUD NEPA 24 CFR Part 58 environmental review was completed, there were choice limiting actions committed by the subrecipient, Mountain Housing Opportunities (MHO) when trees were cleared from the Subject Property between March 6 and March 10, 2023. The NCHFA requested a waiver of the 24 CFR 58.22 requirements and HUD responded on January 8, 2024 that the "Office of Environmental and Energy (OEE) recommends that upon receipt of the RROF the AUGF should be approved." HUD determined that "MHO, acting in good faith, inadvertently completed the tree removal action based on erroneous guidance from its environmental consultant; and there are no adverse environmental impacts that will result from approving the project, provided the mitigation actions that MHO has agreed to act upon are implemented" (**Attachment 1B**).

The proposed scope and physical project location have not changed since the original EA. The November 27, 2023 EA prepared by the NCHFA has been reviewed by NCORR to re-evaluate and update the findings of the EA in accordance with 40 CFR 1506.3. This environmental record includes additional documentation for compliance with 24 CFR 50, 24 CFR 51, 24 CFR 55, and 24 CFR 58 and related laws and regulations that are not included in the November 27, 2023 EA.

**Project Location:**

The proposed project is located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 (Subject Property). The Subject Property includes an approximate 5.31-acre lot identified on the Haywood County GIS website as Parcel Identification Number (PIN) #8616-42-5414.

**Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**

Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention ponds, and associated infrastructure. This proposed project will increase affordable housing inventory for low- and moderate-income families. The proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. In addition, 12 of the 84 units will be fully accessible with features for mobility impaired residents. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities to incorporate energy efficiency, as well as achieve Enterprise Green Communities Multifamily Certification.

**Statement of Purpose and Need for the Proposal** [40 CFR 1508.9(b)]:

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. Tropical Storm Fred caused significant damages within Haywood County dumping several inches of rain across western North Carolina, which resulted in devastating flooding and landslides. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. The availability of affordable housing to lower income families was reduced by this major storm event which disproportionately affected older, more affordable housing stock, leaving it uninhabitable. The proposed project will provide an opportunity to create much needed affordable housing in the Waynesville community.

On August 17, 2021, Tropical Storm Fred's floodwaters inundated Haywood County. This resulted in six fatalities, the destruction of 563 homes, major damage to 206 homes, minor damage to 160 homes in the area. In the aftermath, some residents were forced to find temporary housing, remain in unsafe living conditions, or relocate. There were 161 people who needed long-term sheltering from August to December 2021. Haywood County leaders noted the urgent need for affordable housing options for families who lost their homes. Based on Dogwood Health Trust's 2021 Housing Needs Assessment, Haywood County's housing gap is among the highest in the region particularly for households earning less than 50% AMI and up to 80% AMI. Dogwood Health Trust's Assessment revealed a housing gap of 768 units affordable to families at or below 50% AMI in Haywood County.

The Town of Waynesville Comprehensive Land Use Plan for 2035 (CLUP) reports that the lack of new housing stock has caused rental rates and real estate prices to rise significantly, resulting in a need for workforce and affordable housing. The CLUP further states that 40% of individual renters are paying 35% or more of their annual household income on housing. Reported demands for seasonal homes in Waynesville and Haywood County have led to increases in housing values and concerns over availability of affordable housing for varying income levels. A market study conducted for the Balsam Edge development shows a total demand for 751 rental units affordable at or below 60% AMI with only 54 units currently in development, meaning Balsam Edge's 84 units will have a prospective capture rate of 12%.

Affordable housing needs have only been exacerbated by the devastating effects of Tropical Storm Helene on safe, available housing stock in the region. This proposed project will increase affordable housing inventory for low- and moderate-income families. The proposed project will increase affordable housing inventory for families at or below 60% of the AMI with 34 units reserved for families at or below 50% AMI. In addition, 12 of the 84 units will be fully accessible with features for mobility impaired residents. The Balsam Edge development addresses a critical need to help meet the demand for affordable rental units as outlined in the CLUP and Dogwood Health Trust's Assessment. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

**Existing Conditions and Trends** [24 CFR 58.40(a)]:

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence and movable shed. Logged trees are located in the central portion of the property. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction.

The Subject Property is located in a residential and commercial area of Waynesville, North Carolina. Balsam Edge sits on the western side of Howell Mill Road directly off of Russ Avenue, and is less than a mile from the commuting corridor of the Great Smoky Mountains Expressway. Due to its location, Balsam Edge is surrounded with ample amenities, most of which are within 10 minutes walking distance. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south with the Sonoco warehouse and Waynesville Plaza Shopping Mall; and to the southeast and southwest corners with adjacent residences. The heart of Historic Downtown Waynesville is only a mile away. Additionally, Balsam Edge enjoys close proximity to several major industrial employers along with continuous sidewalk access to the Waynesville Parks and Recreation Complex with trail systems connecting to Lake Junaluska.

## Funding Information

| Grant Number | HUD Program | Funding Amount |
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| B-21-DF-37-0001 and B-22-DF-37-0002 | CDBG-DR | $3,500,000.00 |

NCHFA HOME RPP Loan Funding: $1,450,000.00

**Estimated Total HUD Funded Amount:** $4,950,000.00

**Non-HUD Funding Federal Source:** Federal LIHTC Equity
**Non-HUD Funding Federal Amount:** $9,942,099.00
**Non-HUD Funding Source:** Town of Waynesville Grant
**Non-HUD Funding Amount:** $110,000.00
**Non-HUD Funding Federal Source:** USDA 538 Construction Permanent Loan
**Non-HUD Funding Amount:** $6,077,456.00
**Non-HUD Funding Source:** DHT Grant
**Non-HUD Funding Amount:** $855,000.00
**Non-HUD Funding Source:** Pigeon River Fund
**Non-HUD Funding Amount:** $35,000.00

**Estimated Total non-HUD Funded Amount:** $17,019,555.00

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $21,969,555.00

## Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

| **Compliance Factors**: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6 | Are formal compliance steps or mitigation required? | Compliance determinations |
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| **STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6** | | |
| **Airport Hazards**<br><br>24 CFR Part 51 Subpart D | Yes ☐ No ☒ | The Subject Property is not located within 2,500 feet of a civil airport or 15,000 feet of a military airfield. The proposed project is in compliance with this section.<br><br>*See* **Attachment 2** (Appendix A) updated with NEPAssist Airports Map with 15,000-foot Buffer. |
| **Coastal Barrier Resources**<br><br>Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] | Yes ☐ No ☒ | Based on the U.S. Fish and Wildlife Service (USFWS) Coastal Barrier Resources System (CBRS) map, the Subject Property is not located in the vicinity of a CBRS unit or Otherwise Protected Area (OPA). Thus, the proposed project is not anticipated to impact coastal barrier resources. The proposed project is in compliance with this section.<br><br>*See* **Attachment 3** (Appendix B) updated with final USFWS CBRS Map and Certification. |
| **Flood Insurance**<br><br>Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a] | Yes ☐ No ☒ | Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel Number 3700861600J, effective 04/03/2012, the Subject Property is wholly located in Zone X, Area of Minimal Flood Hazard, which is outside of the Special Flood Hazard Area |

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| | | (SFHA). A Preliminary FIRM (PFIRM) is not available for the Subject Property according to the FEMA Map Service Center. The Subject Property does not contain a FEMA-designated regulatory floodway.<br><br>Since the Subject Property is wholly located in Zone X, flood insurance is not required. While flood insurance is not mandatory for this project, HUD strongly recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The proposed project is in compliance with flood insurance requirements.<br><br>*See* **Attachment 4** (Appendix C). |
| **STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5** | | |
| **Clean Air**<br><br>Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93 | Yes ☐ No ☒ | According to the North Carolina Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants (U.S. EPA Green Book), a northwestern portion of Haywood County in the Great Smoky Mountain National Park is in Maintenance status for Ozone 8-hour 1997 standard (NAAQS revoked). This project is not located in the Great Smoky Mountain National Park, but rather in an Attainment status area of Haywood County.<br><br>The construction and operation of the proposed project is exempted from NC State air quality permit requirements under 15A NCAC 02Q.0102(d) since emissions will be below the established thresholds. Thus, the proposed project's emissions are automatically considered de minimis (40 CFR § 93.153(c)(2)) and the proposed project is considered compliant with the State Implementation Plan. The proposed project would not exceed de minimis emissions |

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| | | levels for federal general conformity purposes (40 CFR § 93.153(c)(2)).<br><br>The proposed project constructs a multifamily residential complex with amenities. The proposed project will not generate significant levels of vehicular traffic. Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust and emissions from construction equipment. The proposed project will conform to NC Air Quality Management regulations during and following construction. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The contractor will use Best Management Practices (BMPs) to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and operating construction vehicles and machinery at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting the use of vehicles and other machinery to construction hours only and removal once construction is completed.<br><br>Therefore, there will be no significant impact to air quality from the proposed project. The operation of the proposed project following the completion of construction activities will not significantly increase emissions. Any air quality impacts would be short-term and localized during construction, and no significant adverse impacts to air quality are anticipated. Thus, the proposed project is in compliance with this section. |

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| | | *See* **Attachment 5** (Appendix D) updated with the North Carolina Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants, 8-hour Ozone (1997) Maintenance Area (Redesignated from Nonattainment) Area/State/County Report - NAAQS Revoked, and Maintenance Ozone 8-hour (1997 NAAQS Revoked) Map.<br><br>*See also,* Recent Updates: Federal Register Notices Published or Effective After December 31, 2024, at https://www3.epa.gov/airquality/greenbook/adden.html |
| **Coastal Zone Management**<br><br>Coastal Zone Management Act, sections 307(c) & (d) | Yes ☐ No ☒ | The Subject Property is located in Haywood County, which is *not* one of the 20 coastal counties included in the North Carolina Coastal Management Program. Therefore, the proposed project is not anticipated to impact coastal resources. A Consistency Determination is *not* required to be submitted to the NC Division of Coastal Management (DCM). DCM carries out the State's Coastal Area Management Act (CAMA), the Dredge and Fill Law and the federal Coastal Zone Management Act of 1972 in the 20 coastal counties, using rules and policies of the NC Coastal Resources Commission, known as the CRC. No further action is required. The proposed project is in compliance with the Coastal Zone Management Act, sections 307(c) & (d).<br><br>*See* **Attachment 6** (Appendix E) updated with the final DCM Counties List and Map. |
| **Contamination and Toxic Substances**<br><br>24 CFR Part 50.3(i) & 58.5(i)(2) | Yes ☒ No ☐ | The southeastern portion of the Subject Property is developed with a paved driveway and a vacant, approximately 1,880-square-foot single-family residence that was likely constructed in 1950. A dilapidated modular movable shed is located in the eastern portion of the Subject Property. |

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| | | According to NEPAssist and the Phase I Environmental Site Assessment (ESA), the Subject Property is not listed on an EPA Superfund National Priorities or Comprehensive Environmental Response Compensation and Liability Act (CERCLA) List or equivalent State list (**Attachment 7**). The Phase I ESA identified toxic and solid waste landfills within 3,000 feet of the Subject Property but determined they are not a hazard or Recognized Environmental Concern (REC) (**Attachment 7**). According to the NC Department of Environmental Quality (NC DEQ) Division of Waste Management (DWM) comment, there are four Superfund Section sites and one Brownfields Program Site identified within one mile of the Subject Property. The Brownfields Program Site, Depot Street, is located over 0.5 mile from the Subject Property which is further than the 1,500-foot receptor survey area. Central Cleaners, a certified DSCA site, has groundwater impacts extending approximately 1,200 feet downgradient to the north, but is located more than 0.5-mile from the Subject Property. Due to the distance and type of contamination, these sites do not pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. The other three Superfund sites, Schulhoffer Junkyard, WR Boyd Investments, and Town of Waynesville Dump, were reviewed in the Phase I ESA which determined that these sites do not pose a hazard that could affect the health and safety of occupants or conflict with the intended utilization of the property.<br><br>During the Phase I ESA's site visit, a hazard was identified as a fill port and vent pipe indicative of an underground storage tank (UST) near the southwestern corner of the residence. This potential for an undocumented release from the UST was deemed a REC with additional environmental |

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| | | assessment warranted. A Limited UST Closure Assessment was performed on August 18, 2023 to assess the potential impacts from the UST to the soil and groundwater. Petroleum constituents were identified in soils on the western and southern side of the UST in exceedance of NC DEQ Residential Maximum Soil Contaminant Concentrations (MSCCs) and groundwater impacts at concentrations above the NC DEQ 15A NCAC 02L .0202 Ground Water Quality Standards. The UST-61 24-Hour Release and UST Leak Reporting Form was submitted to the NC DEQ UST Section on February 13, 2024. Prior to funding, NCHFA requested that a State-approved remediation plan be prepared for the removal of the UST and associated petroleum-impacted soil to the extent practicable. A Memorandum of Understanding (MOU) was entered into between NCHFA and Balsam Edge, LLC which addressed the UST removal and remediation (**Attachment 7**).<br><br>The UST Closure and Initial Abatement Action Plan (Action Plan) dated March 5, 2024 was approved by NCDEQ on March 14, 2024 with a Low Risk classification and documents the scope of services for the heating oil UST removal, petroleum-impacted soil removal, and associated soil sampling at the Subject Property (**Attachment 7**). **The heating oil UST and identified petroleum-impacted soil shall be removed and remediated to acceptable NCDEQ residential MSCC and NC2L GWQS standards and obtain a No Further Action or equivalent letter prior to development. All documentation of the remediation must be provided to NCORR and appended to the environmental review record (ERR).**<br><br>If suspect asbestos-containing material (ACM) is found during demolition and redevelopment activities, it should be |

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| | | assumed to contain asbestos until laboratory analysis can confirm or deny their asbestos content. The NC Department of Health and Human Services (DHHS) and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos professionals in accordance with all applicable federal, state and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, NC Hazardous Waste Rules, and NC Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the Health Hazards Control Unit (HHCU) of the NC DHHS Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607.<br><br>Lead-based Paint (LBP) inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR |

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| | | Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. All LBP and ACM debris will be properly disposed of in an NC DEQ DWM approved landfill facility in accordance with applicable regulations. The Asbestos and Lead-based Paint Surveys/ Abatement/ Clearance Reports and applicable permits will be appended to this ERR.<br><br>While not considered a REC, if encountered during site development, USTs, septic systems, and water supply wells should be closed in accordance with applicable laws. If any additional USTs are discovered, then NC DEQ DWM's UST Section Asheville Regional Office (ARO) will be notified. If any abandoned wells are discovered, then NC DEQ will be notified and abandoned in accordance with Title 15A. Subchapter 2C.0100. "Any open burning associated with the subject proposal must be in compliance with 15 A NCAC 2D.1900" (*see* **Attachment 28**). In the event that unexpected contaminated or potentially hazardous materials, soils or debris are encountered during demolition or construction, work in the area shall cease immediately, and the work area shall be secured. The NC DEQ ARO will be contacted and the contamination assessed with an environmental consultant. Soils with evidence of petroleum contamination (stained soil, odors, or free product) must be reported immediately to the local Fire Marshal to determine whether explosive or inhalation hazards exist and the ARO UST Section. Petroleum contaminated soils and other hazards must be handled in accordance with all applicable regulations. Appropriate measures will be taken to address the hazard(s) (i.e., contaminated soils, hazardous debris, USTs, lead-based paint, etc.), and, if removed, will be properly |

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| | | disposed of in the appropriate NC DEQ DWM approved facility in accordance with federal, state and local laws and regulations (e.g., RCRA Subtitles C and D, NESHAP 40 CFR 61.150, and NC Solid Laws NCGS 130A, and NC Hazardous Waste Rules 15A NCAC 13A).<br><br>A Radon Mitigation System and vapor intrusion barrier will be installed that meets ANSI/AARST CC-2000 2018 Soil Gas Control Systems in New Construction of Buildings (**Attachment 7**). The mitigation plan must: identify the radon level; consider the risk to occupants' health; describe the radon reduction system that will be installed; whenever possible, establish an ongoing maintenance plan to ensure the system is operating as intended; establish a reasonable timeframe for implementation; and require post-installation testing. Where feasible, post-installation testing should be conducted by a licensed radon professional. The HUD Radon Policy Notice does not preempt or override any existing federal, state, or local requirements regarding residential radon testing and mitigation that may be more strict or comprehensive than the policy notice.<br><br>Based upon the site inspection, Phase I ESA, and review of available environmental and historical records and reports for the Subject Property and surrounding area, there is one REC and potential radon identified that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property without proper mitigation. With the proper mitigation measures and protocols discussed above, the Subject Property will be unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. |

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| | | ***NCORR notified the Developer that they may proceed with remediation and demolition, as needed, as long as it is completed without NCORR funding*** (**Attachment 7**). The proposed project is in compliance with contamination and toxic substances requirements.<br><br>*See* **Attachment 7** (Appendix F) updated with the NC DEQ UST Section Approval Letter; UST Closure and Initial Abatement Action Plan; NCORR Remediation Email; MOU; NEPAssist EPA Facilities Reports with 1-mile, 0.5-mile, and 3,000-foot Buffers; NC DEQ DWM Site Locator Reports with 1-mile, 0.5-mile and 3,000-foot Buffers; and Radon Mitigation System Design Plans. |
| **Endangered Species**<br><br>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402 | Yes ☒ No ☐ | According to the USFWS Information for Planning and Consultation (IPaC) Official Species List prepared for the Subject Property, there are a total of seven threatened, endangered, proposed, or candidate species identified. The NC NHP database query report identified three federally-listed species within a one-mile radius of the Subject Property. However, based on the USFWS IPaC, there are no critical habitats identified within the proposed project area. Also, the NC NHP database query report identified no records for rare species, important natural communities, natural areas, and/ or conservation/ managed areas within the proposed project boundary. North Carolina Wildlife Resources Commission (NC WRC) biologists reviewed the proposed project (**Attachment 28**). According to the NC WRC there are no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site.<br><br>On January 7, 2025, NCORR submitted the updated consultation package to USFWS Asheville Field Office (FO) for review. |

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| | | NCORR made "No Effect" determinations for proposed/listed species and/or proposed/designated critical habitat except a "May Affect, Not Likely to Adversely Affect" determinations for the Rusty-patched Bumble Bee and Monarch Butterfly, and a "no Eagle Act permit required" determination for eagles. The USFWS Asheville FO responded on January 30, 2025, that the *"consultation done by Byron in Feb of 2023 remains valid. The removal of trees from the site in March meets the time-of-year restrictions recommended in the consultation and agreed to by the project proponent; therefore, we have no reason to update what was sent."*<br><br>For NCHFA's EA, a biological evaluation for the Subject Property was submitted to USFWS. On February 16, 2023, USFWS concurred with *"may affect, not likely to adversely affect" determinations for all bat species*, including the tricolored bat, should it become listed in the future. USFWS stated that *suitable habitat does not occur within the action area for any other federally protected species*.<br><br>In January 2023, ECS informed MHO that the USFWS flagged a potential roosting habitat for the federally endangered gray bat within one-half mile of the Subject Property. The USFWS outlined impact avoidance and minimization measures to allow USFWS to concur with a determination of "may affect, not likely to adversely affect" for all the bat species referenced. ECS advised MHO that USFWS would consent to removal of the trees prior to March 15th and **MHO will have onsite manmade structures surveyed for evidence of bats within two weeks prior to demolition activities**. **Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats. In addition, USFWS stated to further** |

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| | | **reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives, and attached several general lighting recommendations. USFWS also offered to be available to assist with a site-specific lighting design at the request of project proponents.**<br><br>Based on this guidance, MHO cleared trees from the Subject Property between March 6 and March 10, 2023, which was before the USFWS March 15th deadline. Since the tree clearing was performed before the NCHFA HUD NEPA 24 CFR Part 58 environmental review was completed, there were choice limiting actions committed despite being recommended by USFWS as an impact avoidance and minimization measure. NCHFA requested a waiver of the 24 CFR 58.22 requirements and HUD responded on January 8, 2024 that the "OEE recommends that upon receipt of the RROF the AUGF should be approved." HUD determined that "MHO, acting in good faith, inadvertently completed the tree removal action based on erroneous guidance from its environmental consultant." The proposed project is in compliance with the Endangered Species Act.<br><br>*See* **Attachment 8** (Appendix G) updated with NCORR USFWS Consultation and Correspondence. |
| **Explosive and Flammable Hazards**<br><br>24 CFR Part 51 Subpart C | Yes ☐ No ☒ | The Program does not involve the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries).<br><br>---*NCHFA EA*---<br><br>Seventeen aboveground storage containers were identified within one mile of the project site. The ASD from the aboveground storage |

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| | | tank located at 11 Palmer Drive does encroach onto the project site boundary, however, the proposed development does not have any existing or proposed human congregation areas within the blast radius. The Separation Distance from the project site is acceptable based on results from HUD's ASD calculator. There are no known planned aboveground storage containers. *(HUD FO required this section to be updated to account for human congregation areas in the revised November 27, 2023 NCHFA EA.)* The project is in compliance with explosive and flammable hazard requirements.<br><br>*See* **Attachment 9** (Appendix H). |
| **Farmlands Protection**<br><br>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658 | Yes ☐ No ☒ | According to 7 CFR Part 658.2(a) "[f]armland does not include land already in or committed to urban development." Farmland "already in" urban development includes all such land identified as an "urbanized area" (UA) on the Census Bureau Map, or as urban area mapped with a "tint overprint" on the USGS topographical maps, or as "urban-built-up" on the USDA Important Farmland Maps. The Subject Property is located within an "urbanized area" on the Census Bureau Map and will not convert important farmland to nonagricultural uses. Thus, the proposed project is not subject to provisions of the Farmland Protection Policy Act and is in compliance with this section.<br><br>*See* **Attachment 10** (Appendix I) updated with NEPAssist Urban Areas Map. |
| **Floodplain Management**<br><br>Executive Order 11988, particularly section 2(a); 24 CFR Part 55 | Yes ☐ No ☒ | Based on the FEMA FIRM Panel Number 3700861600J, effective 04/03/2012, the Subject Property is wholly located in Zone X, Area of Minimal Flood Hazard, which is outside of the SFHA. A PFIRM is not available for the Subject Property according to the FEMA Map Service Center. The |

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| | | Subject Property does not contain a FEMA-designated regulatory floodway.<br><br>As of June 24, 2024, HUD's Federal Flood Risk Management Standard (FFRMS) compliance is required for new projects reviewed under the updated 24 CFR Part 55. According to the effective FEMA FIRM, the Subject Property is located in Zone X. The Federal Flood Standard Support Tool (FFSST) confirms in the attached FFRMS Freeboard Value Approach (FVA) Report that the Subject Property is not located in the coastal or riverine FFRMS floodplain.<br><br>Since the Subject Property is located in Zone X and outside of the FFRMS floodplain, the proposed project is in compliance with this section. Further compliance steps under 24 CFR Part 55 and Executive Orders (EOs) 11988 and 13690 are not required.<br><br>*See* **Attachment 11** (Appendix J) updated with the FFSST FFRMS FVA Report. |
| **Historic Preservation**<br><br>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800 | Yes ☐ No ☒ | On December 13, 2024, NCORR submitted the proposed project to the NC State Historic Preservation Office (SHPO) for review and concurrence of a preliminary finding of "No Historic Properties Affected" pursuant to 36 CFR 800.4(d)(1). On December 24, 2024, Ms. Renee Gledhill-Earley, NC SHPO Environmental Review Coordinator, responded that "[w]e concur with NCORR's determination for the above-referenced project. We have determined that the project as proposed will not have an effect on any historic structures. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project." The SHPO |

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| | | response and NCORR submission package are in **Attachment 12**.<br><br>According to the HUD Tribal Directory Assessment Tool (TDAT), the Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation are the federally-recognized Tribes, Nations and Communities with interests in Haywood County, North Carolina. On December 16, 2024, NCORR consulted with these Tribes, Nations and Communities for discussion on historic properties in the proposed project area that may have religious and cultural significance. The Section 106 review packages were sent to the appropriate Chiefs and/or THPOs of the Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation. On January 17, 2025, Ms. Caitlin Rogers responded for THPO Dr. Haire that "[t]he Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**" On January 28, 2025, Ms. Shadow Hardbarger from the Cherokee Nation THPO responded "[w]e previously responded with a no impact letter and still concur with this response." On December 26, 2024, Mr. Logan Guthrie from the Muscogee (Creek) Nation's Historic and Cultural Preservation Department "[a]fter review, the Muscogee Nation is unaware of any Muscogee sacred sites, burial grounds, or significant cultural resources located within the immediate project area. However, as the project is located in an area that is of general historic interest to the Tribe, **we request that work be stopped and our office contacted immediately if any Native American cultural materials are encountered. This** |

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| | | **stipulation should be placed on the construction plans to ensure contractors are aware of it.** If construction should affect subsurface areas beyond the defined APE, further consultation will be necessary. Please feel free to contact me with any further questions or concerns." The consultation period has lapsed and NCORR has not received a response from the Eastern Band of Cherokee Indians. The Catawba Indian Nation, Cherokee Nation, and Muscogee (Creek) Nation responses and NCORR Section 106 review packages are in **Attachment 12**.<br><br>*See* **Attachment 12** (Appendix K) updated with the SHPO Response; NCORR SHPO Submission Package; HUD TDAT Results; THPO Responses from the Catawba Indian Nation, Cherokee Nation, and Muscogee (Creek) Nation; and Chief and THPO Section 106 Review Packages Submitted to the Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation. |
| **Noise Abatement and Control**<br><br>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B | Yes ☐ No ☒ | ECS completed a preliminary screening for noise generators near the Subject Property. One major road is located within 1,000 feet of the Subject Property. One railroad is located within 3,000 feet of the Subject Property. The Subject Property is not located within 15 miles of any commercial airports or military airfields. According to the ECS Day/Night Noise Level (DNL) Calculator, the Subject Property's DNLs for 2023 and 2040 is 61 decibels (dB) which is within HUD's Acceptable noise range (not exceeding 65 dB).<br><br>The proposed project is not expected to generate excessive noise during the short-term construction work or long-term operation. Short-term construction noise will be limited to daytime hours. Construction |

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| | | equipment will be required to meet local sound control requirements. The proposed project activities will be completed in accordance with all applicable federal, State and local laws, regulations, and permit requirements and conditions. Therefore, the proposed project is not expected to generate any significant adverse noise impacts. The proposed project is in compliance with this section.<br><br>*See* **Attachment 13** (Appendix L). |
| **Sole Source Aquifers**<br><br>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149 | Yes ☐ No ☒ | No sole source aquifers are located in North Carolina according to the U.S. EPA. No further action is required. The proposed project is in compliance with this section.<br><br>*See* **Attachment 14** (Appendix M) updated with final U.S. EPA Sole Source Aquifers Map. |
| **Wetlands Protection**<br><br>Executive Order 11990, particularly sections 2 and 5 | Yes ☒ No ☐ | An unnamed tributary to Richland Creek runs through the site. Equinox Environmental Consultation and Design, Inc. (Equinox Environmental) completed a wetland delineation on the Subject Property in conformance with the 1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual. USACE issued a Notification of Jurisdictional Determination for the 0.34-acre delineated wetland and 315 feet of perennial stream (non-wetland) running through the wetland that are subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344).<br><br>According to Equinox Environmental's Water of the U.S. (WOTUS) Delineation Report dated July 2023, no other jurisdictional or non-jurisdictional wetlands or streams were identified within the Subject Property's boundaries. One riparian wetland is located on the southwest central portion of the Subject Property. A perennial stream (0.007 acres, R4SBC) originates offsite from |

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| | | the northwest and traverses across the wetland towards Howell Mill Road and Richland Creek. A MOU was entered into between NCHFA and Balsam Edge, LLC which includes a restrictive covenant for the wetland on the Subject Property (**Attachment 15**). Per the MOU, the Developer agrees that no ground disturbance, unallowed activities under former 24 CFR 55.12(c)(7(i), or construction will occur in the wetland. The Conservation Declaration was recorded and serves to ensure the wetland and the majority of the perennial stream are maintained in their natural condition (**Attachment 15**). The site plans show an existing 30-foot wetland buffer and grading plans show the limits of disturbance east of the northern portion of the perennial stream (**Attachment 1**).<br><br>Any impacts to jurisdictional streams or wetlands would require a CWA Section 404 permit from the U.S. Army Corps of Engineers (USACE) and corresponding Water Quality Certification from the Division of Water Resources (NC DWR). Since there will be no construction or impacts in the wetland, a USACE CWA Section 404 permit and NC DWR CWA Section 401 Water Quality Certification are not required. Regardless of permitting requirements, all activities must be conducted in compliance with NC Surface Water Standards found in 15A NCAC 02B .0200, including adherence to turbidity standards. Appropriate best management practices should be employed when working around streams and wetlands to ensure compliance with the standards.<br><br>The proposed development has been designed to incorporate stormwater control measures, a spillway with erosion control matting, retaining walls, maintenance of the onsite wetland, stream and required buffers, open space, and landscaping. BMPs for erosion and |

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| | | sedimentation control such as silt fencing will be utilized during construction to prevent sedimentation impacts and native plants used in site restoration. In addition, the NC DEQ commented through the State Environmental Clearinghouse that the Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity (**Attachment 28**). An Erosion and Sedimentation Control (E&SC) Plan is required if one or more acres are to be disturbed. The E&SC Plan must be filed with and approved by the applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>A NPDES Construction Stormwater permit (NCG010000) is usually required when design features meet minimum requirements. Compliance with the 15A NCAC 2H .0126 NPDES Stormwater Program will be required because the Subject Property is located within a Phase II MS4 area and construction activities will disturb more than one acre. In addition, compliance with the 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control might be required (**Attachment 28**).<br><br>NC WRC biologists found no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site. The NC WRC recommends maintenance of a minimum 100-foot undisturbed, native, forested buffer along all perennial streams and a minimum 50-foot |

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| | | buffer along intermittent streams and wetlands to minimize impacts to aquatic and terrestrial wildlife resources, water quality, and aquatic habitat both within and downstream of the project area. The NC WRC recommends limiting impervious surface to less than 10% or use stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%. Also, the NC WRC recommends using non-invasive native species, Low Impact Development (LID) technology in landscaping, and limiting native vegetation clearing as much as possible. Open space areas including forested green space should be maintained with native vegetation. Sediment and erosion control measures should be installed prior to any land clearing or construction and routinely inspected and properly maintained. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the ERR when received from the permitting agencies.<br><br>*See* **Attachment 15** (Appendix N). |
| **Wild and Scenic Rivers**<br><br>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) | Yes ☐ No ☒ | The proposed project will not affect a designated, listed or study Wild and Scenic River in the DOI NPS Nationwide Rivers Inventory (NRI) or National Wild and Scenic Rivers (WSR) System. According to the NEPAssist NRI and WSR Map, there are no designated, listed or study river segments located within 0.25-mile of the Subject Property. Due to the distance from the closest NRI or WSR river segments, there are no impacts anticipated from the proposed project on a designated, listed or study NRI or WSR river. The proposed project is in compliance with this section. |

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| | | *See* **Attachment 16** (Appendix O) updated with NEPAssist NRI and WSR Map Showing 0.25-mile Buffer and DOI NPS Eligible and Suitable WSR Map. |
| **ENVIRONMENTAL JUSTICE** | | |
| **Environmental Justice**<br><br>Executive Order 12898 | Yes ☐ No ☒ | According to the EPA Environmental Justice Screening and Mapping Tool (EJScreen), there is a 30% low-income population, which is equal to the national average, and an 11% minority population within a one-mile radius of the Subject Property. However, based on the NC DEQ Community Mapping System, the Subject Property is not located in the NC DEQ Potentially Underserved Block Groups 2019 area.<br><br>No adverse environmental impacts were identified during the proposed project's 24 CFR 58 environmental review. The proposed project does not facilitate development which would result in disproportionate adverse environmental impacts on low-income or minority populations. Rather, the proposed project will benefit low- and moderate-income residents through the new construction of safe, affordable residential rental housing. The proposed project is in compliance with Environmental Justice, Executive Order 12898.<br><br>*See* **Attachment 17** (Appendix P) updated with NC DEQ Potentially Underserved Block Groups 2019 Map. |

**Environmental Assessment Factors** [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

**Impact Codes**: Use an impact code from the following list to make the determination of impact for each factor.
**(1)** Minor beneficial impact
**(2)** No impact anticipated
**(3)** Minor Adverse Impact – May require mitigation
**(4)** Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **LAND DEVELOPMENT** | | |
| Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design | 2 | According to the Haywood County GIS website, the Subject Property is zoned as Howell Mill Urban Residential (HM-UR). Ms. Elizabeth Teague, Waynesville Development Services Director, stated that the Subject Property is zoned HM-UR in which multifamily is a permitted use. Ms. Teague noted that the Town Planning Board approved the proposed project's development and site plan at a March 15, 2021 public hearing with a minor revision on April 28, 2021 for ADA compliance and to decrease a portion of the parking lot's impervious surface area.<br><br>The proposed project will be compatible with surrounding land uses that are currently zoned as Commercial and Residential Medium Density, Urban Residential and Mixed Use. Existing utilities and municipal services are available at and within the vicinity of the Subject Property. This development will better utilize the vacant Subject Property considering the surrounding area's land uses. Since the Subject Property is zoned appropriately and will increase affordable housing stock in an area that needs it, there are |

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| | | no adverse impacts on land use and zoning anticipated from the proposed project.<br><br>*See* **Attachment 18** updated with Haywood County GIS Zoning Map. |
| Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff | 2 | Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Based on ECS's site visit, there was no evidence of discernable soil problems in the project area. The Subject Property slopes to the southwest with onsite elevations ranging from 2,680 feet to 2,650 feet. Evidence of slope failure, slides, and slump was not observed on the Subject Property.<br><br>The USDA Soil Data Explorer (Explorer) was consulted to determine the susceptibility of the soil to "sheet and rill erosion" by water, indicated by factor K. The Explorer indicates that Dillsboro loam (DsB and DsC) has a K factor of 0.24, while Evard-Cowee complex (EvD) has a K factor of 0.10. The K factor values range from 0.02 to 0.69, with the higher value indicating the soil is more susceptible to sheet and rill erosion by water. Based on the reported K factor for the onsite soils, there is a low potential for sheet and rill erosion by water at the Subject Property. The Explorer was also consulted to determine the suitability of onsite soils for dwellings with basements. The suitability rating is based on the soil properties which affect the capacity of a soil to support loads without movement and existing factors that might affect construction and excavation costs. Dillsboro loam, 2 to 8 percent slopes (DsB), has a rating of "not limited" indicating that the soil has features that are very favorable for the proposed use. Dillsboro loam, 8 to 15 percent slopes (DsC), has a rating of "somewhat limited" due to the slopes located on the Subject Property. A rating of "somewhat limited" indicates that the soil has features that are moderately favorable for the proposed use. Evard-Cowee complex, 15 to 30 percent slopes (EvD), has a rating of "very limited" due to the slopes and depth to soft bedrock located on the Subject Property. A rating of "very limited" indicates the soil has one or more features that are unfavorable for the proposed use. Based on the site plans, the Subject Property will be leveled by grading and excavation of onsite soils and, when necessary, the importation of fill material. |

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| | | ***Any fill material must come from an approved source, and applicable NC regulations on erosion control permit might apply. The soils will be confirmed to be "clean" fill and that it meets project requirements prior to importing the material. The proposed project will be designed in a way to balance the grading and not require as much off-site material, if possible. Any soil removed from the site will be quantified and only exported to an approved site per NC requirements.***<br><br>The proposed development has been designed to incorporate stormwater control measures, a spillway with erosion control matting, retaining walls, maintenance of the onsite wetland, stream and required buffers, open space, and landscaping. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction to prevent sedimentation impacts and native plants used in site restoration. In addition, the NC DEQ commented through the State Environmental Clearinghouse that the Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An E&SC Plan is required if one or more acres are to be disturbed. The E&SC Plan must be filed with and approved by the applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>A NPDES Construction Stormwater permit (NCG010000) is usually required when design features meet minimum requirements. Compliance with the 15A NCAC 2H .0126 NPDES Stormwater Program will be required because the Subject Property is located within a Phase II MS4 area and construction activities will disturb more than one acre. In addition, compliance with the 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control might be required. The proposed project activities will be completed in conformance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. All necessary permits will be identified and obtained prior to commencing work and |

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| | | appended to the ERR when received from the permitting agencies. Therefore, the proposed project is not expected to adversely impact Soil Suitability/ Slope/ Erosion/ Drainage/ Stormwater Runoff at the Subject Property.<br><br>*See* **Attachment 19** and **Attachment 28**. |
| Hazards and Nuisances including Site Safety and Noise | 3 | Based upon the site inspection, Phase I ESA, and review of available environmental and historical records and reports for the Subject Property and surrounding area, there is one REC and potential radon identified that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property without proper mitigation. With the proper mitigation measures and protocols discussed above, the Subject Property will be unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. ***NCORR notified the Developer that they may proceed with remediation and demolition, as needed, as long as it is completed without NCORR funding*** (*see* Contamination and Toxic Substances section and **Attachment 7** for full details).<br><br>Site development will temporarily increase man-made hazards during construction such as site safety, hazards, noise or traffic. Contractors and employees will follow OSHA safety guidelines and procedures on the construction site. In order to mitigate hazards during construction, fencing will be erected around the site to secure the area and keep the general public from the physical hazards. Additionally, designated entrance and exit points and traffic controls will be used to manage traffic and allow safe access to public roads. According to the MOU's restrictive covenant, the stream and wetland area shall not allow pedestrian or motorized passage (**Attachment 15**). Other natural hazards, built hazards, and nuisances were not observed by ECS at the Subject Property.<br><br>Construction related activities (land clearing, grading) could cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust leaving the construction site and emissions from construction equipment. Mitigation measures for emissions and dust control will be implemented to reduce potential impacts to air quality during construction. Thus, there will |

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| | | be no significant impact to air quality from the proposed project. (*See* Clean Air Act section.)<br><br>A noise assessment was completed for the Subject Property (**Attachment 13**). The combined DNL for the Subject Property was calculated to be 61 dB using 2023 and 2040 data, which is within HUD's **Acceptable** range according to HUD regulation 24 CFR 51.103(c). The proposed project activities are not expected to generate excessive noise during the short-term construction work or long-term operation. Short-term construction noise will be limited to daytime hours. Construction equipment will be required to meet local sound control requirements. The proposed project activities will be completed in accordance with all applicable federal, State and local laws, regulations, and permit requirements and conditions. Therefore, the proposed project is not expected to generate any significant adverse noise impacts.<br><br>Thus, the proposed project is not expected to adversely impact the Subject Property or surrounding area through hazards and nuisances including site safety and noise during construction or operation with the implementation of the identified mitigation measures.<br><br>*See* **Attachment 7**: Contamination and Toxic Substances; **Attachment 13**: Noise Assessment, **Attachment 15**: Wetlands Protection, and **Attachment 28**: State Environmental Clearinghouse Comments. |
| Environmental Assessment Factor | Impact Code | Impact Evaluation |
| **SOCIOECONOMIC** | | |
| Employment and Income Patterns | 1 | New jobs will be created during temporary construction and long-term operations as a result of this development. Balsam Edge residents will help to support nearby existing and planned commercial development, which may generate additional job opportunities for these residents. The residents will provide an employee and customer base to local businesses. The proposed project will not adversely impact traffic during construction or operation. Employment options including retail, service, and light industrial businesses are located near the Subject Property. The proposed project is anticipated to have a minor beneficial impact to the employment and income patterns of the area. |

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| Demographic Character Changes, Displacement | 2 | The Subject Property is a vacant/abandoned site, so there will be no occupant displacement. The proposed development of the Subject Property is compatible with the surrounding area and no demographic character changes are anticipated in connection with the development. The proposed project will not deny potential for growth to any population within the local community. The proposed project will not act as an isolation feature within the local area or community. Local institutions (churches, community centers, elderly centers, etc.) will not be adversely impacted by the development. The majority of residents are expected to come from within the community. Thus, the proposed project is not expected to cause the displacement of individuals or families, destroy jobs, local businesses or public community facilities, or disproportionately affect particular populations. |
| Environmental Justice | 2 | According to the EPA EJScreen, there is a 30% low-income population, which is equal to the national average, and an 11% minority population within a one-mile radius of the Subject Property. Based on the NC DEQ Community Mapping System, the Subject Property is not located in the NC DEQ Potentially Underserved Block Groups 2019 area.<br><br>Some of the EJScreen indicators for a one-mile radius of the Subject Property are lower than the State and national averages including Particulate Matter 2.5, Ozone, Diesel Particulate Matter, Air Toxics Cancer Risk, Air Toxics Respiratory Hazard Index, Risk Management Plan (RMP) Facility Proximity, and Wastewater Discharge. Traffic Proximity and Hazardous Waste Proximity are higher than the State average but lower than the national average. Superfund Proximity, Underground Storage Tanks, and Lead Paint, are higher than the State and national averages. (*See* **Attachment 17**.)<br><br>According to the U.S. EPA Green Book, the Subject Property is not located in an Attainment status area of Haywood County (**Attachment 5**). With the proper mitigation measures and protocols discussed above, the Subject Property will be unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property (*see* Contamination and Toxic Substances section and **Attachment 7** for full details). |

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| | | No adverse environmental impacts were identified during the proposed project's 24 CFR 58 environmental review. The proposed project does not site a nuisance or hazard in a potential environmental justice area, but rather provides affordable housing to families who need it. The proposed project does not facilitate development which would result in disproportionate adverse environmental impacts on low-income or minority populations. Rather, the proposed project will benefit low- and moderate-income residents through the new construction of safe, affordable residential rental housing options within the community following a decrease in affordable housing inventory after Tropical Storm Fred. Thus, the proposed project does not contribute to or promote environmental injustice. The proposed project is in compliance with Environmental Justice, Executive Order 12898.<br><br>*See* **Attachment 17** (Appendix P) updated with NC DEQ Potentially Underserved Block Groups 2019 Map. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **COMMUNITY FACILITIES AND SERVICES** | | |
| Educational and Cultural Facilities | 2 | There are many cultural facilities located within one to three miles of the Subject Property including several art galleries, museums, and churches. The schools that will serve the proposed development include Junaluska Elementary, Waynesville Middle School, and Tuscola High School. Mr. Graham Haynes, Haywood County Schools Assistant Superintendent, responded that the proposed project will not adversely affect these schools. Furthermore, schools located in this district are not considered high risk or poor performing schools per state or federal performance standards. Since many of the proposed project's residents are expected to come from within the community, a significant increase in school enrollment is not expected. In addition, the increased tax base from the proposed development should provide extra funding for the community. Therefore, the proposed project is not anticipated to have any adverse effects on the community's educational and cultural facilities.<br><br>*See* **Attachment 20** updated with Cultural Facilities Bing Maps Search Results. |

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| Commercial Facilities | 1 | There are adequate commercial facilities located near the Subject Property. The Subject Property is located in a residential and commercial area of Waynesville, NC. Balsam Edge sits on the western side of Howell Mill Road directly off of Russ Avenue, and is less than a mile from the commuting corridor of the Great Smoky Mountains Expressway. Due to its location, Balsam Edge is surrounded with ample amenities, most of which are within 10 minutes walking distance. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south with the Sonoco warehouse and Waynesville Plaza Shopping Mall; and to the southeast and southwest corners with adjacent residences. The heart of Historic Downtown Waynesville is only a mile away. Additionally, Balsam Edge enjoys close proximity to several major industrial employers.<br><br>The development will increase the customer base for these local businesses that might still be suffering losses experienced during the past storm events. The residents will also provide an employee base for local businesses. The proposed project should have a beneficial effect on local commercial facilities.<br><br>*See* **Attachment 21**. |
| Health Care and Social Services | 2 | The proposed project is located in an area with close proximity to local health care and social service providers. The Haywood Regional Medical Center is located approximately 3 miles northeast of the proposed project. Multiple medical offices and urgent care facilities are located within 3 miles of the proposed project. According to correspondence dated November 18, 2022 with Sarah Henderson, Public Health Services Division Director, adequate and appropriate health services are available and health services will not be adversely affected by this proposed project. Ms. Henderson stated that Haywood Regional Medical Center, Haywood County EMS, Haywood County Health and Human Services Agency, Mercy Urgent Care, HRMC Urgent Care (Canton), HRMC Urgent Care (Hazelwood), and other various primary care providers are located in the area. It is anticipated that many residents of the proposed project will come from within the community and are potentially already served by local |

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| | | health care and social services providers. Therefore, there should only be a negligible increase in demand for services.<br><br>Additionally, the development should increase the employee availability in the local area. An increase in the tax base will support these and other services. The proposed project is not likely to have an adverse effect on the local health care and social services of the area.<br><br>*See* **Attachment 22**. |
| Solid Waste Disposal / Recycling | 2 | Mr. Kris Boyd, Assisting County Manager for Haywood County, stated that solid waste disposal for the proposed project can be adequately handled by public or private collectors without adversely affecting landfill capacity. According to the NC DEQ DWM, Solid Waste Section (Section), "[a]ny structures proposed to be demolished and/or rehabilitated as part of this project should be evaluated for lead, asbestos or other contaminants which must be managed appropriately. Also, three solid waste management facilities are located within one-half mile of the proposed apartment community, N0593 – Town of Waynesville LCID Landfill, N0660 – Town of Waynesville LCID Landfill, and YWN-44-005 – Town of Waynesville Yard Waste Notification. Otherwise, the review has been completed and has found no adverse impact on the surrounding community and likewise knows of no situations in the community, which would affect this project from a non-hazardous solid waste perspective" (**Attachment 28**). Hazardous waste is discussed in further detail in the Contamination and Toxic Substances section and **Attachment 7**.<br><br>During the construction phase of the proposed project, wastes generated are expected to consist of primarily packaging from construction materials and mixed municipal wastes generated daily by site workers. Construction debris will be taken to an appropriate, legally compliant landfill. The Section stated in its comments that "[d]uring the project, every feasible effort should be made to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by this project that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility approved to manage the respective waste type. The Section strongly recommends |

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| | | that any contractors are required to provide proof of proper disposal for all waste generated as part of the project. A list of permitted solid waste management facilities is available on the Solid Waste Section portal site at: http://deq.nc.gov/waste-management-laserfiche" (**Attachment 28**). According to the NC DEQ comments, "[a]ny open burning associated with proposed project must be in compliance with 15A NCAC 2D.1900" (**Attachment 28**). Therefore, the proposed project is not anticipated to have an adverse impact on solid waste disposal and recycling in the area.<br><br>*See* **Attachment 23**. *See also*, **Attachment 7:** Contamination and Toxic Substances documentation; and **Attachment 28:** State Environmental Clearinghouse Comments. |
| Waste Water / Sanitary Sewers | 2 | The proposed project will connect to the municipal sewer. Mr. Jeffrey Stines, Town of Waynesville Public Services Director, stated that public sewer is available and adequate to serve the proposed project. Mr. Stines noted that the closest tap is an eight-inch line located 1,135 feet from the Subject Property and buried approximately three feet deep. Mr. Stines noted that the line and connection point are located at the southernmost end of Abel Lane (**Attachment 24**). Due to the existing available and adequate public sewer service, no adverse impact is anticipated from the proposed project.<br><br>A permit to construct and operate sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system might be required. A sewer extension permit will be required but might qualify for the Fast-Track permitting program (**Attachment 28**). All applicable federal, State and local permits will be obtained for the proposed project prior to construction and activities will comply with their requirements and conditions. Therefore, the proposed project is not anticipated to have an adverse impact on waste water/ sanitary sewers and capacity onsite and in the surrounding area.<br><br>*See* **Attachment 24** . *See also*, **Attachment 28:** State Environmental Clearinghouse Comments. |
| Water Supply | 2 | The proposed project will connect to the municipal water supply. Mr. Jeffrey Stines, Town of Waynesville Public Services Director, stated that public water is available and |

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| | | adequate to serve the proposed project. Mr. Stines noted that the closest tap is a ten-inch line located adjacent to the Subject Property. Due to the existing available and adequate public water supply service, no adverse impact is anticipated from the proposed project.<br><br>Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the DWR/ Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq. In addition, all public water supply systems must comply with State and federal drinking water monitoring requirements. If any wells are discovered on the proposed project site, then abandonment of wells must be in accordance with Title 15A Subchapter 2C.0100. The relocation of existing water lines requires plans to be submitted to the DWR/ Public Water Supply Section prior to construction. All applicable federal, State and local permits will be obtained for the proposed project prior to construction and activities will comply with their requirements and conditions. Therefore, the proposed project is not anticipated to have an adverse impact on the water supply onsite and in the surrounding area.<br><br>*See* **Attachment 24**. *See also*, **Attachment 28:** State Environmental Clearinghouse Comments. |
| Public Safety - Police, Fire and Emergency Medical | 2 | There are adequate Police, Fire and Emergency Medical Services (EMS) services available to the proposed project. ECS spoke with Josh Nichols, Town of Waynesville Police Department dispatcher, via telephone on February 22, 2023. Mr. Nichols reported that the Subject Property is currently within the jurisdiction of Haywood County; however, if the Subject Property is annexed within the Town limits, any calls originating from the address of the Subject Property would be covered by the Town of Waynesville Police Department. ECS submitted an email request to Greg Christopher, Haywood County Sheriff, on November 11, 2022, and January 3, 2023. ECS also emailed requests to Elizabeth Teague and Gina Zachary with Haywood County to request information regarding police response time and coverage for the Subject Property, but responses were not received.<br><br>The Town of Waynesville Fire Department currently provides services to the Subject Property and will continue to do so for the proposed development. According to the |

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| | | Haywood County GIS, the Subject Property is serviced by the Howell Mill Fire District. The Waynesville Fire Department (1022 N. Main Street) is located approximately 1 mile from the Subject Property. According to Darrell Calhoun, Town of Waynesville Fire Marshal, fire protection is available and adequate for the proposed project with an average response time of four minutes which falls within the average community response time of four minutes. Further, Mr. Calhoun noted that fire protection services would not be adversely affected by the proposed project.<br><br>The Haywood County Emergency Services is responsible for services throughout Haywood County. The closest EMS services facility (Haywood County Rescue Squad) is located approximately one mile from the Subject Property. According to Travis Donaldson, Haywood County Emergency Services Director, emergency medical services are available and adequate for the project with an average response time of 9 minutes which falls within the average community response time of 9 minutes and 30 seconds. Additionally, Mr. Donaldson stated that emergency medical services would not be adversely affect by the project. Additionally, it is anticipated that many residents of the proposed project will come from within the community and there will be a negligible increased demand for services. Therefore, the proposed project is not anticipated to have an adverse impact on the public safety services in the surrounding area.<br><br>*See* **Attachment 25**. |
| Parks, Open Space and Recreation | 2 | The proposed project will include a community clubhouse, playground, and picnic pavilion for residents. Many parks, open space, trails, and recreation facilities are located nearby the Subject Property with continuous sidewalk access to the Waynesville Parks and Recreation Complex with trail systems connecting to Lake Junaluska.<br><br>ECS submitted an email request to Ian Smith, Director of Haywood County Recreation and Parks, on November 11, 2022, and January 3, 2023, but a response was not received. The Town of Waynesville Parks, Recreation, and Cultural Resources Department has several parks with various amenities within the Town of Waynesville. The Waynesville Recreation Park is located approximately one mile from the Subject Property and consists of 12 acres that |

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| | | includes six asphalt tennis courts, two playgrounds, restrooms, sports fields, skate park, greenway, and three picnic shelters. Vance Street Park is located approximately 0.5 mile from the property and consists of 16 acres that contains the Waynesville Recreation Center, a softball field, soccer field, picnic shelter, restrooms, two sand volleyball courts, green space, a walking trail along Richland Creek, and a handicapped fishing pier. The 64,000 square foot Waynesville Recreation Center includes a water play park, swimming pool, two basketball courts, two racquetball courts, workout rooms, and a rubber walking track. It is anticipated that many residents of the proposed project will come from within the community and there will be a negligible increased demand for resources. Based on the availability of public parks within a mile of the Subject Property, no adverse impact is anticipated by the proposed project on parks, open spaces, and recreation areas.<br><br>*See* **Attachment 26** updated with Waynesville Parks Map. |
| Transportation and Accessibility | 2 | The Subject Property is located in an area within walking distance of many commercial and industrial facilities. The heart of Historic Downtown Waynesville is only a mile away. The development will have access onto Howell Mill Road and requires an NC Department of Transportation (DOT) Driveway Permit and review to minimize offsite traffic impacts. The Grant Recipient will coordinate with NC DOT while obtaining the required NC DOT Driveway Permit to ensure that the construction of the housing complex will not be affected by roadway improvements in accordance with the current and planned updates to the State Transportation Improvement Program (STIP).<br><br>There is a bus stop providing access to the Town of Waynesville public transportation system at the Ingles Market on the adjoining western property (201 Barber Boulevard). According to Si Simmons, Director of Haywood Public Transit, public bus transportation is available for the proposed project. Further, the proposed project is not anticipated to adversely impact traffic during temporary construction or long-term operation. Thus, the proposed project is not anticipated to have an adverse impact on transportation and accessibility.<br><br>*See* **Attachment 27**. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **NATURAL FEATURES** | | |
| Unique Natural Features, Water Resources | 2 | According to the NC NHP database query results, there are five managed areas and no natural areas documented within a one-mile radius of the Subject Property (**Attachment 8**). These managed areas include two Town of Waynesville parks (Chestnut Park and Waynesville Recreation Park), a Town of Waynesville Open Space, an NCDOT Mitigation Site, and the Mountain Research Station. Based on the type of managed areas and distance from the Subject Property, the proposed project is not anticipated to have an adverse impact on the managed areas.<br><br>Based on the site visit, ECS noted that there are no unique natural features that would be affected by the proposed project. One riparian wetland is located on the southwest central portion of the Subject Property. A perennial stream (0.007 acres, R4SBC) originates offsite from the northwest and traverses across the wetland towards Howell Mill Road and Richland Creek. A MOU was entered into between NCHFA and Balsam Edge, LLC which includes a restrictive covenant for the wetland on the Subject Property (**Attachment 15**). Per the MOU, the Developer agrees that no ground disturbance, unallowed activities under former 24 CFR 55.12(c)(7(i), or construction will occur in the wetland. The Conservation Declaration was recorded and serves to ensure the wetland and the majority of the perennial stream are maintained in their natural condition (**Attachment 15**). The site plans show an existing 30-foot wetland buffer and grading plans show the limits of disturbance east of the northern portion of the perennial stream (**Attachment 1**).<br><br>Any impacts to jurisdictional streams or wetlands would require a CWA Section 404 permit from the USACE and corresponding Water Quality Certification from the NC DWR. Since there will be no construction or impacts in the wetland, a USACE CWA Section 404 permit and NC DWR CWA Section 401 Water Quality Certification are not required. Regardless of permitting requirements, all activities must be conducted in compliance with NC Surface Water Standards found in 15A NCAC 02B .0200, including adherence to turbidity standards. Appropriate best management practices should be employed when working around streams and wetlands to ensure compliance with the standards. |

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| | | The proposed development has been designed to incorporate stormwater control measures, a spillway with erosion control matting, retaining walls, maintenance of the onsite wetland, stream and required buffers, open space, and landscaping. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction to prevent sedimentation impacts and native plants used in site restoration. In addition, the NC DEQ commented through the State Environmental Clearinghouse that the Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity (**Attachment 28**). An E&SC Plan is required if one or more acres are to be disturbed. The E&SC Plan must be filed with and approved by the applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>A NPDES Construction Stormwater permit (NCG010000) is usually required when design features meet minimum requirements. Compliance with the 15A NCAC 2H .0126 NPDES Stormwater Program will be required because the Subject Property is located within a Phase II MS4 area and construction activities will disturb more than one acre. In addition, compliance with the 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control might be required (**Attachment 28**).<br><br>NC WRC biologists found no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site. The NC WRC recommends maintenance of a minimum 100-foot undisturbed, native, forested buffer along all perennial streams and a minimum 50-foot buffer along intermittent streams and wetlands to minimize impacts to aquatic and terrestrial wildlife resources, water quality, and aquatic habitat both within and downstream of the project area. The NC WRC recommends limiting impervious surface to less than 10% or use stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%. Also, the NC |

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| | | WRC recommends using non-invasive native species, LID technology in landscaping, and limiting native vegetation clearing as much as possible. Open space areas including forested green space should be maintained with native vegetation. Sediment and erosion control measures should be installed prior to any land clearing or construction and routinely inspected and properly maintained. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the ERR when received from the permitting agencies.<br><br>*See* **Attachment 15:** Wetlands Protection and **Attachment 28:** State Environmental Clearinghouse Comments. |
| Vegetation, Wildlife | 2 | The USFWS Asheville FO responded on January 30, 2025, that the *"consultation done by Byron in Feb of 2023 remains valid. The removal of trees from the site in March meets the time-of-year restrictions recommended in the consultation and agreed to by the project proponent; therefore, we have no reason to update what was sent."* **MHO will have onsite manmade structures surveyed for evidence of bats within two weeks prior to demolition activities. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats. In addition, USFWS stated to further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives, and attached several general lighting recommendations. USFWS also offered to be available to assist with a site-specific lighting design at the request of project proponents.**<br><br>The proposed development has been designed to incorporate stormwater control measures, a spillway with erosion control matting, retaining walls, maintenance of the onsite wetland, stream and required buffers, open space, and landscaping. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction to prevent sedimentation impacts and native plants used in site restoration. In addition, the NC DEQ commented through the State Environmental Clearinghouse that the Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity |

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| | | (**Attachment 28**). An E&SC Plan is required if one or more acres are to be disturbed. The E&SC Plan must be filed with and approved by the applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>A NPDES Construction Stormwater permit (NCG010000) is usually required when design features meet minimum requirements. Compliance with the 15A NCAC 2H .0126 NPDES Stormwater Program will be required because the Subject Property is located within a Phase II MS4 area and construction activities will disturb more than one acre. In addition, compliance with the 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control might be required (**Attachment 28**).<br><br>NC WRC biologists found no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site. The NC WRC recommends maintenance of a minimum 100-foot undisturbed, native, forested buffer along all perennial streams and a minimum 50-foot buffer along intermittent streams and wetlands to minimize impacts to aquatic and terrestrial wildlife resources, water quality, and aquatic habitat both within and downstream of the project area. The NC WRC recommends limiting impervious surface to less than 10% or use stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%. Also, the NC WRC recommends using non-invasive native species, LID technology in landscaping, and limiting native vegetation clearing as much as possible. Open space areas including forested green space should be maintained with native vegetation. Sediment and erosion control measures should be installed prior to any land clearing or construction and routinely inspected and properly maintained. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing |

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| | | work and appended to the ERR when received from the permitting agencies.<br><br>*See* **Attachment 8:** Endangered Species Act documentation, **Attachment 15:** Wetlands Protection documentation, and **Attachment 28:** State Environmental Clearinghouse Comments. |
| Other Factors | 2 | No other factors were identified which would be impacted by the proposed project. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **CLIMATE AND ENERGY** | | |
| Climate Change Impacts | 2 | According to the National Oceanic and Atmospheric Administration (NOAA), climate change is likely increasing the intensity of tropical cyclones. The Subject Property is not located within a Special Flood Hazard Area or a coastal area. No portions of the Subject Property are located within 100- or 500-year floodplain.<br><br>The proposed development will provide much needed affordable housing options within the community. Due to the increased frequency of high intensity storms and the resultant housing inventory shortage, the Subject Property was determined most suitable and necessary for providing the community with new, safe, affordable housing.<br><br>------*NCHFA EA Excerpt*-----<br>ECS reviewed the following natural hazards that might be affected by climate change and impact the proposed development.<br>• Flooding - The Subject Property is located up-gradient and outside the mapped flood hazard zones. A stream was observed transecting the western portion of the site; however, no indicators of recent flooding events were observed. Additionally, current site plans indicate the structures will be placed at an elevation of over 2,655 feet, approximately 20 feet higher in elevation than the stream (2,635 feet).<br>• Sea Level Rise - The Subject Property is located approximately 320 miles from the coastline of the Atlantic Ocean.<br>• Hurricanes and Extreme Storms - North Carolina, and respectively the subject property, are located within a humid climate zone. Hurricanes and other extreme storms |

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| | | originating from the Gulf of Mexico or the Atlantic Ocean have a potential to reach the Subject Property; however, site plans indicate that stormwater features will be placed on the site to accommodate rain events on the impervious surfaces of the parking lots, structures, and roads. Additionally, site plans show the placement (post-development) of canopy trees, evergreen trees, and shrubs. As part of the development, it is assumed that the vegetation will be routinely maintained to prevent damage to persons or property from dead trees, falling branches, etc.<br>• Drought - The Subject Property will be serviced by municipal water supply. Although vegetation on the project site may be impacted by drought, there are no expected impacts to residents from drought conditions.<br>• Extreme Heat - According to temperature data obtained from NOAA , the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the Subject Property will utilize electric HVAC units for heating and cooling the residential units.<br>• Wildfire - The Subject Property is not located within close proximity (<1,000 feet) of large, contiguous forested areas.<br>• Landslides - The proposed site plans indicate the site will be leveled and retained using walls for the proposed action, reducing the risk of landslides on the Subject Property.<br>• Extreme Cold - According to temperature data obtained from NOAA, the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the Subject Property will utilize electric HVAC units for heating and cooling the residential units. Based on the site topography, location, and climate, the risk of natural hazards associated with climate change appears to be minimal. There are no pre-existing conditions regarding air quality, urban heat island effects, soil stability, and water resources; therefore, no site suitability factors are expected to be altered before or after implementation of the proposed action.<br><br>https://www.climate.gov/news-features/understandingclimate/climate-change-probably-increasing-intensitytropical-cyclones |
| Energy Efficiency | 2 | The proposed project will cause an increase in energy use as compared to the current use. However, the proposed project will be connected to an existing grid and will not require additional infrastructure. The existing power infrastructure can support the proposed project. According to the Waynesville CLUP, a Town goal is to protect and enhance |

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| | | its natural resources which includes the engagement and promotion of best management practices related to energy use, efficiency, and waste management.<br><br>Energy-efficient building materials are to be utilized during construction, and upon completion, the complex will be equipped with high efficiency lighting and appliances. The development will be built to achieve the Energy Star Multifamily New Construction certification with energy-efficient windows and HVAC. Energy Star Certification for new multifamily construction projects requires one of three paths to earn the certification based on energy rating and/or modeling software and use of energy efficient measures. The proposed project will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and multifamily developments. Further, the proposed project will achieve Enterprise Green Communities Multifamily Certification.<br><br>The proposed project is located within close proximity to amenities and major transportation arteries including Howell Mill Road, Russ Avenue, and Great Smoky Mountain Expressway (US-23). With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency. |

**Additional Studies Performed:**

- Phase I Environmental Site Assessment, ECS Southeast, LLP, May 22, 2023
- Limited UST Closure Assessment Report, Bunnell Lammons Engineering, August 30, 2023
- Water of the U.S. Delineation Report, Equinox Environmental Consultation and Design, Inc. (Equinox Environmental), July 2023
- UST Closure and Initial Abatement Action Plan, ECS Southeast, LLP, March 5, 2024

**Field Inspection** (Date and completed by)**:**

- Lori Parker, Environmental Principal, ECS, Phase I ESA, May 16, 2023
- Kelsey Cahill, Environmental Scientist, Bunnell Lammons Engineering, Soil and Groundwater Sampling, August 18, 2023
- Equinox Environmental Staff, Wetland Delineation, November 8, 2022

**List of Sources, Agencies and Persons Consulted** [40 CFR 1508.9(b)]**:**

- Fact Sheet #D1: Siting HUD-Assisted Projects in Accident Potential Zones, at https://www.hud.gov/sites/documents/DOC_14225.PDF
- US EPA NEPAssist Tool, at https://nepassisttool.epa.gov/nepassist/nepamap.aspx
- Airport Data and Information Portal (ADIP), at https://adip.faa.gov/agis/public/#/public
- Federal Aviation Administration (FAA) Circle Search for Airports, at https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=showCircleSearchAirportsForm
- USFWS CBRS Mapper, at https://www.fws.gov/CBRA/Maps/Mapper.html
- FEMA Map Service Center, at https://msc.fema.gov/portal/home and https://hazards.fema.gov/femaportal/prelimdownload/searchResult.action
- NC Flood Risk Information System (FRIS), at https://fris.nc.gov/
- NFIP Community Status Book, at https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book
- Federal Flood Standard Support Tool, at https://floodstandard.climate.gov/tool
- U.S. EPA Green Book, at https://www3.epa.gov/airquality/greenbook/anayo_nc.html
- EPA, Recent Updates: Federal Register Notices Published or Effective, https://www3.epa.gov/airquality/greenbook/adden.html
- 8-Hour Ozone (1997) Maintenance Area (Redesignated from Nonattainment) Area/ State/ County Report - NAAQS Revoked Data, at https://www3.epa.gov/airquality/greenbook/gmca.html
- North Carolina Division of Coastal Management, at https://www.deq.nc.gov/about/divisions/division-coastal-management
- NC DEQ's DWM Site Locator Tool, at https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=7dd59be2750b40bebebfa49fc383f688
- NC DEQ's DWM Online Documents and Environmental Data website, at https://deq.nc.gov/about/divisions/waste-management/waste-management-online-documents-and-environmental-data
- CDC National Environmental Public Health Tracking Network (Data Explorer), at https://ephtracking.cdc.gov/DataExplorer/
- NC Dept. HHS Radon Testing and FAQs, at https://radon.ncdhhs.gov/Testing.html and https://radon.ncdhhs.gov/FAQ.html
- USFWS Asheville FO
- NC NHP
- USFWS Asheville FO Project Review Guide, at https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview
- USFWS Information for Planning and Consultation (IPaC) , at https://ipac.ecosphere.fws.gov/
- USFWS Critical Habitat Mapper, at https://ecos.fws.gov/ecp/report/table/critical-habitat.html
- USFWS Eagle Management website, at https://www.fws.gov/program/eagle-management/eagle-incidental-disturbance-and-nest-take-permits

- USFWS Migratory Bird Program website, at https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- NC NHP Data Explorer Tool, at https://ncnhde.natureserve.org/
- HUD Acceptable Separation Distance Calculator, at https://www.hudexchange.info/environmental-review/asd-calculator/
- US Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey, at https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
- North Carolina Department of Natural and Cultural Resources – State Historic Preservation Office, at https://www.ncdcr.gov/old-state-historic-preservation-office
- NC SHPO and NC HPOWEB, at https://nc.maps.arcgis.com/home/item.html?id=79ea671ebdcc45639f0860257d5f5ed7
- Natural Register of Historic Places Mapper, at https://www.nps.gov/maps/full.html?mapId=7ad17cc9-b808-4ff8-a2f9-a99909164466
- HUD Tribal Directory Assessment Tool, at https://egis.hud.gov/tdat/
- Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation
- North Carolina Department of Transportation (NC DOT) Traffic Counts, at https://connect.ncdot.gov/resources/State-Mapping/pages/traffic-volume-maps.aspx
- Federal Railroad Administration (FRA) Safety Map, at https://fragis.fra.dot.gov/gisfrasafety/
- HUD Day/Night Noise Level Calculator, at https://www.hudexchange.info/programs/environmental-review/dnl-calculator
- EPA Sole Source Aquifer Map, at https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b
- USFWS National Wetland Inventory (NWI), at https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper
- USACE - Wilmington District, Asheville Office
- National Park Service Nationwide Rivers Inventory, at https://www.nps.gov/maps/full.html?mapId=8adbe798-0d7e-40fb-bd48-225513d64977
- National Wild and Scenic Rivers System, at https://www.rivers.gov/
- EPA EJScreen, at https://www.epa.gov/ejscreen
- NC DEQ Community Mapping, at https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4cccb3cc212af8a0b8c8
- CDC, National Environmental Public Health Tracking Network, at https://ephtracking.cdc.gov/InfoByLocation/?FIPS=37065&topics=1,10,2,3,4,5,6,7,8
- Haywood County, https://www.haywoodcountync.gov/540/Development-Services
- Town of Waynesville, NC, CLUP, at https://www.waynesvillenc.gov/departments/development-services/2035-comprehensive-plan-planning-purpose
- U.S. Treasury Opportunity Zones, at https://www.irs.gov/newsroom/opportunity-zones
- North Carolina State Parks, at https://www.ncparks.gov/find-a-park
- NC NHP, at https://www.ncnhp.org/

**List of Permits To Be Obtained** (later identified permits will be added to the ERR)**:**

All applicable federal, State and local permits will be identified and obtained prior to starting construction. Permits that might be required include, but are not limited, to:

- Waynesville Planning Board, Site Plan Approval, received March 15, 2021
- Building Permit
- Grading Permit
- NC DEQ - Land Disturbance Permit
- NC DEQ - NPDES Construction Stormwater Permit (NCG010000)
- NC DEQ - State Stormwater Permit (15A NCAC 02H .1000)
- NC DEQ - Erosion & Sedimentation Control Plan Approval
- Haywood County - Erosion & Sedimentation Control Plan Approval
- NC DWR/ Public Water Supply Section - Water Extension Permit
- NC DEQ - Sewer Extension Permit
- NC DOT Encroachment Permit
- NC DOT Driveway Permit

**Public Outreach** [24 CFR 50.23 & 58.43]**:**

- March 15, 2021, Waynesville Planning Board public hearing on development and site plan approval
- The NCORR FONSI/NOI-RROF is being posted to the NCORR ReBuild NC Environmental Reviews website (https://www.rebuild.nc.gov/about/plans-policies-reports/environmental-reviews#AffordableHousingDevelopmentFundProgram-2322) and sent via Federal Express, USPS Certified Mail, and email to Interested Agencies, Groups and Individuals. The Final Adopted EA posted to the NCORR website is attached in HEROS.
- The proposed project's NEPA HUD Part 58 EA NCORR Adoption was submitted to the NC State Environmental Clearinghouse (SCH) for agency review on December 12, 2024, attached in HEROS. NCORR also submitted the FONSI/NOI-RROF to the NC State Environmental Clearinghouse for agency review and comment. (All comments received are uploaded with this review under the HEROS EA Factors section.)

**Cumulative Impact Analysis** [24 CFR 58.32]**:**

The proposed project and its potential environmental impacts were evaluated in accordance with 24 CFR 58 requirements to determine whether it meets federal, State, and local environmental standards. This evaluation included a review of cumulative impacts on the environment resulting from the proposed project's incremental impacts combined with other past, present, and reasonably foreseeable future actions undertaken by any party. The proposed project does not negatively impact the surrounding environment or Subject Property and will not have an adverse

environmental or health effect on end users with the implementation of proper mitigation measures outlined in this environmental review. This site was found to be ideal for much needed multifamily affordable housing with minimal environmental impacts and close proximity to community services. The benefits of this proposed project to the Town of Waynesville, Haywood County, and low- and moderate-income families cannot be understated.

**Alternatives** [24 CFR 58.40(e); 40 CFR 1508.9]:

There are two main alternatives to the proposed project, selection of a different site location or the "No Action" Alternative. In western North Carolina's mountainous terrain, suitable multifamily development sites (adequate size and topography) are scarce, and MHO faces competition from market-rate and commercial developers for suitable sites. A site located at 275 Deaverview Road was evaluated to be used for the proposed project. The proposed project utilized NCHFA funding which competitively awards Low Income Housing Tax Credits (LIHTCs) based on a Qualified Allocation Plan (QAP). This plan prioritizes criteria like neighborhood quality, amenities, and site suitability, and effectively limits applicants to one maximum 9% credit award per cycle. Mountain Housing Opportunities (MHO) must consider these QAP requirements, along with local planning and zoning regulations when selecting sites. While MHO also submitted the 275 Deaverview Road site for review (in partnership with the Housing Authority of Asheville), Deaverview's fragmented site proved inefficient. Balsam Edge's close proximity to amenities (grocery, pharmacy, shopping, and recreation), sizeable acreage, compatible zoning, and nearby existing infrastructure made it a stronger competitive choice for NCHFA funding and more feasible for development overall. Therefore, the Subject Property was determined to be the most suitable location for the proposed project. Further, the proposed project is designed to allow the wetland and stream to be maintained in its natural condition with a buffer area.

**No Action Alternative** [24 CFR 58.40(e)]**:**

With the "No Action" Alternative, affordable housing would not be provided for low- and moderate-income families in the local community. The Town of Waynesville would need to find other options to address the shortage in affordable housing inventory exacerbated by the effects of hurricanes that recently damaged or destroyed hundreds of homes in western North Carolina. Haywood County leaders noted the urgent need for affordable housing options for families who lost their homes after Tropical Storm Fred. Affordable housing needs have only increased after the devastating effects of Tropical Storm Helene on safe, available housing stock in the region. This proposed project will increase affordable housing inventory for low- and moderate-income families. Further, in the absence of the proposed project, the site would not generate additional tax revenue nor create affordable housing, which are both of greater benefit to the community than leaving the property vacant. The Subject Property would remain developed with a vacant single-family residence containing wooded land, fields, and residential UST-related contamination. Under this alternative, there would be no multifamily affordable housing development to help meet the demands outlined in the CLUP and the Dogwood Health Trust's Assessment. Thus, the "No Action" Alternative is not feasible in relation to the desired objective of creating much needed affordable housing options in the Town of Waynesville and Haywood County.

**Summary of Findings and Conclusions:**

The preceding Statutory Checklist and Environmental Assessment Checklist, and the discussion below, document that the proposed project work will comply with regulations in 24 CFR part 58 and that there are no direct or cumulative adverse environmental impacts anticipated as a result of the proposed action.

**Mitigation Measures and Conditions** [40 CFR 1505.2(c)]**:**

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state, and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state, and local environmental permits and clearances may jeopardize federal funding. Guidelines, recommendations, and requirements identified during agency and the State Environmental Clearinghouse inter-agency review shall be considered and required, where applicable.

| Law, Authority, or Factor | Mitigation Measure |
|---|---|
| **Clean Air**<br><br>Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93 | Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust and emissions from construction equipment. The proposed project will conform to NC Air Quality Management regulations during and following construction. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The contractor will use BMPs to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and operating construction vehicles and machinery at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting the use of vehicles and other machinery to construction hours only and removal once construction is completed. |
| **Contamination and Toxic Substances**<br><br>24 CFR Part 50.3(i) & 58.5(i)(2)<br><br>Hazards and Nuisances including Site Safety and Noise | Prior to funding, NCHFA requested that a State-approved remediation plan be prepared for the removal of the UST and associated petroleum-impacted soil to the extent practicable. A Memorandum of Understanding (MOU) was entered into between NCHFA and Balsam Edge, LLC which addressed the UST removal and remediation (**Attachment 7**).<br><br>The UST Closure and Initial Abatement Action Plan (Action Plan) dated March 5, 2024 was approved by NCDEQ on March 14, 2024 with a Low Risk classification and documents the scope of services for the heating oil UST removal, petroleum-impacted soil removal, and associated soil sampling at the Subject Property (**Attachment 7**). **The heating oil UST and identified petroleum-impacted soil shall be removed and remediated to acceptable NCDEQ residential MSCC and NC2L GWQS standards and obtain a No Further Action or equivalent letter prior to development. All documentation of the remediation must be provided to NCORR and appended to the environmental review record (ERR).** |

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| | If suspect ACM is found during demolition and redevelopment activities, it should be assumed to contain asbestos until laboratory analysis can confirm or deny their asbestos content. The NC DHHS and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos professionals in accordance with all applicable federal, state and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, NC Hazardous Waste Rules, and NC Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the HHCU of the NC DHHS Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607.<br><br>LBP inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. All LBP and ACM debris will be properly disposed of in an NC DEQ DWM approved landfill facility in accordance with applicable regulations. The Asbestos and Lead-based Paint Surveys/ Abatement/ Clearance Reports and applicable permits will be appended to this ERR. |

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| | While not considered a REC, if encountered during site development, USTs, septic systems, and water supply wells should be closed in accordance with applicable laws. If any additional USTs are discovered, then NC DEQ DWM's UST Section Asheville Regional Office (ARO) will be notified. If any abandoned wells are discovered, then NC DEQ will be notified and abandoned in accordance with Title 15A. Subchapter 2C.0100. "Any open burning associated with the subject proposal must be in compliance with 15 A NCAC 2D.1900" (*see* **Attachment 28**). In the event that unexpected contaminated or potentially hazardous materials, soils or debris are encountered during demolition or construction, work in the area shall cease immediately, and the work area shall be secured. The NC DEQ ARO will be contacted and the contamination assessed with an environmental consultant. Soils with evidence of petroleum contamination (stained soil, odors, or free product) must be reported immediately to the local Fire Marshal to determine whether explosive or inhalation hazards exist and the ARO UST Section. Petroleum contaminated soils and other hazards must be handled in accordance with all applicable regulations. Appropriate measures will be taken to address the hazard(s) (i.e., contaminated soils, hazardous debris, USTs, lead-based paint, etc.), and, if removed, will be properly disposed of in the appropriate NC DEQ DWM approved facility in accordance with federal, state and local laws and regulations (e.g., RCRA Subtitles C and D, NESHAP 40 CFR 61.150, and NC Solid Laws NCGS 130A, and NC Hazardous Waste Rules 15A NCAC 13A).<br><br>A Radon Mitigation System and vapor intrusion barrier will be installed that meets ANSI/AARST CC-2000 2018 Soil Gas Control Systems in New Construction of Buildings (**Attachment 7**). The mitigation plan must: identify the radon level; consider the risk to occupants' health; describe the radon reduction system that will be installed; whenever possible, establish an ongoing maintenance plan to ensure the system is operating as intended; establish a reasonable timeframe for implementation; and require post-installation testing. Where feasible, post-installation testing should be conducted by a licensed radon professional. The HUD Radon Policy Notice does not preempt or override any existing federal, state, or local requirements regarding |

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| | residential radon testing and mitigation that may be more strict or comprehensive than the policy notice. |
| **Endangered Species**<br><br>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402<br><br>Vegetation, Wildlife | The USFWS outlined impact avoidance and minimization measures to allow USFWS to concur with a determination of "may affect, not likely to adversely affect" for all the bat species referenced. ECS advised MHO that USFWS would consent to removal of the trees prior to March 15th and **MHO will have onsite manmade structures surveyed for evidence of bats within two weeks prior to demolition activities**. **Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats. In addition, USFWS stated to further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives, and attached several general lighting recommendations. USFWS also offered to be available to assist with a site-specific lighting design at the request of project proponents.** |
| **Wetlands Protection**<br>Executive Order 11990, particularly sections 2 and 5<br><br>Unique Natural Features, Water Resources | According to Equinox Environmental's WOTUS Delineation Report dated July 2023, no other jurisdictional or non-jurisdictional wetlands or streams were identified within the Subject Property's boundaries. One riparian wetland is located on the southwest central portion of the Subject Property. A perennial stream (0.007 acres, R4SBC) originates offsite from the northwest and traverses across the wetland towards Howell Mill Road and Richland Creek. A MOU was entered into between NCHFA and Balsam Edge, LLC which includes a restrictive covenant for the wetland on the Subject Property (**Attachment 15**). Per the MOU, the Developer agrees that no ground disturbance, unallowed activities under former 24 CFR 55.12(c)(7(i), or construction will occur in the wetland. The Conservation Declaration was recorded and serves to ensure the wetland and the majority of the perennial stream are maintained in their natural condition (**Attachment 15**). The site plans show an existing 30-foot wetland buffer and grading plans show the limits of disturbance east of the northern portion of the perennial stream (**Attachment 1**). |

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| | Any impacts to jurisdictional streams or wetlands would require a CWA Section 404 permit from the USACE and corresponding Water Quality Certification from the NC DWR. Since there will be no construction or impacts in the wetland, a USACE CWA Section 404 permit and NC DWR CWA Section 401 Water Quality Certification are not required. Regardless of permitting requirements, all activities must be conducted in compliance with NC Surface Water Standards found in 15A NCAC 02B .0200, including adherence to turbidity standards. Appropriate best management practices should be employed when working around streams and wetlands to ensure compliance with the standards.<br><br>The proposed development has been designed to incorporate stormwater control measures, a spillway with erosion control matting, retaining walls, maintenance of the onsite wetland, stream and required buffers, open space, and landscaping. BMPs for erosion and sedimentation control such as silt fencing will be utilized during construction to prevent sedimentation impacts and native plants used in site restoration. In addition, the NC DEQ commented through the State Environmental Clearinghouse that the Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity (**Attachment 28**). An Erosion and Sedimentation Control (E&SC) Plan is required if one or more acres are to be disturbed. The E&SC Plan must be filed with and approved by the applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>A NPDES Construction Stormwater permit (NCG010000) is usually required when design features meet minimum requirements. Compliance with the 15A NCAC 2H .0126 NPDES Stormwater Program will be required because the Subject Property is located within a Phase II MS4 area and construction activities will disturb more than one acre. In addition, compliance with the 15A NCAC 2H 1000 State Stormwater Permitting Programs |

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| | that regulate site development and post-construction stormwater runoff control might be required (**Attachment 28**).<br><br>NC WRC biologists found no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site. The NC WRC recommends maintenance of a minimum 100-foot undisturbed, native, forested buffer along all perennial streams and a minimum 50-foot buffer along intermittent streams and wetlands to minimize impacts to aquatic and terrestrial wildlife resources, water quality, and aquatic habitat both within and downstream of the project area. The NC WRC recommends limiting impervious surface to less than 10% or use stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%. Also, the NC WRC recommends using non-invasive native species, LID technology in landscaping, and limiting native vegetation clearing as much as possible. Open space areas including forested green space should be maintained with native vegetation. Sediment and erosion control measures should be installed prior to any land clearing or construction and routinely inspected and properly maintained. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the ERR when received from the permitting agencies. |
| Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff | ***Any fill material must come from an approved source, and applicable NC regulations on erosion control permit might apply. The soils will be confirmed to be "clean" fill and that it meets project requirements prior to importing the material. The proposed project will be designed in a way to balance the grading and not require as much off-site material, if possible. Any soil removed from the site will be quantified and only exported to an approved site per NC requirements.***<br><br>The proposed development has been designed to incorporate stormwater control measures, a spillway with erosion control matting, retaining walls, maintenance of the onsite wetland, stream and required buffers, open space, and landscaping. BMPs for erosion |

| | |
|---|---|
| | and sedimentation control such as silt fencing will be utilized during construction to prevent sedimentation impacts and native plants used in site restoration. In addition, the NC DEQ commented through the State Environmental Clearinghouse that the Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An E&SC Plan is required if one or more acres are to be disturbed. The E&SC Plan must be filed with and approved by the applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>A NPDES Construction Stormwater permit (NCG010000) is usually required when design features meet minimum requirements. Compliance with the 15A NCAC 2H .0126 NPDES Stormwater Program will be required because the Subject Property is located within a Phase II MS4 area and construction activities will disturb more than one acre. In addition, compliance with the 15A NCAC 2H 1000 State Stormwater Permitting Programs that regulate site development and post-construction stormwater runoff control might be required. The proposed project activities will be completed in conformance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. All necessary permits will be identified and obtained prior to commencing work and appended to the ERR when received from the permitting agencies. |
| Solid Waste Disposal / Recycling | According to the NC DEQ DWM, Solid Waste Section (Section), "[a]ny structures proposed to be demolished and/or rehabilitated as part of this project should be evaluated for lead, asbestos or other contaminants which must be managed appropriately. Hazardous waste is discussed in further detail in the Contamination and Toxic Substances section and **Attachment 7**.<br><br>During the construction phase of the proposed project, wastes generated are expected to consist of primarily packaging from construction materials and mixed municipal wastes generated daily by site workers. |

Docusign Envelope ID: B66DDA13-5241-43AE-BD2C-A1A1ADF73E5E

| | |
|---|---|
| | Construction debris will be taken to an appropriate, legally compliant landfill. The Section stated in its comments that "[d]uring the project, every feasible effort should be made to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by this project that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility approved to manage the respective waste type. The Section strongly recommends that any contractors are required to provide proof of proper disposal for all waste generated as part of the project. A list of permitted solid waste management facilities is available on the Solid Waste Section portal site at: http://deq.nc.gov/waste-management-laserfiche" (**Attachment 28**). According to the NC DEQ comments, "[a]ny open burning associated with proposed project must be in compliance with 15A NCAC 2D.1900" (**Attachment 28**). |

**Determination:**

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: _____ Date: 2/5/2025

Name/Title/Organization: Andrea Gievers, Environmental SME, NCORR

Certifying Officer Signature: DocuSigned by: Tracey Colores 28F62AF3656F479... Date: 2/6/2025

Name/Title: Tracey Colores, Community Development Director, NCORR

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

# ATTACHMENT 1:

# Proposed Project Location Maps and Site Plans

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Balsam Edge - Street Map

December 4, 2024

Balsam Edge

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Balsam Edge - Topographic Map

December 4, 2024

Balsam Edge

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S.

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

# BALSAM EDGE

## WAYNESVILLE, NORTH CAROLINA

PREPARED FOR:

MOUNTAIN HOUSING OPPORTUNITIES, INC
64 CLINGMAN AVENUE, SUITE 101
ASHEVILLE, NC 28801
ADELINE WOLFE
(864) 680-6587

| DEVELOPMENT DATA | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

INDEX OF SHEETS


| Sheet No. | Title |
|---|---|
| C000 | COVER |
| -- | SURVEY |
| C101 | EXISTING CONDITIONS & DEMOLITION PLAN |
| C201 | SITE PLAN |
| C301 | ROUGH GRADING & EROSION CONTROL PLAN-PHI |
| C302 | ROUGH GRADING & EROSION CONTROL PLAN-PHII |
| C401 | FINE GRADING PLAN |
| C501 | STORM DRAINAGE PLAN |
| C502 | STORM DRAINAGE TABLES |
| C503 | STORM PROFILES |
| C504 | STORM PROFILES |
| C601 | WATER PLAN |
| C701 | SEWER PLAN |
| C702 | SEWER PROFILE |
| C921 | SITE DETAILS |
| C922 | SITE DETAILS |
| C931 | EROSION CONTROL DETAILS |
| C932 | EROSION CONTROL DETAILS |
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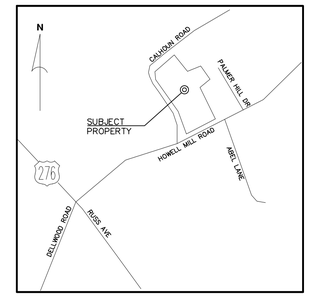
| C942 | STORM DRAINAGE DETAILS |
| C961 | WATER DETAILS |
| C962 | WATER DETAILS |
| C971 | SEWER DETAILS |
| C998 | NCG01 |


VICINITY MAP
(NOT TO SCALE)

Know what's **below.**
**Call** before you dig.

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 252-5388
FAX (828) 253-3865
NCBELS LICENSE #: C-2184
WAYNESVILLE OFFICE
52 WALNUT STREET - SUITE B
WAYNESVILLE, NC 28786
PHONE (828) 452-4416
FAX (828) 950-0403
www.civildesignconcepts.com


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO
Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DANIEL D. BRUCE
12-4-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

COVER

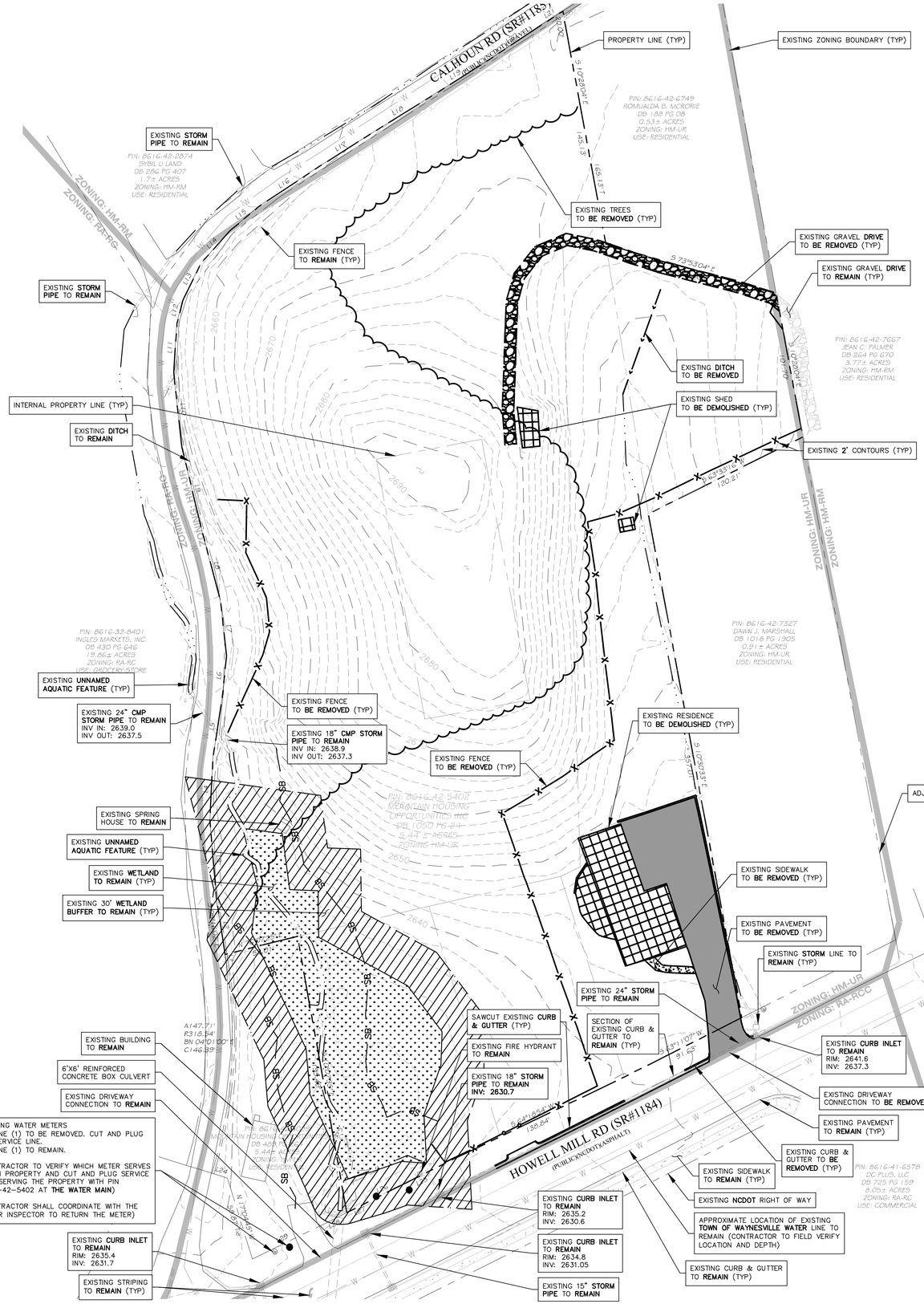
C000

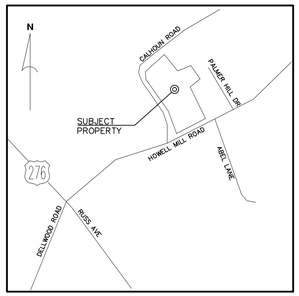
## NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED **GRADING/LAND DISTURBANCE AND DRIVEWAY** PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A **NORTH CAROLINA** LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

## EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
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## DEVELOPMENT DATA

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| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

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| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN – 1.5 SPACES PER UNIT
MAX – 1 SPACE PER 20 SPACES
UNITS – 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
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| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
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CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
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T: 704.333.7862 F: 704.343.9380

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168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 252-5388
FAX (828) 253-3865
NCBELS LICENSE #: C-2184
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52 WALNUT STREET - SUITE B
WAYNESVILLE, NC 28786
PHONE (828) 452-4416
FAX (828) 650-0431
www.civildesignconcepts.com


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BRINK 12/6/24

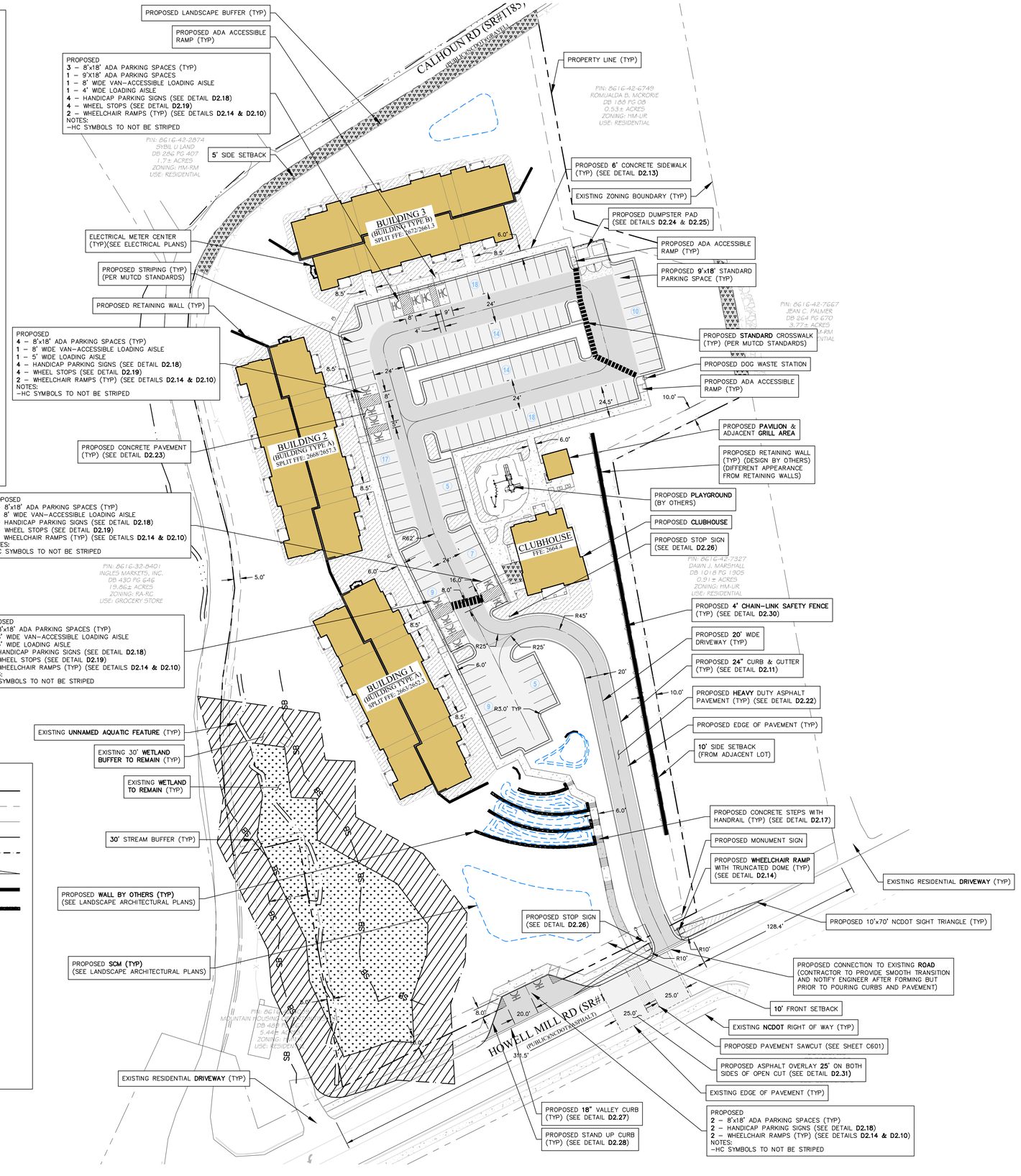
Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101

## NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. SINGLE-PHASE CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A **NORTH CAROLINA** LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES (SHOWN TO REMAIN) AND NEWLY COMPLETED WORK DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. SIDEWALKS SHALL BE CONSTRUCTED IN ORDER TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES. A MAXIMUM OF 5% SIDEWALK/CROSSWALK LONGITUDINAL SLOPE IS PERMITTED. A MAXIMUM OF 1/4" PER FOOT SIDEWALK/CROSSWALK CROSS SLOPE IS PERMITTED. ANY SIDEWALK/CROSSWALK INSTALLED WITH A STEEPER SLOPES SHALL BE REMOVED AND REPLACED AT CONTRACTORS EXPENSE.
9. ALL RADII LISTED ARE FROM FACE OF CURB UNLESS OTHERWISE NOTED. ALL PARKING LOT RADII ARE **3'** UNLESS OTHERWISE NOTED.
10. ALL ROAD/PARKING LOT IMPROVEMENTS, STRIPING AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE (MUTCD). CONTRACTOR MAY USE A PAINT SUITABLE FOR ASPHALT APPLICATION IN LIEU OF THERMOPLASTIC WITH PRIOR APPROVAL FROM THE ENGINEER.
11. CURB END TREATMENT TO BE APPLIED TO ALL CURB ENDS. REFER TO CURB END TREATMENT DETAIL.
12. PROPOSED ROADS TO BE **PRIVATE. NCDOT IS NOT** RESPONSIBLE FOR ANY ROAD MAINTENANCE.




### SITE LEGEND

- PROPERTY LINE
- SETBACK LINE
- RIGHT OF WAY LINE
- EXISTING STREAM
- SAWCUT LINE
- PROPOSED SIGHT TRIANGLE
- PROPOSED RETAINING WALL
- PROPOSED WING WALL
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED OPEN SPACE
- PROPOSED LANDSCAPE BUFFER
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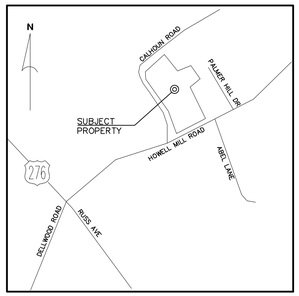


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MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID E. BEAL 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

## NOTES

1. SEE GRADING, EROSION CONTROL, AND STORM DRAINAGE DETAIL SHEETS FOR ALL GENERAL NOTES. CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL PLANS.
2. **NO** PORTION OF THIS PROJECT LIES WITHIN THE 100-YR FEMA FLOODPLAIN.
3. **HYDROLOGIC SOIL GROUP B (WELL DRAINED)**
4. STREAM INFO
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   STREAM NAME: RICHLAND CREEK
   CLASSIFICATION: B
   RIVER BASIN: FRENCH BROAD
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## ROUGH GRADING & EROSION CONTROL LEGEND

- LIMITS OF DISTURBANCE
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- STRAW WATTLE
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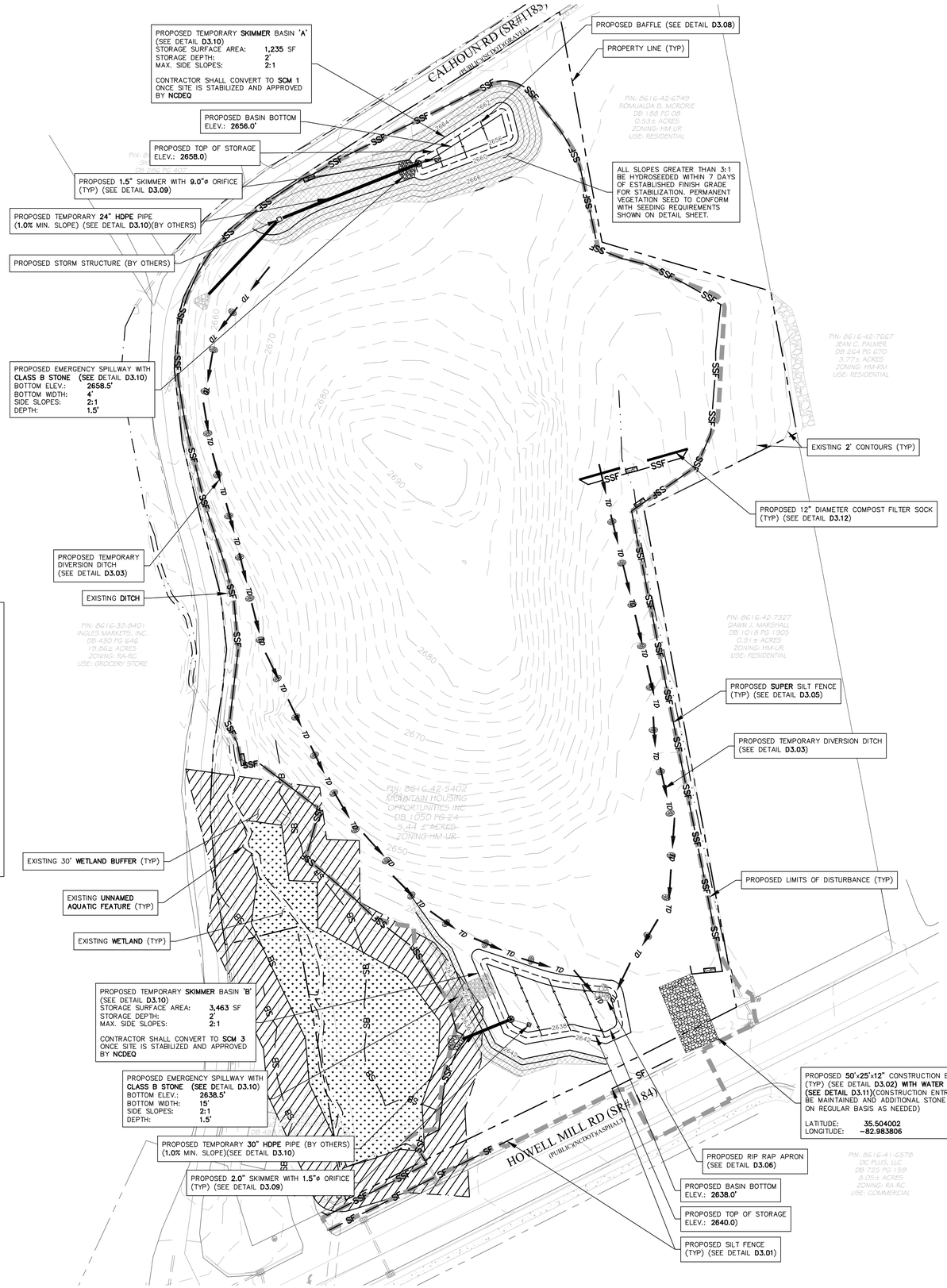


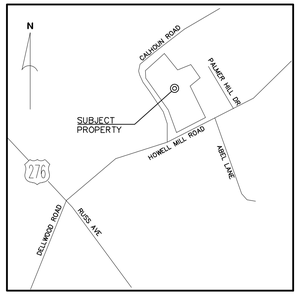


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MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BRUCE 12/6/24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

ROUGH GRADING &EROSION CONTROL PLAN-PHI

C301

## NOTES

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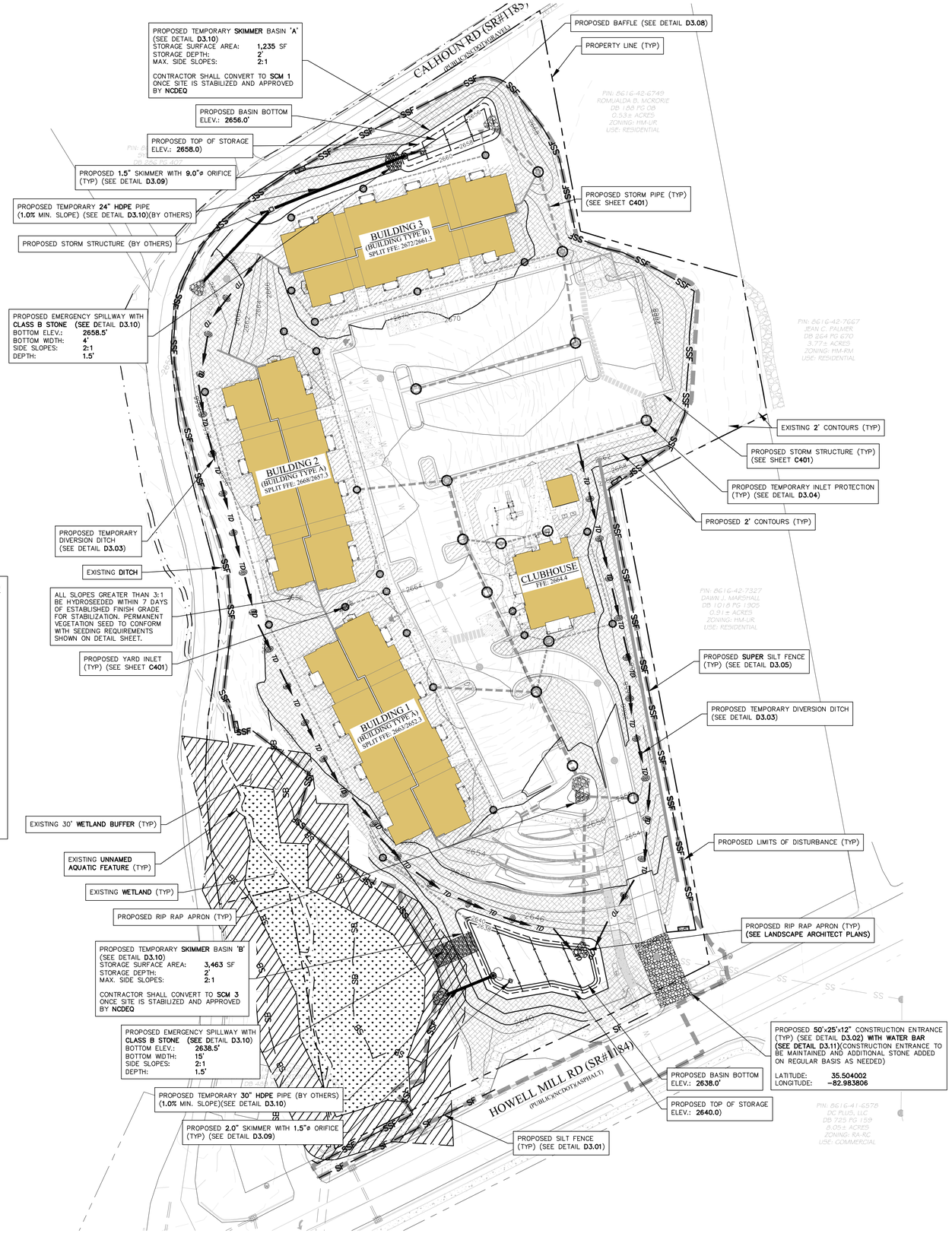


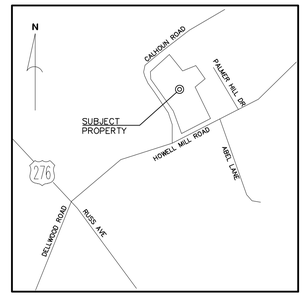


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| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE

40 0 20 40 80 120

( IN FEET )

1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA

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MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BRAY

12.6.24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

ROUGH GRADING &EROSION CONTROL PLAN-PHII

C302

## NOTES

1. SEE GRADING, EROSION CONTROL, AND STORM DRAINAGE DETAIL SHEETS FOR ALL GENERAL NOTES. CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL PLANS.
2. **NO** PORTION OF THIS PROJECT LIES WITHIN THE 100-YR FEMA FLOODPLAIN.
3. **HYDROLOGIC SOIL GROUP B (WELL DRAINED)**
4. STREAM INFO
   INDEX: 5-16-(11.5)
   STREAM NAME: RICHLAND CREEK
   CLASSIFICATION: B
   RIVER BASIN: FRENCH BROAD
5. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
6. RETAINING WALLS:

   ALL RETAINING WALL ELEVATIONS SHOWN ARE FROM TOP OF WALL TO FINISH GRADE ELEVATION. CONTRACTOR TO ACCOUNT FOR FOOTER/COVER OVER FOOTER. REFER TO WALL DESIGN FOR FOOTER DESIGN. WALL DESIGN TO ALSO ACCOMMODATE STORM PIPE PENETRATIONS PER PLANS.

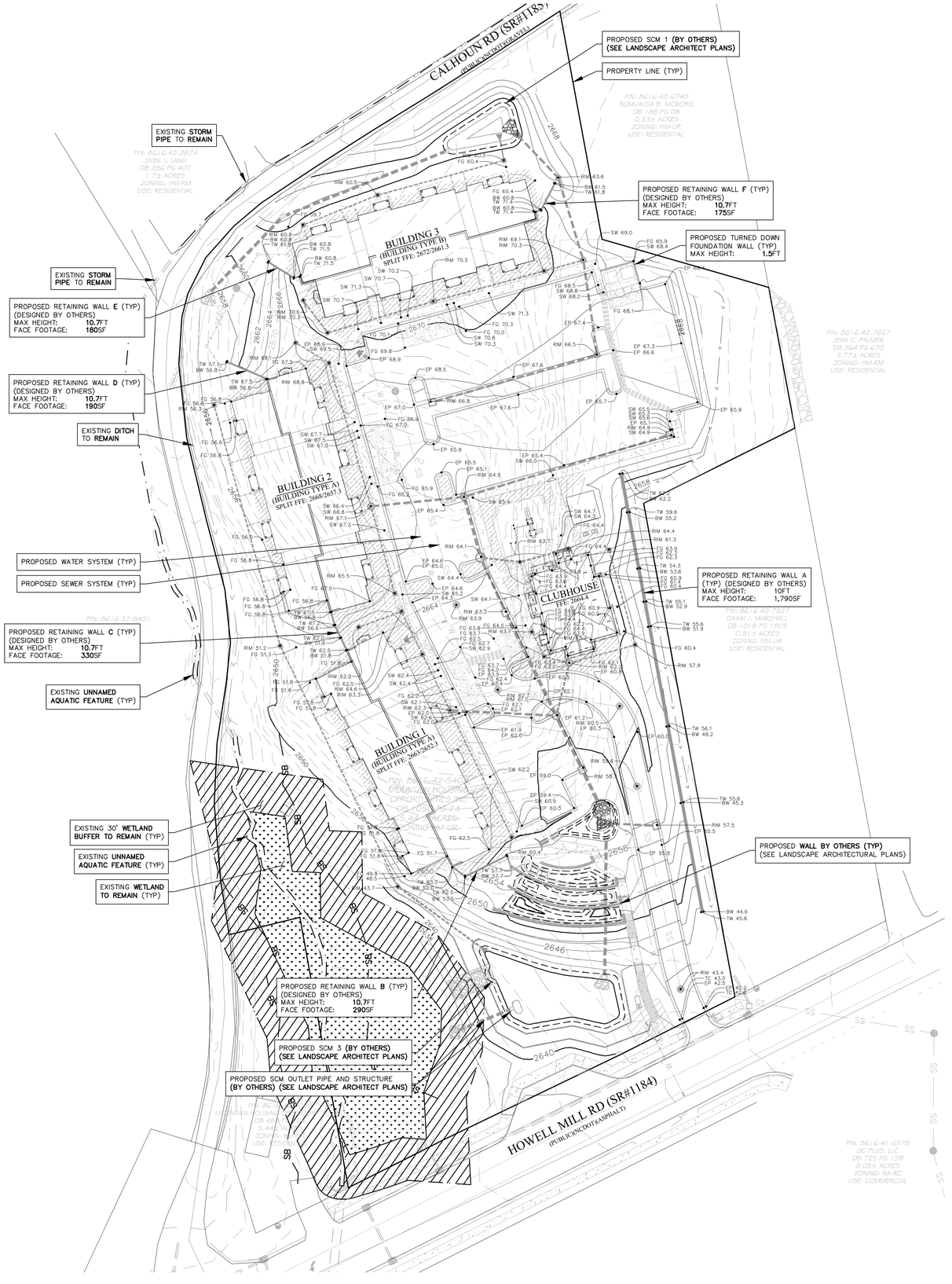
   WALL DESIGN TO INCLUDE FOOTING DRAIN AND MINIMUM WIDTH OF 12" OF #57 WASHED STONE BEHIND WALL FROM BOTTOM TO TOP OF WALL.

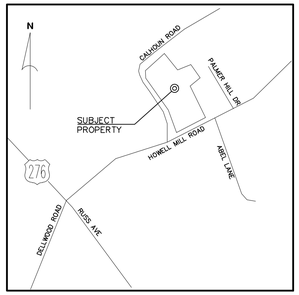
   ALL RETAINING WALLS PROVIDING A CHANGE OF GRADE OF 30" OR MORE SHALL BE PROTECTED WITH A GUARDRAIL. THE GUARDRAIL SHALL BE 42" MINIMUM IN HEIGHT, AND PREVENT THE PASSAGE OF A 21" SPHERE UNLESS ADJACENT TO A WALKING SURFACE. COORDINATE BARRIER STYLE AND COLOR WITH ARCHITECT AND ENGINEER. SEE SITE PLAN FOR APPROXIMATE LOCATION OF FENCING/BARRIERS.

   CONTRACTOR TO SUBMIT TO OWNER AND ENGINEER FOR REVIEW PRIOR TO ORDERING MATERIALS. CONTRACTOR TO COORDINATE WALL STYLE AND COLOR WITH ARCHITECT AND ENGINEER.

   CONTRACTOR RESPONSIBLE FOR OBTAINING BUILDING PERMIT FOR ALL RETAINING WALLS PRIOR TO ORDERING MATERIALS OR CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR CONSTRUCTING RETAINING WALLS IN ACCORDANCE WITH ALL WALL MANUFACTURERS STANDARDS AND SPECIFICATIONS.

   ALL RETAINING WALLS 4' OR GREATER TO BE SUBMITTED TO **TOWN OF WAYNESVILLE** BUILDING SAFETY DIVISION FOR REVIEW AND APPROVAL AND CERTIFIED BY THE WALL ENGINEER UPON COMPLETION. RETAINING WALLS SUBJECT TO ADDITIONAL LANDSCAPING DEPENDING ON HEIGHT AND MATERIAL.




## VICINITY MAP

(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN – 1.5 SPACES PER UNIT
MAX – 1 SPACE PER 20 SPACES
UNITS – 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
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REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
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Know what's **below.** **Call** before you dig.

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1 inch = 40 ft.


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# MHO - BALSAM EDGE

WAYNESVILLE, NORTH CAROLINA

NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BROOKS

12.6.24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

FINE GRADING PLAN

C401

## NOTES

1. SEE GRADING, EROSION CONTROL, AND STORM DRAINAGE DETAIL SHEETS FOR ALL GENERAL NOTES. CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL PLANS.
2. **NO** PORTION OF THIS PROJECT LIES WITHIN THE 100-YR FEMA FLOODPLAIN.
3. **HYDROLOGIC SOIL GROUP B (WELL DRAINED)**
4. STREAM INFO
   INDEX: 5-16-(11.5)
   STREAM NAME: RICHLAND CREEK
   CLASSIFICATION: B
   RIVER BASIN: FRENCH BROAD
5. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
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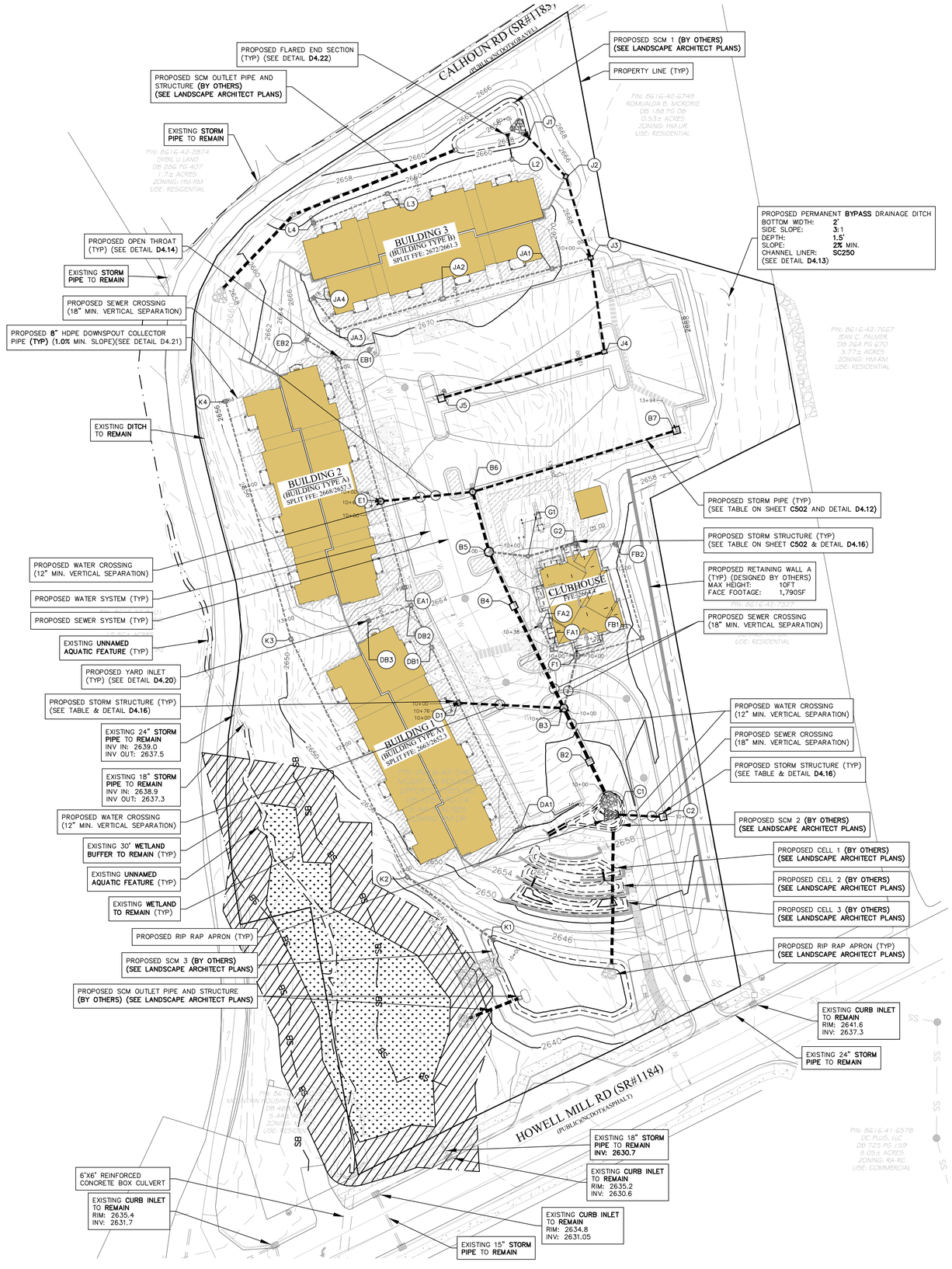
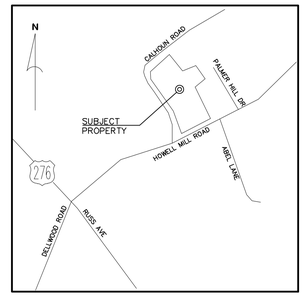
## STORM LEGEND

- EXISTING STORM PIPE
- EXISTING STORM STRUCTURE
- PROPOSED STORM PIPE
- PROPOSED ROOF LEADER COLLECTOR
- PROPOSED HEADWALL
- PROPOSED CURB INLET STRUCTURE
- PROPOSED JUNCTION BOX
- PROPOSED RIP-RAP APRON
- EXISTING STREAM
- EXISTING WETLANDS
- EXISTING WETLANDS BUFFER




VICINITY MAP

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## PROJECT DATA

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| DEED BOOK/PAGE: | 1050/24 |
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| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
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MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

STORM DRAINAGE PLAN

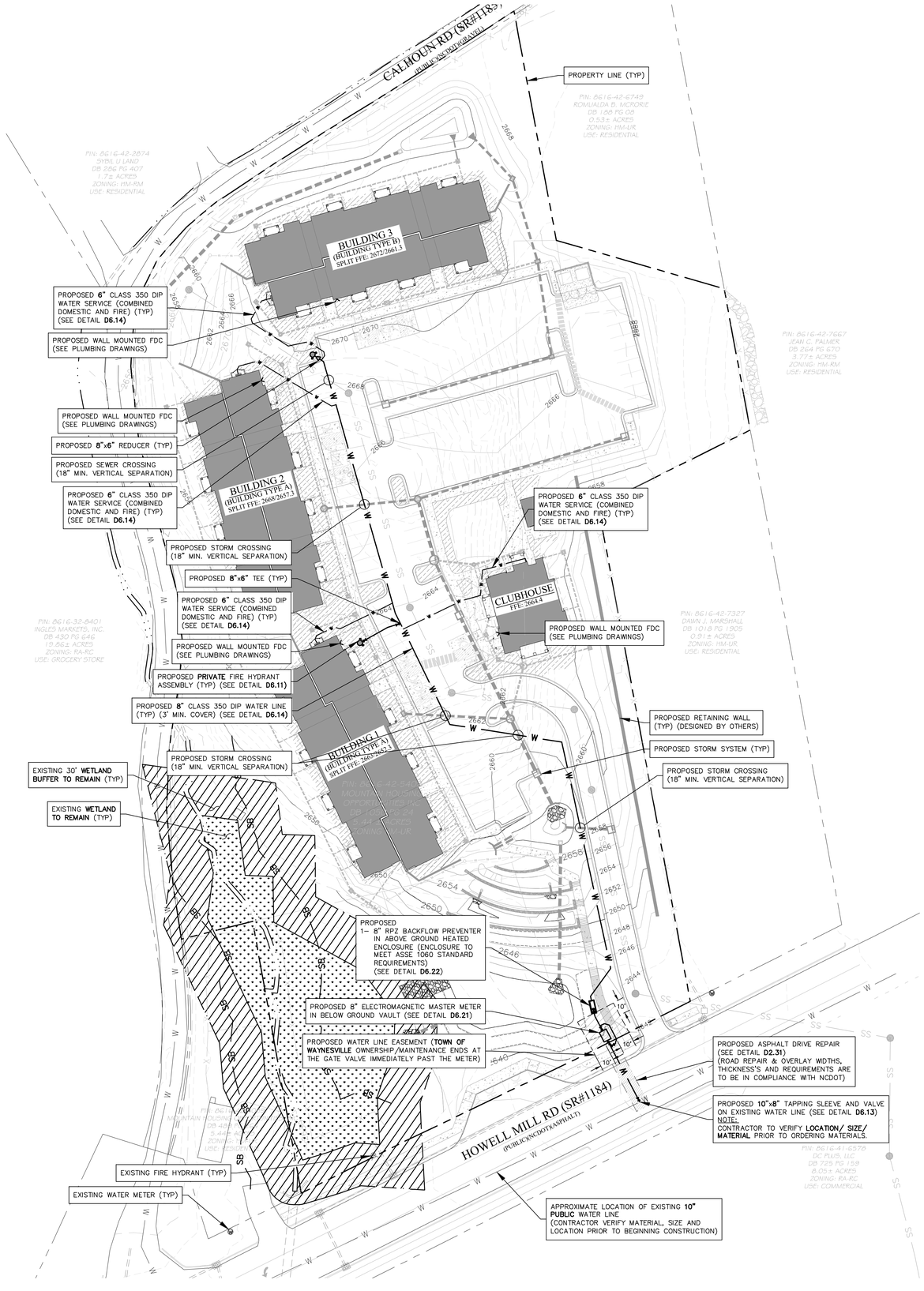
C501

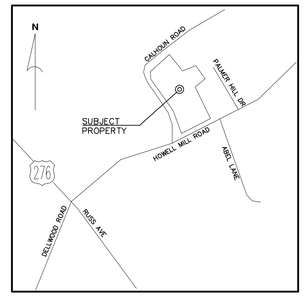
## NOTES

1. SEE WATER DETAIL SHEETS FOR ALL GENERAL WATER NOTES. CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL WATER PLANS.
2. WATER METERS ARE TO BE PLACED MAXIMUM OF 5' OFF EDGE OF PAVEMENT/SIDEWALK. WHEN A UTILITY STRIP IS PRESENT, METERS SHALL BE INSTALLED WITHIN STRIP. WHEN SIDEWALK IS CONSTRUCTED AND NO STRIP IS AVAILABLE, SERVICE LINES CROSSING SIDEWALK SHALL BE CONSTRUCTED WITH PVC SLEEVE EXTENDING 6" ON EITHER SIDE OF SIDEWALK **PER CITY OF ASHEVILLE** STANDARDS AND SPECIFICATIONS.
3. TYPICAL EASEMENTS FOR WATER LINES LOCATED OUTSIDE ESTABLISHED UTILITY EASEMENTS OR ROAD RIGHT-OF-WAYS SHALL BE A 20 FEET. THE ENTIRE WATER EASEMENT MUST BE CLEAR AND REMAINED CLEARED OF TREE PLANTINGS, EXISTING TREES, AND ANY PERMANENT STRUCTURES.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK.

## WATER LEGEND

- EXISTING WATERLINE — W
- EXISTING WATER METER — M
- EXISTING FIRE HYDRANT
- PROPOSED WATER LINE — W
- PROPOSED WATER SERVICE
- PROPOSED WATER METER — M
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED AIR RELEASE VALVE — A

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| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
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| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
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PARKING CALCULATIONS:

| | |
|---|---|
| VEHICULAR: | |
| REQUIRED SPACES: | MIN – 1.5 SPACES PER UNIT<br>MAX – 1 SPACE PER 20 SPACES<br>UNITS – 84 |
| SPACES PROVIDED: | 128 |
| HANDICAPPED SPACES: | |
| SPACES REQUIRED: 5 | SPACES PROVIDED: 16 |

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
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# MHO - BALSAM EDGE

WAYNESVILLE, NORTH CAROLINA

NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BRADY

12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

WATER PLAN

C601

## NOTES

1. ALL PUBLIC SANITARY SEWER WORK ASSOCIATED WITH THIS PROJECT TO BE PERFORMED BY A NC LICENSED UTILITY CONTRACTOR.
2. SEE SEWER DETAIL SHEETS FOR ALL GENERAL SEWER NOTES. CONTRACTOR RESPONSIBLE FOR INCLUSION OF DETAILS SHEETS WITH ALL SEWER PLANS.
3. CROSSINGS TO MAINTAIN MSD REQUIRED VERTICAL SEPARATION. CONTRACTOR TO CONTACT ENGINEER ON ANY CROSSING THAT DOES NOT MEET THIS SEPARATION, OR SEPARATION IS CLOSER THAN 1'. REFER TO GENERAL NOTES ON SEWER DETAIL SHEET FOR SEPARATION REQUIREMENTS BETWEEN UTILITIES.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. TYPICAL EASEMENTS FOR SEWER LINES LOCATED OUTSIDE ESTABLISHED UTILITY EASEMENTS OR ROAD RIGHT-OF-WAYS SHALL BE AS SHOWN. THE ENTIRE SEWER EASEMENT MUST BE CLEAR AND REMAINED CLEARED OF TREE PLANTINGS, EXISTING TREES, AND ANY PERMANENT STRUCTURES.
6. **NO** PORTION OF THIS PROJECT LIES WITHIN THE 100-YR FEMA FLOODPLAIN.

## SEWER LEGEND

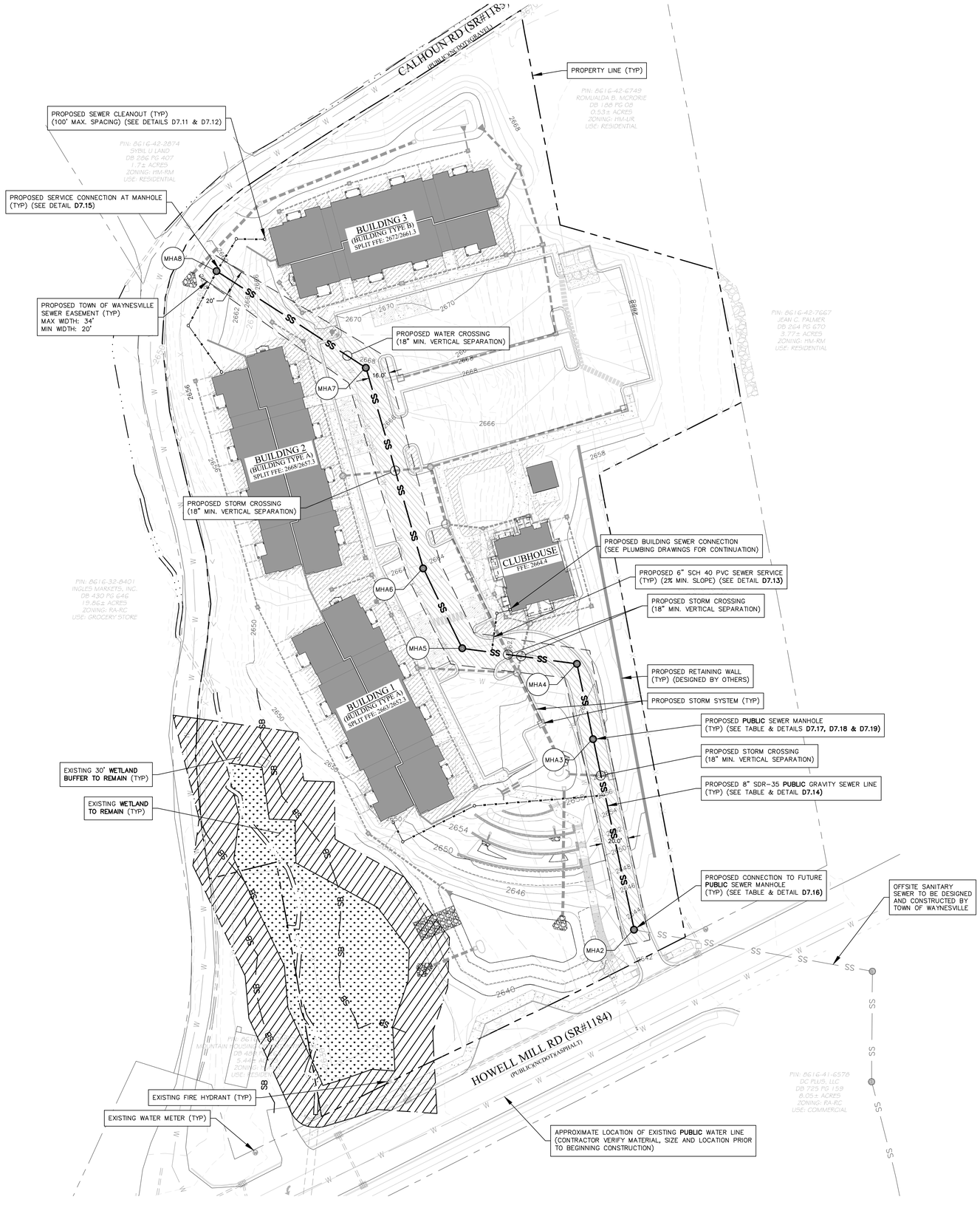
- EXISTING SEWER LINE — SS
- EXISTING SEWER CLEANOUT
- EXISTING SEWER MANHOLE
- PROPOSED SEWER LINE — SS
- PROPOSED SEWER SERVICE — SS SS SS
- PROPOSED FLOW ARROW
- PROPOSED SEWER MANHOLE
- PROPOSED SEWER CLEANOUT
- STEEL PIPE ENCASEMENT

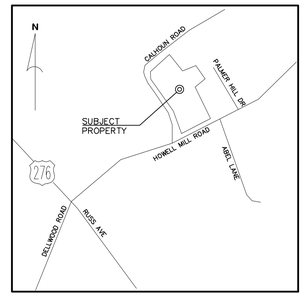
STRUCTURE TABLE
(INVERTS BASED ON 2D LENGTH TO INSIDE EDGES)

| STRUCTURE | STATION | STRUCTURE DETAILS | DEPTH | DESCRIPTION |
|---|---|---|---|---|
| MHA2 | 11+83 | RIM 2643.5<br>INV. IN 2640.0 (MHA3-MHA2)<br>INV. OUT 2639.9 (MHA2-MHA1) | 3.6'± | MANHOLE |
| MHA3 | 13+30 | RIM 2659.6<br>INV. IN 2647.4 (MHA4-MHA3)<br>INV. OUT 2647.3 (MHA3-MHA2) | 12.3'± | MANHOLE |
| MHA4 | 13+89 | RIM 2660.5<br>INV. IN 2649.9 (MHA5-MHA4)<br>INV. OUT 2649.7 (MHA4-MHA3) | 10.8'± | MANHOLE |
| MHA5 | 14+76 | RIM 2662.7<br>INV. IN 2650.7 (MHA6-MHA5)<br>INV. OUT 2650.5 (MHA5-MHA4) | 12.2'± | MANHOLE |
| MHA6 | 15+44 | RIM 2663.9<br>INV. IN 2651.3 (MHA7-MHA6)<br>INV. OUT 2651.1 (MHA6-MHA5) | 12.8'± | MANHOLE |
| MHA7 | 17+02 | RIM 2667.6<br>INV. IN 2652.5 (MHA8-MHA7)<br>INV. OUT 2652.3 (MHA7-MHA6) | 15.3'± | MANHOLE |
| MHA8 | 18+36 | RIM 2659.1<br>INV. OUT 2653.3 (MHA8-MHA7) | 5.8'± | MANHOLE |

PIPE TABLE
(SLOPES BASED ON 2D LENGTH TO INSIDE EDGES)

| PIPE NAME | SIZE | LENGTH | SLOPE | MATERIAL |
|---|---|---|---|---|
| MHA3-MHA2 | 8" | 144' | 5.1% | PVC |
| MHA4-MHA3 | 8" | 54' | 4.2% | PVC |
| MHA5-MHA4 | 8" | 84' | 0.7% | PVC |
| MHA6-MHA5 | 8" | 63' | 0.6% | PVC |
| MHA7-MHA6 | 8" | 154' | 0.6% | PVC |
| MHA8-MHA7 | 8" | 131' | 0.6% | PVC |




VICINITY MAP
(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

| | |
|---|---|
| VEHICULAR: | |
| REQUIRED SPACES: | MIN - 1.5 SPACES PER UNIT<br>MAX - 1 SPACE PER 20 SPACES<br>UNITS - 84 |
| SPACES PROVIDED: | 128 |
| HANDICAPPED SPACES: | |
| SPACES REQUIRED: 5 | SPACES PROVIDED: 16 |

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

811 Know what's **below.** **Call** before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.

HOUSING STUDIO

CDC Civil Design Concepts, PA

ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 252-5388
FAX (828) 253-3865
NCBELS LICENSE #: C-2184

WAYNESVILLE OFFICE
52 WALNUT STREET - SUITE B
WAYNESVILLE, NC 28786
PHONE (828) 452-4416
FAX (828) 950-0431
www.civildesignconcepts.com

# MHO - BALSAM EDGE

WAYNESVILLE, NORTH CAROLINA

NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL SEAL 030669 ENGINEER DAVID BRE... 12/6/24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SEWER PLAN

C701

# ATTACHMENT 1A:

# Site Visit Photographs

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

15 - View of the northern adjoining property (residential).

16 - View of the eastern adjoining property (residential).

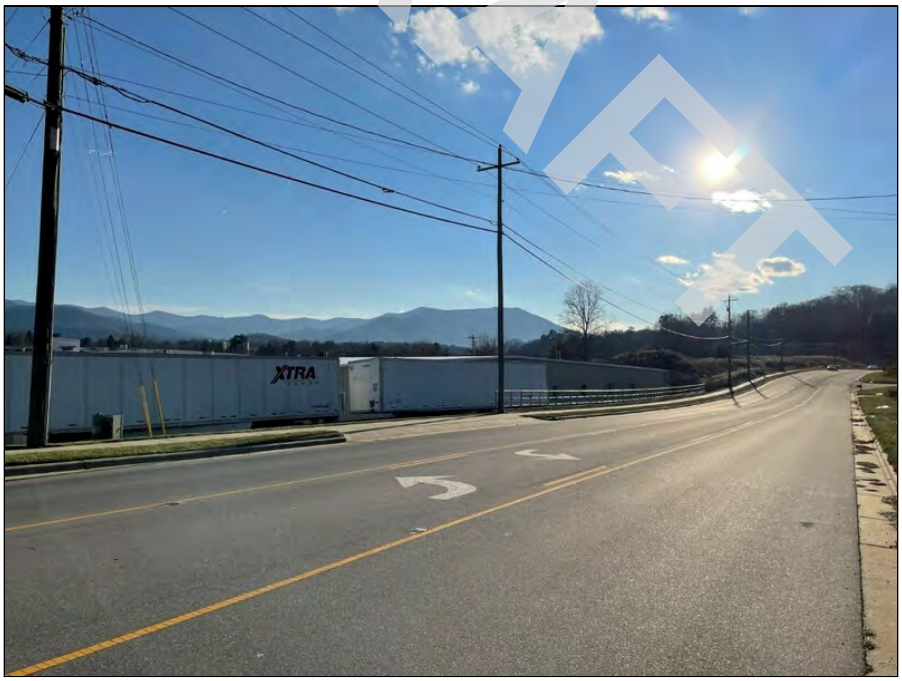
DRAFT

17 - View of the eastern adjoining property (residential) and an approximate 275-gallon heating oil AST.

18 - View along Howell Mill Road and the southern boundary of the subject property.

DRAFT

19 - View along Howell Mill Road and the southern boundary of the subject property.




20 - View of the southern adjoining property - Sunoco Plastics.

DRAFT

21 - View of the southwestern adjoining property (vacant residential).

22 - View of the western adjoining property (wooded).

DRAFT

# ATTACHMENT 1B:

# NCHFA Balsam Edge FINAL EA dated November 27, 2023; HUD Waiver and Correspondence; NCHFA Closeout Letter, AUGF, RROF, and FONSI with Affidavit; and Previous NCHFA Balsam Edge EAs

# NCHFA Balsam Edge EA dated November 27, 2023

**U.S. Department of Housing and Urban Development**
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

# Environmental Assessment
# Determinations and Compliance Findings for HUD-assisted Projects
# 24 CFR Part 58

## Project Information

**Project Name:** Balsam Edge

**Responsible Entity:** North Carolina Housing Finance Agency

**Grant Recipient**: Balsam Edge, LLC

**State/Local Identifier**: M22-SG-37-0100

**Preparer:** Claudia Young, North Carolina Housing Finance Agency

**Certifying Officer Name and Title:** Scott Farmer, Executive Director, North Carolina Housing Finance Agency

**Consultant**: ESC Southeast, LLP

**Direct Comments to:** Scott Farmer, Executive Director, North Carolina Housing Finance Agency, 3508 Bush Street, Raleigh, NC 27609

**Project Location:** 333 Howell Mill Road in Waynesville, Haywood County, North Carolina.

**Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**
The subject property includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western
portion of the property.

Balsam Edge is proposed to be an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All units will include washer/dryer hookups, central AC, ceiling fans, Energy Star kitchen appliances (including dishwashers), and mini-blinds. 12 of the 84 units will be fully accessible with grab bars in the bathrooms and other features for mobility impaired residents. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities for energy efficiency.

**Statement of Purpose and Need for the Proposal** [40 CFR 1508.9(b)]:
The City of Waynesville Comprehensive Land Use Plan for 2035 reports that the lack of new housing stock has caused rental rates and real estate prices to rise significantly, resulting in a need for workforce and affordable housing. The plan further states that 40 percent of individuals that pay rent are paying 35 percent of more of their annual household income on housing. Reported demands for seasonal homes in Waynesville and Haywood County have led to increases in housing value and concerns over availability of affordable housing for a varying income levels.

All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI. A regional housing needs assessment conducted by Dogwood Health Trust in 2021 demonstrated a housing gap of 768 units affordable to families at or below 50% AMI in Haywood County. A market study conducted for the Balsam Edge development shows a total demand for 751 rental units affordable at or below 60% AMI with only 54 units currently in development, meaning Balsam Edge's 84 units will have a prospective capture rate of 12%. The Proposed Action addresses a critical need to provide affordable rental units to residents and meets the demand for affordable rental units as outlined in the City of Waynesville Comprehensive Land Use Plan for 2035 and the regional housing needs assessment conducted by Dogwood Health Trust.

**Existing Conditions and Trends** [24 CFR 58.40(a)]:
The subject property is located in a residential and commercial area of Waynesville, North Carolina. The approximately 5.1-acre subject property consists of grass-covered and wooded land. The southeastern portion of the property is developed with a paved driveway and a vacant, approximate 1,880 square foot single-family residence that was reportedly constructed in 1950. A dilapidated modular movable shed is located in the eastern portion of the property. Logged trees are located in the central portion of the property. The subject property currently consists of wooded land, fields, a residential structure, and a shed.

Balsam Edge sits on the western side of Howell Mill Road directly off of Russ Avenue, and is less than a mile from the commuting corridor of the Great Smoky Mountains Expressway. Due to its location, Balsam Edge is surrounded with ample amenities, most of which are within 10 minutes walking distance. The heart of Historic Downtown Waynesville is only a mile away. Additionally, Balsam Edge enjoys close proximity to several major industrial employers along with continuous sidewalk access to the Waynesville Parks and Recreation Complex with trail systems connecting to Lake Junaluska.

## Funding Information

| Grant Number | HUD Program | Funding Amount |
|---|---|---|
| | HOME | $1,450,000.00 |
| | | |

**Estimated Total HUD Funded Amount:** $1,450,000.00

| FUNDING SOURCE SUMMARY | |
|---|---|
| RPP Loan () | $1,450,000 |
| RD 538 Loan | $3,987,638 |
| Other Loan 1 | $965,000 |
| Equity: Federal LIHTC | $9,942,099 |
| Deferred Developer Fees | $3,933 |
| **Total** | **$16,348,670** |

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $16,348,670.00

## Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

| **Compliance Factors**: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6 | Are formal compliance steps or mitigation required? | Compliance determinations |
|---|---|---|
| **STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6** | | |
| **Airport Hazards**<br><br>24 CFR Part 51 Subpart D | Yes ☐ No ☒ | The project is not located within 2,500 feet of a civil airport, or 15,000 feet of a military airfield. See attached Appendix A. |
| **Coastal Barrier Resources**<br><br>Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] | Yes ☐ No ☒ | The project site is not located in a Coastal Barrier Resource System (CBRS) unit. See attached Appendix B. |
| **Flood Insurance**<br><br>Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a] | Yes ☐ No ☒ | The project site is not located in a FEMA designated Special Flood Hazard Area. The site is not located in a flood zone or a floodplain (Zone X), as determined from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) associated with the site and surrounding area. The map utilized was 3700861600J, effective 4/3/2012. See attached Appendix C. |
| **STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5** | | |
| **Clean Air**<br><br>Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93 | Yes ☐ No ☒ | Per the US EPA Green Book, Haywood County is not in non-attainment or maintenance status for any criteria pollutants. The project site is in compliance with the Clean Air Act. See attached Appendix D. |

| | | |
|---|---|---|
| **Coastal Zone Management**<br><br>Coastal Zone Management Act, sections 307(c) & (d) | Yes ☐ No ☒ | The project site is not located in one of North Carolina's 20 coastal counties and is in compliance with the Coastal Zone Management Act. See attached Appendix E. |
| **Contamination and Toxic Substances**<br><br>24 CFR Part 50.3(i) & 58.5(i)(2) | Yes ☒ No ☐ | ECS Southeast, LLP completed a Phase I ESA for the site in accordance with ASTM 1527-21 with site reconnaissance completed on May 16, 2023. A fill port and vent pipe, indicative of a UST, were observed at the southwester corner of the residence. ESC considers the potential for an undocumented release from the UST to represent a REC.<br><br>Bunnell Lammons Engineering conducted a Limited UST Closure Assessment at the site on August 18, 2023 to assess the potential impacts of the UST to the soil and groundwater. Petroleum constituents were identified in soils on the western and southern side of the UST in exceedance of NCDEQ Action Limits and Residential MSCCs and contaminates were identified in the groundwater on-site in exceedance of NCDQ 2L Standards.<br><br>In a Memorandum of Understanding dated September 11, 2023, Balsam Edge, LLC agrees to report the release incident identified in the Limited UST Closure Assessment Report dated August 30, 2023, and associated assessment date to the NCDEQ UST Section. Due to the identified presence of limited soil and groundwater impacts, a complete State approved remediation plan will be required prior to obtaining the necessary signatures to complete the environmental review and publishing or posting a combined NOI-RROF/FONSI. Removal of the UST and the abatement of grossly impacted soil and a Notice of Residual Petroleum (NRP) to address the groundwater contamination on the Site will likely be requested by the NCDEQ. See attached Appendix F. |

| | | |
|---|---|---|
| **Endangered Species**<br><br>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402 | Yes ☐ No ☒ | A biological evaluation was conducted for the project site and submitted to USFWS. In an email dated February 16, 2023, the USFWS states concurrence with "may affect, not likely to adversely affect" determinations for all bat species, including the tricolored bat, should it become listed in the future. USFWS also states that suitable habitat does not occur within the action area for any other federally protected species.<br><br>Balsam Edge, LLC contracted with ECS Southeast, LLP ("ECS") to complete an environmental assessment. While conducting that assessment in January of 2023, ECS advised MHO that the United States Fish and Wildlife Service ("USFWS") flagged a potential roosting habitat for the federally endangered gray bat within one-half mile of the Balsam Edge site. In its correspondence, USFWS outlined appropriate mitigation measures to allow USFWS to determine development of the project would be "not likely to adversely affect" the habitat for the gray bat, including "accomplish[ing] all tree clearing activities outside of the active season for [the] gray bat." During the active season, bats may forage, commute and/or roost within the action area. After consulting with USFWS staff, ECS indicated USFWS would consent to removal of the trees prior to March 15th and would issue a "may affect, not likely to adversely affect" determination regarding the effect of the development of the site on the federally protected bats. Based on this guidance from both ECS and USFWS, MHO removed the trees prior to the 3/15/23 deadline. MHO now understands that removing trees, even though recommended by USFWS as an impact avoidance and minimization measure during the Part 58 Environmental Review, constitutes a choice-limiting action. NCHFA seeks a waiver of |

| | | |
|---|---|---|
| | | 24 CFR §55.22(a), or such other approval or action the HUD deems appropriate (the "Waiver"), thereby allowing Balsam Edge, LLC to obtain federal funds in order to support development of this critical affordable housing. See attached Appendix G. |
| **Explosive and Flammable Hazards**<br><br>24 CFR Part 51 Subpart C | Yes ☐ No ☒ | The proposed project does not include a hazardous facility. Seventeen (17) aboveground storage containers were identified within one mile of the project site. The ASD from the aboveground storage tank located at 11 Palmer Drive does encroach onto the project site boundary, however, the proposed development does not have any existing or proposed human congregation areas within the blast radius. The Separation Distance from the project site is acceptable based on results from HUD's ASD calculator. There are no known planned aboveground storage containers. The project is in compliance with explosive and flammable hazard requirements. See attached Appendix H. See attached Appendix H. |
| **Farmlands Protection**<br><br>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658 | Yes ☐ No ☒ | The project site is located within an "urbanized area" on the US Census Bureau and will not convert important farmland to nonagricultural uses. See attached Appendix I. |
| **Floodplain Management**<br><br>Executive Order 11988, particularly section 2(a); 24 CFR Part 55 | Yes ☐ No ☒ | The project site is not located in a FEMA designated Special Flood Hazard Area. The site is not located in a flood zone or a floodplain (Zone X), as determined from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) associated with the site and surrounding area. The map utilized was 3700861600J, effective 4/3/2012.See attached Appendix J. |
| **Historic Preservation**<br><br>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800 | Yes ☐ No ☒ | In a letter dated May 24, 2023, NC SHPO states they are aware of no historic resources which would be affected by the project and have no comment on the project as proposed. |

| | | |
|---|---|---|
| | | On May 17, 2023, the Muscogee (Creek) Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and the Catawba Indian Nation were invited to consult on the proposed project. In a letter dated June 26, 2023, the Catawba Indian Nation stated no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project area. In a letter dated June 23, 2023, the Cherokee Nation states they do not foresee this project imparting impacts to Cherokee cultural resources. Both Tribes are to be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of this project. No responses were received from the Muscogee (Creek) Nation or the Easter Band of Cherokee Indians. See attached Appendix K. |
| **Noise Abatement and Control**<br><br>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B | Yes ☐ No ☒ | One major road identified as a noise generator is located within 1,000 feet of the site. One railroad is located within 3,000 feet of the site. The site is not located within 15 miles of any commercial airports or military airfields. The highest DNL for the site is 61 dB and is within the acceptable noise range. See attached Appendix L. |
| **Sole Source Aquifers**<br><br>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149 | Yes ☐ No ☒ | No sole source aquifers are located in North Carolina. See attached Appendix M. |
| **Wetlands Protection**<br><br>Executive Order 11990, particularly sections 2 and 5 | Yes ☒ No ☐ | Equinox Environmental Consultation and Design, Inc. completed a wetland delineation on the project site in conformance with the 1987 US Army Corps of Engineers Wetland Delineation Manual. In a report dated June 2023, Equinox identified one riparian wetland on the southwest central portion of the property and no non-jurisdictional wetlands are present on the site. In an Memorandum of Understanding dated September 11, 2023, Balsam Edge, LLC agrees that no ground disturbance (either temporary or permanent) will occur in the on |

| | | |
|---|---|---|
| | | site wetland, and no portion of the project will be constructed in the wetland. The Developer futher agrees to record a restrictive covenant on the wetland within 60 days of the date of a HUD approved waiver of 24 CFR §55.22(a), or such other approval or action that HUD deems appropriate. See attached Exhibit N. |
| **Wild and Scenic Rivers**<br><br>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) | Yes ☐ No ☒ | The project is not located in a county that contains a Wild and Scenic River. The project site is not located within 0.25 miles of a Nationwide River Inventory (NRI) river. See attached Appendix O. |
| **ENVIRONMENTAL JUSTICE** | | |
| **Environmental Justice**<br><br>Executive Order 12898 | Yes ☐ No ☒ | The proposed project does not suffer from adverse environmental conditions and will not have a disproportionate adverse impact on minority or low-income populations. See attached Appendix P. |

**Environmental Assessment Factors** [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

**Impact Codes**: Use an impact code from the following list to make the determination of impact for each factor.
**(1)** Minor beneficial impact
**(2)** No impact anticipated
**(3)** Minor Adverse Impact – May require mitigation
**(4)** Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
|---|---|---|

| LAND DEVELOPMENT | | |
|---|---|---|
| Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design | 2 | The project will be compatible with surrounding land uses that are currently zoned as commercial and residential with mixed-use-community and Residential-Medium to High Density. Existing utilities and city services are available at and within the vicinity of the site. According to the Haywood County, North Carolina GIS website, the subject property is zoned for Howell Mill Urban Residential (HM-UR). Ms. Elizabeth Teague, Development Service Director, stated that the property was zoned HM-UR in which multi-family is a permitted use. Ms. Teague further stated that the zoning use had been approved for the site. Based on the proposed action conforming with the approved zoning for the project site, no impact is anticipated. |
| Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff | 2 | The project site currently consists of wooded land, fields, a residential structure, and a shed. Based on ECS' site visit on November 18, 2022, there was no evidence of discernable soil problems in the project area. The site slopes to the southwest with on-site elevations ranging from 2,680 feet to 2,650 feet. Site plans indicate that the property will be leveled prior to development for the proposed action. Evidence of slope failure, slides, and slump was not observed on the project site. The USDA Soil Data Explorer was consulted to determine the susceptibility of the soil to sheet and rill erosion by water, indicated by factor K. The Explorer indicates that Dillsboro loam (DsB, DsC) has a factor K of 0.24, while Evard-Cowee complex (EvD) has a factor K of 0.1. The values for K range from 0.02 to 0.69, with the higher value indicating the soil is more susceptible to sheet and rill erosion by water. Based on the reported K factor for the on-site soils, the potential for sheet and rill erosion by water at the project site appears to be low.<br><br>The USDA Soil Data Explorer was consulted to determine the suitability of the on-site soils for residential dwellings with basements. The suitability rating is based on the soil properties which affect the capacity of a soil to support loads without movement and on the existing factors that might affect construction and excavation costs. Dillsboro loam, 2 to 8 percent slopes (DsB), has a rating of not limited indicating that the soil has features that are very favorable for the proposed use. Dillsboro loam, 8 to 15 percent slopes (DsC), has a rating of somewhat limited due to the slopes located on the project site. A rating of somewhat limited indicates that the soil has features that are moderately favorable for the proposed use. Evard-Cowee complex, 15 to 30 percent slopes (EvD), has a rating of very limited due to the slopes and depth to soft bedrock located on the project site. A rating of very limited indicates the soil has one or more features that are unfavorable for the proposed use. Based on the site plans, the property will be leveled by grading operations |

| | | |
|---|---|---|
| | | using the grading and excavation of on-site soils and, when necessary, the import of fill material.<br><br>A stormwater management feature is proposed as part of site development and will be constructed in accordance with local regulations. Significant issues associated with stormwater are not anticipated for the project and runoff of pollutants or other chemicals is not expected.<br><br>Based on the project plans, which include grading and excavation of on-site soils and implementation of stormwater management features, no impact is anticipated. |
| Hazards and Nuisances including Site Safety and Noise | 3 | The construction of a multi-family apartment complex has the potential to create a short amount of time where site safety, site hazards, or traffic issues may be a minor concern. The construction may also generate noise from machinery and power tools. Mitigation steps will include using caution control on roads as necessary and conducting any noise-generating work during the daytime hours. Site safety and adherence to OSHA safety requirements should be managed by the contracted parties engaged in the project.<br><br>A stream and wetland areas were identified along the western boundary of the subject property and could be considered a natural hazard due to the risk of slips, falls, or drowning. Moderately dense vegetation was observed within the vicinity of the stream and has the potential to provide habitat for plants, insects, and animals, some of which may be considered poisonous. Based on the site plans and correspondence with the relying entity, the proposed development will be restricted from the stream, wetland areas, and dense vegetation on the western portion of the subject property by implementation of a retaining wall along which the structures will be constructed. Current site plans indicate there will be no entry or egress on the rear (western exterior) of the structures. The implementation of the retaining wall and limitations on rear access to the structures within the development is considered a man-made buffer to protect individuals from these natural hazards.<br><br>Based on our site observations, a sidewalk is located along the southern edge of Howell Mill Road. The proposed development is located to the north of Howell Mill Road and current site plans indicate the construction of a sidewalk along the northern edge of Howell Mill Road. However, there are currently no plans to extend the sidewalk to nearby commercial facilities or public transportation points. The implementation of a cross-walk and adequate street lighting is recommended for pedestrian traffic to access the existing sidewalk system to the south of Howell Mill Road prior to implementation of the proposed action. |

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| | | Other natural hazards, built hazards, and nuisances were not observed at the subject property. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
|---|---|---|
| **SOCIOECONOMIC** | | |
| Employment and Income Patterns | 1 | This project is expected to create temporary jobs during the construction and development phases, and then permanent local jobs to service the facility leasing office, maintenance, grounds keeping, and other tenant-supportive services. Additionally, the implementation of the proposed action will increase the local workforce as tenants will be able to work at local businesses, retail stores, and other employers. The project is anticipated to have a minor beneficial impact to the employment and income patterns of the area. |
| Demographic Character Changes, Displacement | 2 | Because the proposed action will result in the addition of affordable housing units and does not displace any current residents, no impact is anticipated. |
| Environmental Justice | 2 | The proposed project does not suffer from adverse environmental conditions and will not have a disproportionate adverse impact on minority or low-income populations. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **COMMUNITY FACILITIES AND SERVICES** | | |
| Educational and Cultural Facilities | 2 | Mr. Graham Haynes, Haywood County Schools Assistant Superintendent, provided correspondence on January 4, 2023, that the project is located in the Haywood County School District and will not adversely affect the schools serving this project. Mr. Haynes said the schools located in the district are not considered high risk or poor performing schools per state or federal performance standards. The schools that will serve this project are Junaluska Elementary, Waynesville Middle School, and Tuscola High School. Because the proposed action will not adversely affect the schools serving the project site, no impact is anticipated. |
| Commercial Facilities | 2 | The proposed project is located in a residential and commercial area and currently contains an uninhabited single-family residence. The subject property is zoned for HM-UR in which multi-family is a permitted use. The project is being developed as a multi-family residential development that will be affordable to families at or below 60% of the area median income (AMI). |

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| Health Care and Social Services | 2 | The Haywood Regional Medical Center is located approximately 3 miles northeast of the proposed project. Multiple medical offices and urgent care facilities are located within 3 miles of the proposed project. According to correspondence dated November 18, 2022 with Sarah Henderson, Public Health Services Division Director, adequate and appropriate health services are available for this project, and health services will not be adversely affected by this project. Ms. Henderson stated that Haywood Regional Medical Center, Haywood County EMS, Haywood County Health and Human Services Agency, Mercy Urgent Care, HRMC Urgent Care (Canton), HRMC Urgent Care (Hazelwood), and other various primary care providers were in the area. Because the proposed action will not adversely affect the health services serving the project site, no impact is anticipated. |
| Solid Waste Disposal / Recycling | 2 | Mr. Kris Boyd, Assisting County Manager for Haywood County, provided correspondence on January 3, 2023, that states solid waste disposal for the project can be adequately handled by public or private collectors without adversely affecting landfill capacity. Because the proposed action will not adversely affect the landfills serving the project site, no impact is anticipated. |
| Waste Water / Sanitary Sewers | 2 | Mr. Jeffrey Stines of the Public Services Department at the Town of Waynesville reported that public sewer is available and adequate to serve the project per a certification letter signed and dated January 30, 2023. Mr. Stines further reported that the closest tap is an eight inch line located 1,135 feet from the subject property and buried approximately three feet deep. Mr. Stines remarked that the line and connection point are located at the southernmost end of Abel Lane. Due to the existing available and adequate public sewer, no impact is anticipated for the proposed action. |
| Water Supply | 2 | Mr. Jeffrey Stines of the Public Services Department at the Town of Waynesville reported that public water is available and adequate to serve the project per a certification letter signed and dated January 30, 2023. Mr. Stines further reported that the closest tap is an ten inch line located adjacent to the subject property. Due to the existing available and adequate public water supply, no impact is anticipated for the proposed action. |
| Public Safety - Police, Fire and Emergency Medical | 2 | Police: ECS spoke with Josh Nichols, dispatcher for the Town of Waynesville Police Department, via telephone on February 22, 2023. Mr. Nichols reported that the subject property is currently within the jurisdiction of Haywood County; however, if the subject property is annexed within the town limits, any calls originating from the address of the subject property would be covered by the Town of Waynesville Police Department. ECS submitted an email request to Greg Christopher, Sheriff of Haywood County, on November 11, 2022, and again on January 3, 2023. ECS also emailed requests to Elizabeth Teague and Gina Zachary with |

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| | | Haywood County to request information regarding police response time and coverage for the subject property. Responses have not been received at the time of this submittal.<br><br>Fire: The City of Waynesville Fire Department currently provides services to the subject property and will continue to do so with the development of the proposed multi-family complex. According to the Haywood County GIS, the property is serviced by the Howell Mill Fire District. The Waynesville Fire Department (1022 N. Main Street) is located approximately 1 mile from the subject property. According to correspondence dated November 14, 2022, with Darrell Calhoun, Waynesville Fire Marshal, Fire Protection is available and adequate for the project as the average response time of four minutes falls withing the average community response time of four minutes. Further, Mr. Calhoun reported that Fire Protection would not be adversely affected by the project; therefore, no impact is anticipated by the proposed action.<br><br>Emergency Medical: The Haywood County Department of Emergency Medical Services is responsible for services throughout Haywood County. The closest EMS services facility (Haywood County Rescue Squad) is located approximately one mile from the proposed development. According to correspondence dated November 14, 2022, with Travis Donaldson, Director of Haywood County Emergency Services, Emergency Medical Services are available and adequate for the project as the average response time of 9 minutes falls within the average community response time of 9 minutes and 30 seconds. Additionally, Mr. Donaldson reported on February 14, 2023, that Emergency Medical Services would not be adversely affect by the project; therefore, no impact is anticipated by the proposed action. |
| Parks, Open Space and Recreation | 2 | ECS submitted an email request to Ian Smith, Director of Recreation and Parks with Haywood County, on November 11, 2022, and again on January 3, 2023. To date, a response has not been received from Mr. Smith. The City of Waynesville Parks, Recreation, and Cultural Resources Department has several parks with various amenities within the City of Waynesville. The Waynesville Recreation Park is located approximately one mile from the property and consists of 12 acres that includes six asphalt tennis courts, playgrounds, restrooms, sports fields, skate park, greenway, and three picnic shelters. Vance Street Park is located approximately 0.5 miles from the property and consists of 16 acres that contains the 64,000 square foot Waynesville Recreation Center, a softball field, soccer field, picnic shelter, restrooms, two sand volleyball courts, green space, a walking trail beside Richland Creek, and a handicapped fishing pier. Based on the availability of public parks within a mile of the subject property, no impact is anticipated by the implementation of the proposed action. |

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| Transportation and Accessibility | 2 | The proposed property will have access from Howell Mill Road. Public Transportation via the City of Waynesville public transportation system can be accessed with a bus stop at Ingles Market located on the western adjoining property (201 Barber Boulevard). According to Si Simmons, Director of Haywood Public Transit, on January 3, 2023, public transportation is available for the project site and is available through bus transportation. In addition, ECS corresponded with the North Carolina Department of Transportation. Based on the availability of public transportation adjacent to the subject property, no impact is anticipated by the implementation of the proposed action. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **NATURAL FEATURES** | | |
| Unique Natural Features, Water Resources | 2 | Based on the site visit conducted on November 18, 2022, there are no unique natural features that would be affected by the proposed action. Additionally, there are no impacts to the wetlands or stream located on the subject property as part of the proposed action. As the proposed action avoids impacting unique natural features and water resources, no impact is anticipated by the implementation of the proposed action. |
| Vegetation, Wildlife | 3 | Based on the current site plans, removal of the vegetation on portions of the wooded land and fields will be necessary for the development of the project. Following construction, the areas not developed with impervious surfaces will consist of landscaped areas that will be routinely maintained. Based on the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action. |
| Other Factors | | n/a |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **CLIMATE AND ENERGY** | | |
| Climate Change Impacts | | Natural hazards that may be affected by climate change and affect residents of HUD-assisted housing include the following:<br><br>• Flooding - The subject property is located up-gradient and outside the mapped flood hazard zones. A stream was |

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| | | observed transecting the western portion of the site; however, no indicators of recent flooding events were observed. Additionally, current site plans indicate the structures will be placed at an elevation of over 2,655 feet, approximately 20 feet higher in elevation than the stream (2,635 feet).<br>• Sea Level Rise - The subject property is located approximately 320 miles from the coastline of the Atlantic Ocean.<br>• Hurricanes and Extreme Storms - North Carolina, and respectively the subject property, are located within a humid climate zone. Hurricanes and other extreme storms originating from the Gulf of Mexico or the Atlantic Ocean have a potential to reach the subject property; however, site plans indicate that stormwater features will be placed on the site to accommodate rain events on the impervious surfaces of the parking lots, structures, and roads. Additionally, site plans show the placement (post-development) of canopy trees, evergreen trees, and shrubs. As part of the development, it is assumed that the vegetation will be routinely maintained to prevent damage to persons or property from dead trees, falling branches, etc.<br>• Drought - The subject property will be serviced by municipal water supply. Although vegetation on the project site may be impacted by drought, there are no expected impacts to residents from drought conditions.<br>• Extreme Heat - According to temperature data obtained from the National Oceanic and Atmospheric Administration (NOAA), the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the subject property will utilize electric HVAC units for heating and cooling the residential units.<br>• Wildfire - The subject property is not located within close proximity (<1,000 feet) of large, contiguous forested areas.<br>• Landslides - The proposed site plans indicate the site will be leveled and retained using walls for the proposed action, reducing the risk of landslides on the subject property.<br>• Extreme Cold - According to temperature data obtained from the National Oceanic and Atmospheric Administration (NOAA), the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the subject property will utilize electric HVAC units for heating and cooling the residential units. |

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| | | Based on the site topography, location, and climate, the risk of natural hazards associated with climate change appears to be minimal. There are no pre-existing conditions regarding air quality, urban heat island effects, soil stability, and water resources; therefore, no site suitability factors are expected to be altered before or after implementation of the proposed action. |
| Energy Efficiency | 3 | According to the Waynesville 2035 Comprehensive Land Use Plan, one of the goals for the city is to protect and enhance Waynesville's natural resources which includes the engagement and promotion of best management practices related to energy use, efficiency, and waste management. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. Energy Star Certification for multifamily new construction projects requires one of three paths to earn the certification based on energy rating and/or modeling software and use of energy efficient measures. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and mult-family developments.<br><br>The project is located within close proximity to major transportation arteries including Howell Mill Road, Russ Avenue, and Great Smoky Mountain Expressway (US-23). Nearby daily conveniences to the site include Ingles Market, Big Lots, Walmart, and Publix Super Market, which are located within a 10-minute drive from the site, as well as restaurants, pharmacies, and other retailers. County educational facilities and higher education institutional facilities are also located within close proximity to the Project.<br><br>With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency. |

**Additional Studies Performed**:
n/a

**Field Inspection** (Date and completed by)**:**
Phase I Environmental Site Assessment – ECS Southeast, LLP – May 22, 2023
Limited UST Closure Assessment Report – Bunnell Lammons Engineering – August 30, 2023
Water of the US Assessment – Equinox Environmental Consultation and Design, Inc. – July 2023

**List of Sources, Agencies and Persons Consulted** [40 CFR 1508.9(b)]**:**
NC Department of Administration

NC Department of Environmental Quality: Division of Environmental Assistance and Customer Service
NC Department of Environmental Quality: Division of Waste Management
NC Department of Environmental Quality: Division of Emergency Management
NC Department of Environmental Quality: Solid Waste Section
NC Department of Natural & Cultural Resources
NC Wildlife Resource Commission
NC State Historic Preservation Office
US Fish and Wildlife Services
Town of Waynesville – Development Services Department
Haywood County Schools
Haywood County Health and Human Services Agency
Haywood County – County Manager
Director of Public Services
Waynesville Fire Department
Haywood County Emergency Services
Haywood Public Transit

Muscogee (Creek) Nation
Cherokee Nation
Eastern Band of Cherokee Indians
Catawba Indian Nation

Cherokee Nation: ECS Email Request
City of Waynesville, NC Website: https://www.waynesvillenc.gov/
City of Waynesville Comprehensive Land Use Plan for 2035
Department of Military and Veterans Affairs website, https://www.milvets.nc.gov/services/military-bases-north-carolina
Eastern Band of Cherokee Indians: ECS Email Request
EJScreen, https://www.epa.gov/environmentaljustice
EPA Air Data website, http://www.epa.gov/airdata/
EPA Green Book: https://www.epa.gov/green-book
EPA NEPA Assist GIS website, https://www.epa.gov/nepa/nepassist
EPA Radon Map, https://www.epa.gov/sites/default/files/2014-08/documents/north_carolina.pdf
EPA Sole Source Aquifers mapping program (https://www.epa.gov/dwssa/map-sole-source-aquifer-locations)
FEMA Flood Map Service Center: https://msc.fema.gov/portal
Google Earth Website: https://www.google.com/earth/
Haywood County GIS Website: https://maps.haywoodcountync.gov/gisweb/default.htm
Haywood County, NC Website: https://www.haywoodcountync.gov/
HUD Exchange Acceptable Separation Distance Tool, https://www.hudexchange.info/programs/environmental-review/asd-calculator/
HUD Exchange DNL Calculator, https://www.hudexchange.info/programs/environmental-review/dnl-calculator/
Inactive Hazardous Sites and Pollutant-Only Sites Inventory by County (https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program)
Muscogee (Creek) Nation: ECS Email Request & Response
National Park Services Nationwide Rivers Inventory, https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm
National Transportation Noise Map by the Bureau of Transportation Statistics, https://www.bts.gov/geospatial/national-transportation-noise-map

National Wild and Scenic Rivers System Website: https://www.rivers.gov/mapping-gis.php
North Carolina Department of Agricultural (NCDA)
North Carolina Department of Environmental Quality Coastal Area Management Counties website, https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/cama-counties
North Carolina Department of Environmental Quality Laserfische website, Laserfische https://edocs.deq.nc.gov/WasteManagement/Welcome.aspx
North Carolina Department of Transportation (NCDOT) mapping website, https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx
North Carolina Department of Transportation (NCDOT) – Division Office, Aviation website (https://www.ncdot.gov/divisions/aviation/Pages/nc-airports.aspx)
NCDOT Traffic Volume GIS Viewer (https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx)
NC Coastal Area Management Act – Coastal Counties:
https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/camacounties
North Carolina Natural Heritage Program Letter Correspondence
North Carolina State Historic Preservation Office GIS Web Service: http://gis.ncdcr.gov/hpoweb/
North Carolina State Historic Preservation Office letter correspondence
Tribal Directory Assessment Tool website: https://egis.hud.gov/tdat/Tribal.aspx
U.S. Census Bureau, Census 2010 website: http://www.census.gov/
U.S. Department of Agriculture Web Soil Survey website, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
U.S. Department of Housing and Urban Development Environmental Guidance Website:
https://www.hud.gov/states/shared/working/r4/environment/guidancenc
https://www.hudexchange.info/environmental-review/federal-related-laws-and-authorities/
U.S. Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper Website: https://www.fws.gov/wetlands/data/mapper.html
U.S. Fish and Wildlife Service, Asheville Field Office letter correspondence
US Fish and Wildlife Service (FWS) Information for Planning and Consultation (IPaC) tool (https://ecos.fws.gov/ipac/)
U.S. Fish and Wildlife Service – Coastal Barrier Resources System Mapper website:
https://www.fws.gov/cbra/Maps/Mapper.html
U.S. Geological Survey website: http://www.usgs.gov/

**List of Permits Obtained:**
None to date

**Public Outreach** [24 CFR 50.23 & 58.43]**:**
Public hearing for "Major Site Plan Review" at the Town of Waynesville Planning Board – 2021
Posting or publishing of the combined NOI RROF/FONSI for public comment will be completed as part of the Part 58 environmental assessment process.

**Cumulative Impact Analysis** [24 CFR 58.32]**:**
This project is a single and discrete project, not linked with other on-going or planned future projects. As such, its impacts are definable to the time and location of their implementation. As a discrete project, there are no cumulative impacts from associated or future projects related to this site.

**Alternatives** [24 CFR 58.40(e); 40 CFR 1508.9]
Only two possible courses of action were considered: (1) implement project or (2) the no action alternative. The first would be to construct the Proposed Action according to the plans describe herein. The second No

Action Alternative would not construct the proposed multifamily residential development on the site and the property would remain with a vacant single-family residence, wooded land, and fields. Under this alternative, there would be no multi-family housing development and the creation of affordable rental units to meet the demands outlined in the City of Waynesville Comprehensive Land Use Plan for 2035 and the regional housing needs assessment conducted by Dogwood Health Trust. City's Comprehensive Future Land Use Plan would not be met.

**No Action Alternative** [24 CFR 58.40(e)]:
The selection of the No Action Alternative would not meet the stated Purpose and Need, which is to provide affordable housing for low- and moderate-income families.

## Summary of Findings and Conclusions:

The Proposed Balsam Edge Apartments Site is located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The subject property includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as PIN 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed.

The scope of work for the subject property includes an 84 unit, family oriented affordable apartment community consisting of one, two, and three bedroom units. All units will include washer/dryer hookups, central AC, ceiling fans, Energy Star kitchen appliances (including dishwashers), and mini-blinds. 12 of the 84 units will be fully accessible with grab bars in the bathrooms and other features for mobility impaired residents. The subject property will also include a standalone community building with a fitness room, community room with kitchen, computer center, and laundry facilities, while the outdoor amenities will include a picnic/grilling area and an on-site playground. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities for energy efficiency.

Site information used to develop this Environmental Assessment was obtained during walking and driving reconnaissance efforts on and around the property. Environmental resource information was also obtained from letter submittals and responses from state and federal agencies, from information that was obtained through local, state and federal government websites, and other appropriate sources. Based on the proposed development plan and the information reviewed and obtained as part of this Environmental Assessment, the following compliance issues and/or environmental impacts were identified:

- (Contamination and Toxic Substances) - An underground storage tank (UST) was observed on the southern exterior of the residence at 333 Howell Mill Road and is considered a potential risk for contamination if an unknown release has occurred during refueling or decomposition of tank materials. Based on the presence of the UST within the proposed action area, this project is not in compliance with Contamination and Toxic Substances requirements.

- (Endangered Species Act) - Based on correspondence from USFWS, Gray Bat (endangered) and Tricolored Bat (proposed endangered) are known to roost with 0.5-mile of the proposed action. USFWS recommend that tree-clearing be conducted outside the active season for Gray Bat (March 15 - November 15). Additionally, the on-site structures must be surveyed within two weeks of their proposed demolition. The aforementioned actions are proposed for implementation, and based on correspondence with USFWS, following the aforementioned recommendations would allow the project to proceed under a "may affect, not likely to adversely affect" concurrence. Therefore, the project is in compliance with the Endangered Species Act **if** the proposed mitigation measures are followed.

- (Wetlands Protection) - Based on the current site plans and information reviewed, there are no impacts proposed to wetlands, streams, or other waters on the subject property for the proposed action. According to 24 24 CR § 55.12(c)(7) if an activity, which is not excluded under 24 CFR §§ 55.12 occurs on a property which contains wetlands, and the activity will not occur in the wetlands, a permanent covenant or deed restriction must be placed on the property with intent to preserve the wetlands or an 8-step decision making process must be completed. Based on the aforementioned requirement, the wetlands located on the subject property should be conserved with deed-restrictive covenants in order to be in compliance with Executive Order 11990.

- (Hazards and Nuisances) - Based on our site observations, a sidewalk is located along the southern edge of Howell Mill Road. The proposed development is located to the north of Howell Mill Road and current site plans indicate the construction of a sidewalk along the northern edge of Howell Mill Road. However, there are currently no plans to extend the sidewalk to nearby commercial facilities or public transportation points which could represent a site safety hazard. Implementation of a cross-walk, pedestrian signage, and/or extension of the proposed sidewalk on the north side of Howell Mill Road could reduce traffic hazards.

- (Energy Consumption/Efficiency) - The development will be built to achieve Energy Star Multifamily New Construction certification and will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and multi-family developments. With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency.

- (Vegetation/Wildlife) - Due to the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action.

## Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

| Law, Authority, or Factor | Mitigation Measure |
|---|---|
| **Contamination and Toxic Substances:** 24 CFR Part 50.3(i) & 58.5(i)(2) | Due to the identified presence of limited soil and groundwater impacts, the Developer agrees to report the release incident and associated assessment data to the North Carolina Department of Environmental Quality (NCDEQ) UST Section. A complete State approved remediation plan will be required prior to obtaining the necessary signatures to complete the environmental review and publishing or posting a combined NOI-RROF/FONSI. Removal of the UST and the abatement of grossly impacted soil and a Notice of Residual |

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| | Petroleum (NRP) to address the groundwater contamination on the Site will likely be requested by the NCDEQ. |
| **Wetlands Protection:** Executive Order 11990, particularly sections 2 and 5 | A reparian wetland is located on the southwest central portion the Site (see attached Exhibit A).The Developer agrees that no ground disturbance (either temporary or permanent) will occur in the on site wetland, and no portion of the project will be constructed in the wetland. The Developer futher agrees to record a restrictive covenant on the wetland within 60 days of the date of a HUD approved waiver of 24 CFR §55.22(a), or such other approval or action that HUD deems appropriate. |

**Determination:**

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Claudia Young Date: 11/27/2023

Name/Title/Organization: Claudia Young/Manager of Compliance and Quality Assurance/North Carolina Housing Finance Agency

Certifying Officer Signature: Scott Farmer Date: 11/27/2023

Name/Title: Scott Farmer/Executive Director/North Carolina Housing Finance Agency

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

# HUD Waiver and Correspondence

NORTH CAROLINA
HOUSING
FINANCE
AGENCY

A self-supporting
public agency

Scott Farmer
Executive Director

PO Box 28066
Raleigh, NC
27611-8066

3508 Bush Street
Raleigh, NC
27609-7509

TEL. 919-877-5700
FAX 919-877-5701
www.nchfa.com

September 15, 2023

Mr. Lorenzo Claxton
HUD Field Office Director for North Carolina

Mr. Lenwood Smith II, CL
Environmental Protection Specialist

U.S. Department US Department of Housing and Urban Development
1500 Pinecroft Road, Suite 401
Greensboro, NC 27407-3838

Dear Mr. Claxton and Mr. Smith,

The North Carolina Housing Finance Agency ("NCHFA") respectfully submits this request to waive a violation of 24 CFR Part 58 in an instance where non-HUD funds were spent on a choice-limiting or environmentally adverse activity was undertaken by the developer after application for HUD assistance, but prior to NCHFA completing its Part 58 environmental review.

After receiving a *conditional commitment* of HOME funds from NCHFA, the developer, Mountain Housing Opportunities, Inc., a North Carolina nonprofit corporation ("MHO"), mistakenly committed a "choice-limiting action" for a prospective affordable housing development, to be known as Balsam Edge, in Waynesville, North Carolina.[1]

**Project:**
Balsam Edge is a proposed new construction of an 84-unit affordable multifamily development to be located on 5.31-acres at 291 Howell Mill Road in Waynesville, North Carolina. Upon completion, the project will consist of three residential buildings, including 22 one-bedroom units, 42 two-bedroom units, and 20 three-bedroom units. The units in Balsam Edge will be made available to individuals earning at or below 60% of the area median income ("AMI"), including twenty-one units reserved to renters earning at or below 40% AMI and thirteen units earning at or below 50% AMI units that will meet NCHFA'S deep targeting requirements.

The residents of Haywood County have a particular need for this affordable housing development. The Western North Carolina Housing Needs Assessment completed by Bowen National Research in 2021 found 41.5% of Haywood County renter households to be cost burdened and estimated the need for 1,566 units of additional affordable housing to begin to rectify the shortage of affordable housing. In 2022 this need was further exacerbated as

[1] Appendix A

Haywood County suffered devastation from catastrophic flooding due to the remnants of Tropical Storm Fred (FEMA-4617-DR-NC). The North Carolina Office of Recovery and Resilience ("NCORR") reports that due to flooding from Tropical Storm Fred, 56 homes were destroyed in the area and an additional 206 homes suffered damage to the extent of substantial failure.

**Funding Sources (at of time of application):**

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| NCHFA's Rental Production Home Loan (funded with HOME funds) | $1,450,000 |
| RD 538 Loan | $3,987,638 |
| Mountain Housing Opportunities partner loan | $965,000 |
| Federal Low-Income Housing Tax Credits (Equity) | $9,942,099 |
| Deferred Developer Fee | $3,933 |
| **Total** | **$16,348,670** |

Recent changes in interest rates and construction costs present challenges for completion of this project. In order for construction to begin, all financing must be in place. At that time, MHO will close the construction loan and the tax credit equity investor may purchase the awarded tax credits. The total development cost of Balsam Edge is $23.7 million. The primary financing sources include a Section 538 loan guaranteed by USDA and tax credit equity. The Dogwood Health Trust, a North Carolina nonprofit corporation, has also contributed $850 thousand to development of the project. However, an approximate $6 million funding gap remains. Available resources to fill this gap include locally administered HUD HOME funding from the Southwestern Commission's HOME Consortium, HUD Community Development Block Grant-Disaster Recovery ("CDBG-DR") funds (approximately $13 million was allocated by HUD to NCORR, an agency of the State of North Carolina, for use within Haywood County), and the NCHFA allocation of American Rescue Plan HOME funding ("HOME-ARP").-Because each of these potential sources of funds utilize federal funds, a waiver of the 24 CFR §58.22(a) or other waiver or action as HUD deems appropriate will be required, pursuant to the July 24, 2004 memo from Richard Broun to Regional Field Officers ("Guidance on Obtaining a Waiver of 24 CFR Part 58") to access these funds. MHO must close the funding gap in order to construct Balsam Edge.

**Environmental Review:**
NCHFA's completed environmental review, minus environmental public notices, Request for Release of Funds and Certification is attached.

**A description of the violation, including all relevant facts, chronology of events, and nature of violation. As described above the violation must be regulatory (not statutory) to obtain a waiver. The request must identify the specific regulatory violation.**

**Relevant Facts:**

Upon receipt of a 9% tax credit award for Balsam Edge, Mountain Housing Opportunities ("MHO") also received a conditional commitment from the North Carolina Housing Finance Agency ("NCHFA") for a Rental Production Program ("RPP") Loan. RPP is one of several programs into which NCHFA utilizes its allocation of Federal HOME funding and, as a result of the source of funding, completion of an environmental review pursuant to 24 CFR Part 58 ("Part 58 Environmental Review") is required for the recipients of such funding. MHO understood that

receipt of these funds necessitated the completion of a HUD Part 58 Environmental Review prior to undertaking of any "choice-limiting actions" related to the Balsam Edge project.

MHO contracted with ECS Southeast, LLP ("ECS") to complete an environmental assessment. While conducting that assessment in January of 2023, ECS advised MHO that the United States Fish and Wildlife Service ("USFWS") flagged a potential roosting habitat for the federally endangered gray bat within one-half mile of the Balsam Edge site. In its correspondence, USFWS outlined appropriate mitigation measures to allow USFWS to determine development of the project would be "not likely to adversely affect" the habitat for the gray bat, including "accomplish[ing] all tree clearing activities outside of the active season for [the] gray bat." During the active season, bats may forage, commute and/or roost within the action area.

Section 42 of the Internal Revenue Code requires LIHTC developments to expend 10% of a property's reasonably expected tax credit basis within 12 months after carryover allocation ("10% Cost Certification deadline") and be placed-in-service no later than December 31st on the second year after the carryover allocation date. While NCHFA does provide procedures for receipt of a new allocation of tax credits for developers who are unable to meet the IRS milestones, the IRS does not encourage such requests and making them can result in significant penalty to the developer. In the case of Balsam Edge, the 10% Cost Certification deadline is 12/5/23 and the place-in-service deadline is 12/31/24; both of these deadlines would be virtually impossible to meet if trees could not be cleared until 11/15/23.

With the various deadlines in mind, MHO consulted with ECS about options for complying with USFWS mitigation requirements (please see email from Thomas Hawkins dated January 31, 2023) for additional discussion). After consulting with USFWS staff, ECS indicated USFWS would consent to removal of the trees prior to March 15th and would issue a "may affect, not likely to adversely affect" determination regarding the effect of the development of the site on the federally protected bats. Based on this guidance from both ECS and USFWS, MHO removed the trees prior to the 3/15/23 deadline. MHO now understands that removing trees, even though recommended by USFWS as an impact avoidance and minimization measure during the Part 58 Environmental Review, constitutes a choice-limiting action. Such actions may not be undertaken until the Part 58 Environmental Review is complete and the Request for Release of Funds and related certification has been approved. However, neither USFWS nor, more particularly, ECS flagged this action as potentially choice limiting, so MHO mistakenly presumed it was acting within the requirements of the Part 58 Environment Review. MHO asked ECS to communicate its intent to cut trees to USFWS, after which USFWS reaffirmed their position to ECS that such action would be consistent with appropriate mitigation. Before mobilizing, MHO reached out yet again to ECS to double check appropriateness of cutting down the trees and asked if any additional action was required; ECS responded, on February 20, 2023, by sending a February 16, 2023 email from Byron Hamstead of USFWS and reiterating that MHO "should be clear before March 15th" to cut down the trees and noted such information would be included in the environmental assessment. Based on this feedback, MHO erred in not consulting either the responsible entity (NCHFA) or HUD prior to proceeding with the tree cutting. It is here MHO misunderstood the fact that tree felling, though a good faith effort of appropriate mitigation, was not in fact in compliance with part 58 Environmental Review requirements. MHO contracted with Southern Appalachian Grading and Excavation Inc. ("Southern Appalachian") to fell only the trees within the areas of disturbance and to leave tree stumps to avoid land disturbing activities unnecessary to the removal of the trees. MHO used its own unrestricted cash (not federal funding) to pay Southern Appalachian for this activity.

MHO moved forward with felling of trees after consultation with USFWS to address the concerns of USFWS and ensure that federally protected bats known to be present in the vicinity of the property were not adversely impacted by development of the site. MHO mistakenly believed that tree removal prior to completion of the Part 58 Environmental Review would not constitute a choice-limiting action. Upon learning of the tree cutting activities at the Balsam Edge site, NCHFA revoked the conditional commitment of the RPP loan on the grounds that a choice-limiting action had occurred prior completion of the environmental review. Understanding its mistake, MHO is committed to receiving all necessary training and assistance in order to fill in its knowledge gaps about HUD Part 58 Environmental Review procedures and avoid mistakes in the future.

**Timeline: Chronology of events are attached.**[2]

**Evidence that no unmitigated adverse environmental impacts will result from granting a waiver:**

After completing the Part 58 environmental review NCHFA entered into an agreement with MHO to implement mitigation measures listed therein to reduce, avoid, or eliminate adverse environmental impacts identified during NCHFA's review.

**Report from site inspection by HUD Field Office staff or a HUD contractor. The report will independently determine whether granting a waiver will result in and adverse environmental impact:**

**To be completed by HUD.**

NCHFA is of the opinion that MHO acted in good faith based on erroneous guidance from third party consultants and did not willfully non-comply. Considering the tremendous need for affordable housing throughout North Carolina, and specifically in Waynesville, NCHFA respectfully submits with waiver to HUD.

Sincerely,

Jennifer Percy
General Counsel
on behalf of Scott Farmer, Executive Director

[2] Appendix B

NORTH CAROLINA HOUSING FINANCE AGENCY

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Raleigh, NC 27609
919-877-5700
www.HousingBuildsNC.com

January 30, 2024

Matthew T. King, Director

Office of Community Planning & Development

1500 Pinecroft Road

Greensboro, NC 27407-3838

Re: Corrective Actions – Balsam Edge project site

Dear Mr. King:

This letter is in response to HUD's letter dated January 8, 2024 responding to the North Carolina Housing Finance Agency's (NCHFA) request to waive the requirements of 24 CFR 58.22 in anticipation of submitting a Request for Release of Funds (RROF) and seeking issuance of an Authority to Use Grant Funds (AUGF) for the proposed project known as Balsam Edge. HUD recommended that upon receipt of the RROF the AUGF should be approved provided the mitigation actions that the developer, Mountain Housing Opportunities (MHO), has agreed to act upon are implemented. As a result of the recommendations, the Office of Community Planning and Development (CPD) issued a finding requiring corrective actions.

Please see below a summary of the condition, HUD's required corrective actions and steps NCHFA has implemented for remediation.

**Condition:** MHO cleared trees from the Balsam Edge project site between March 6 and 10, 2023, prior to completion of the environmental review process and HUD's issuance of an AUGF.

**Required Corrective Action:** The NCHFA must add language in its application packages and conditional commitment letters indicating that choice limiting actions also include activities that could have an adverse environmental impact or limit the choice of reasonable alternatives (for example, tree removal actions that could adversely affect threatened or endangered species or prejudice the site layout); The NCHFA must also establish a process for applicants to communicate with NCHFA when questions arise regarding activities that may constitute choice-limiting actions.

**NCHFA Implemented Corrective Actions:**

1. Application Packages: Developers submit an online application for all NCHFA Rental Production Program (RPP) loans, including those funded with HOME funds as part of the application to participate in the Low-Income Housing Tax Credit Program (LIHTC). Once an application is approved for LIHTC, an RPP loan is automatically considered under this program. Effective May 10, 2024 the online application will require applicants to attest to the following:

> **"Applicant is requesting RPP funds and understands that the RPP loan may be funded with federal funds such as the HOME Investment Partnership Act (HOME). Applicant, developer or any related entity is prohibited from undertaking or committing any funds to physical or choice-limiting actions until the Environmental Assessment is complete. Examples of a physical or choice-**

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**limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property. Any violation of this provision may result in the denial of funds.**

**In the event Applicant has questions about the Environmental Assessment process, including what is considered a prohibited activity, Applicant should email the Agency at EAQuestions@nchfa.com for additional information and guidance prior to taking any action."**

**2.** Conditional Commitment Letters (CLL): The below language has been added to NCHFA's CLL's for all multi-family projects that will receive a HOME funded Rental Production Program (RPP) loan from NCHFA. The effective date of the revised template is January 23, 2024.

**"A completed environmental assessment includes the Agency's receipt of form HUD-7015.16 (Authority to Use Grant Funds) from HUD.**

An environmental assessment is required on all projects receiving HOME funds. An environmental assessment is comprised of two items: the Statutory Checklist and the Environmental Assessment. The Borrower must submit to the Agency fifteen (15) copies of the Environmental Assessment with supporting documentation, one (1) copy of the Statutory Checklist with supporting documentation, and one (1) copy of the Phase I Environmental Review. These items should be submitted to the Agency as soon as possible in order to expedite approval for the release of funds from the U. S. Department of Housing and Urban Development.

**Important: Notwithstanding any provision of this conditional commitment letter to the contrary, the parties hereto agree and acknowledge that this is a conditional commitment and does not constitute a final commitment of funds or site approval, and that such final commitment of funds or approval may occur only upon satisfactory completion of environmental assessment and receipt by the Agency of a release of funds from the U. S. Department of Housing and Urban Development under 24 CFR Part 58. The parties further agree that the provision of any funds to the project is conditioned on the Agency's determination to proceed with, modify or cancel the project based on the results of a subsequent environmental assessment. Under no circumstances may the Borrower engage in an activity that may result in an adverse environmental condition or limit the choice of reasonable alternatives. If the Borrower is unsure if an activity is a physical or choice-limiting activity it must immediately contact the Agency for guidance prior to any undertaking. Examples of a physical or choice-limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration**

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**of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property. Any violation of this provision may result in the denial of funds under this conditional commitment.**

**In the event Borrower has questions about what is considered a prohibited activity or the Environmental Assessment process, Borrower should email the Agency at EAQuestions@nchfa.com for guidance prior to taking any action and additional information.**"

3. Qualified Allocation Plan (QAP): The QAP details the selection criteria and application requirements for the Low-Income Housing Tax Credit Program (LIHTC). NCHFA publishes the first draft QAP for public comment annually, generally no later than September of each year. The 2025 QAP will include a revision to Appendix G (Rental Production Program Guidelines), to include, at a minimum, the below language.

**"Applying for a Rental Production Program (RPP) loan and prohibition on choice-limiting activities.**

**The source of proceeds for an RPP loan will be selected by the Agency. Since the HOME Investment Partnership Act (HOME) is a source of funding, upon submission of an RPP application, RPP applicants, or related entities, are prohibited from undertaking or committing any funds to physical or choice-limiting actions, including property acquisition, demolition, movement, rehabilitation, conversion, repair or construction until such time as a funding source is designated.**

**If it is determined that HOME is the source of funds for the RPP loan then the prohibitions in the preceding paragraph regarding undertaking or committing any funds to physical or choice-limiting actions remains in effect until satisfactory completion of environmental review and receipt by the Agency of a release of funds from the U.S. Department of Housing and Urban Development under 24 CFR Part 58.**

**If the RPP applicant is unsure if an activity is a physical or choice-limiting activity it must immediately contact the Agency for guidance prior to any undertaking. Examples of a physical or choice-limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property.**

**In the event the RPP applicant has questions about what is considered a prohibited activity or the Environmental Assessment process, Developer/Borrower should**

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**email the Agency at EAQuestions@nchfa.com for guidance prior to taking any action and additional information."**

NCHFA believes adding clarifying language around choice limiting actions and providing a dedicated email address for Environmental Assessment questions in the QAP, the online application, and the Conditional Commitment Letters will ensure potential borrowers are well informed about the prohibition on taking any choice limiting actions, have a better understanding of what is considered a choice limiting action, and have access to ask questions and the opportunity to gain better clarification when questions arise. Please let me know if you have any questions.

Sincerely,

Jennifer Percy
General Counsel

Cc:
Scott Farmer, NCHFA
Claudia Young, NCHFA
Lorenzo Claxton, HUD
Lenwood Smith, HUD

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
Greensboro Office
Office of Community Planning & Development
1500 Pinecroft Road, 401, Asheville Building
Greensboro, NC 27407-3838
(336) 851-2802
*www.hud.gov* ✦ *espanol.hud.gov*

January 8, 2024

Jennifer Percy
General Counsel
NCHFA
P.O. Box 28066
Raleigh, NC 27611-8066

Dear Mrs. Percy:

This letter is in response to the North Carolina Housing Finance Agency's (NCHFA) letter dated September 15, 2023, requesting to waive the requirements of 24 CFR 58.22 in anticipation of submitting a Request for Release of Funds (RROF) and seeking the issuance of an Authority to Use Grant Funds (AUGF) by the HUD Greensboro Field Office. The waiver request is based on NCHFA discovering, upon seeing an ABC13 News story entitled "Old Oak Trees Felled to Make Way for Waynesville Apartment Project", that subrecipient, Mountain Housing Opportunities (MHO), cleared trees from the Balsam Edge project site between March 6 and 10, 2023, prior to completion of the environmental review process and HUD's issuance of an AUGF.

**The Office of Environmental and Energy (OEE) recommends that upon receipt of the RROF the AUGF should be approved.** MHO, acting in good faith, inadvertently completed the tree removal action based on erroneous guidance from its environmental consultant; and there are no adverse environmental impacts that will result from approving the project, provided the mitigation actions that MHO has agreed to act upon are implemented.

As a result of OEE's recommendations the Office of Community Planning and Development (CPD) is issuing a finding which will result in required corrective actions to ensure that future projects funded through the NCHFA do not result in regulatory violations of 24 CFR Part 58.

The finding is as follows:

**Finding No. 1**

**Condition:** MHO cleared trees from the Balsam Edge project site between March 6 and 10, 2023, prior to completion of the environmental review process and HUD's issuance of an AUGF.

**Criteria:** Pursuant to 24 CFR 58.22(a) "until the RROF and the related certification have been approved, neither a recipient nor any participant in the development process may commit non-HUD funds on or undertake an activity...if the activity or project would have an adverse environmental impact or limit the choice of reasonable alternatives."

**Cause:** To maintain a finding of "Not Likely to Adversely Affect", pursuant to Section 7 of the Endangered Species Act (ESA), for the federally endangered Northern long-eared bat (Myotis septentrionalis), Indiana bat (Myotis sodalist) and gray bat (Myotis grisescens), tree clearing could not occur on the Balsam Edge project site between March 15 and November 15. Because a portion of the project funding would be derived from Internal Revenue Service Low-Income Housing Tax Credits (LIHTC), MHO believed that clearing the trees after November 15, 2023, would threaten project feasibility by potentially delaying construction to the point that MHO would fail to meet LIHTC program deadlines; therefore, based on guidance provided by its environmental consultant (ECS Southeast LLP) on February 20, 2023, indicating that the tree clearing could proceed as it had received US Fish and Wildlife Service approval, MHO contracted with Southern Appalachian Grading and Excavation Inc., on March 2, 2023, to clear the trees, while leaving the stumps, prior to March 15, 2023. MHO used its own unrestricted cash to pay Southern Appalachian Grading and Excavation Inc. for the tree removal action. MHO erroneously assumed that its environmental consultant provided proper guidance regarding the tree removal action and did not consult with the NCHFA before executing the tree removal contract. Because the tree clearing action occurred within the U.S. Fish and Wildlife Service's (USFWS) approved cutting window, it is extremely unlikely that it resulted in harm or adverse effects to the federally endangered bat species.

**Effect:** The NCHFA and MHO have confirmed that no demolition or construction action has been initiated. Furthermore, a site visit to the property was conducted by OEE staff on November 30, 2023, which concluded that no demolition or construction work has commenced for the project. OEE has reviewed the Environmental Review Record (ERR) and does not believe that the tree clearing activity resulted in adverse effects to the environment, nor does OEE anticipate that adverse environmental impacts will result from HUD approving this project, provided the mitigation actions that MHO has agreed to act upon, as outlined in the ERR, are implemented.

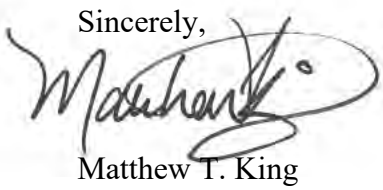
**Corrective action:** The NCHFA must add language to the conditional commitment language in its application packages and Conditional Commitment Letters indicating that choice limiting actions also include activities that could have an adverse environmental impact or limit the choice of reasonable alternatives (for example, tree removal actions that could adversely affect threatened or endangered species or prejudice the site layout);

The NCHFA must also establish a process for applicants to communicate with NCHFA when questions arise regarding activities that may constitute choice-limiting actions.

Within **30** days from the date of this letter NCHFA must provide information demonstrating that it has met the requirements of the required corrective action. If the agency fails to respond within 30 days, or the response is unsatisfactory, HUD will undertake additional corrective actions.

If you have any questions regarding the waiver approval or finding and required corrective actions, please contact Lenwood Smith, Field Environmental Officer, or Tasleem Albaari, Sr. CPD Representative, via email at Lenwood.E.Smith@hud.gov or Tasleem.Albaari@hud.gov, respectively.

Sincerely,



Matthew T. King
Director
Office of Community Planning & Development

cc:
Scott Farmer, NCHFA
Claudia Young, NCHFA
Lorenzo Claxton, HUD
Lenwood Smith, HUD

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# APPENDIX B

## CONDITIONAL COMMITMENT

January 26, 2024

«Borrower.BorrowerName»
Attn: «Borrower.PrimaryContactFullName»
«Borrower.Address»
«Borrower.City», «Borrower.State» «Borrower.Zip»

RE: «Loan.ProjectName»
«Property.City», «Property.CountyName» County, North Carolina
Agency Project Number: «Loan.AgencyProjectNumber»

Dear _____:

The North Carolina Housing Finance Agency ("Agency") has conditionally approved funding under the Rental Production Program ("RPP") to provide assistance to a residential housing project known or to be known as «Loan.ProjectName» ("Project"). The Project is a «RPMProjectInfo.HousingUnitCount»-unit, «rpmprojectinfo.constructiontype» rental project for «rpmprojectinfo.targetdemographic» located on or about «Property.Address», «Property.City», «Property.CountyName» County, North Carolina, which includes land, improvements, easements and development rights ("Property"). This approval and all terms and conditions are based on the Agency's underwriting, the «RPMProjectInfo.AwardYear» Qualified Allocation Plan ("QAP") and representations made in the Project full application for Low-Income Housing Tax Credits dated «RPMProjectInfo.ProjectFullApplicationSubmittedDate» ("Application"). The terms and conditions of the loan ("RPP Loan") are as follows:

| | |
|---|---|
| **Borrower:** | «Borrower.BorrowerName» |
| **Loan Amount:** | $ «Loan.LoanAmountFormattedWithCents» |
| **Source of RPP Funds:** | HOME (42 USC 12721, et seq. and 24 CFR Part 92) |
| **Other Sources of Funds:** | «TableStart:OtherFundingSources»«OtherFundingSourceDesc»«TableEnd:OtherFundingSources» |
| **Interest Rate:** | «LoanDetail.InterestRatePercentage» |
| **Term:** | «LoanDetail.TermInYears» years |
| **Security:** | Secured by Deed of Trust on Property («LoanDetail.LienPositionAsOrdinal» lien position). |
| **Maximum Developer's Fee:** | $«RPMProjectInfo.MaxDeveloperFee»00 |

Trial

**RPP Loan Disbursement: The RPP Loan shall be disbursed in two separate disbursements:**

**(i) First Disbursement. The first disbursement will be in an amount equal to 75% of the RPP Loan amount and will only occur upon meeting the requirements in the Agency's final commitment letter required for closing the RPP Loan. In any event, the RPP Loan first disbursement will only be made when the outstanding balance on the first-tier construction financing equals or exceeds 75% of the RPP Loan amount and after the disbursement of the Workforce Housing Loan Program loan, if applicable.**

**(ii) Second Disbursement. The second disbursement will be in an amount not to exceed 25% of the RPP loan amount and will only occur upon meeting the requirements in the Agency's final commitment letter including, but not limited to, approval of the Project's final cost certification.**

**Notwithstanding anything herein to the contrary, both advances will be made only upon satisfactory completion of the closing conditions listed in the Agency's final commitment letter.**

**Non-Recourse:** The RPP Loan is non-recourse. Other than standard exceptions (i.e. fraud), neither Borrower nor any of its partners, members, shareholders or officers shall have any personal obligation to repay the RPP Loan.

**Reserve Account Requirements:** The following reserve accounts are required to be funded prior to second disbursement and maintained throughout the term of the RPP Loan:

1) **Operating: The greater of $1500.00 per unit or 6 month's debt service and operating expenses**
2) **Replacement reserve requirements are $350 per unit per year; escalating at 4% per annum**

**General Conditions for Funding:**

A Final Commitment Letter, detailing all of the terms and conditions of funding, will not be issued until the following items have been received in a form satisfactory to the Agency:

«UWItem.FCLContingencyList»

In addition, all other public and private sources of Project debt and equity financing must be committed to the Project subject only to standard conditions acceptable to the Agency. All written commitments must be submitted to the Agency within 120 days from the date of this Conditional Commitment Letter.

**Environmental Assessment:**

**A completed environmental assessment includes the Agency's receipt of form HUD-7015.16 (Authority to Use Grant Funds) from HUD.**

**An environmental assessment is required on all projects receiving HOME funds. An environmental assessment is comprised of two items: the Statutory Checklist and the Environmental Assessment. The Borrower must submit to the Agency fifteen (15) copies of the Environmental Assessment with supporting documentation, one (1) copy of the Statutory Checklist with supporting documentation, and one (1) copy of the Phase I Environmental Review. These items should be submitted to the Agency as soon as possible in order to expedite approval for the release of funds from the U. S. Department of Housing and Urban Development.**

**Important: Notwithstanding any provision of this conditional commitment letter to the contrary, the parties hereto agree and acknowledge that this is a conditional commitment and does not constitute a final commitment of funds or site approval, and that such final commitment of funds or approval may occur only upon satisfactory completion of environmental review and receipt by the Agency of a release of funds from the U. S. Department of Housing and Urban Development under 24 CFR Part 58. The parties further agree that the provision of any funds to the project is conditioned on the Agency's determination to proceed**

**with, modify or cancel the project based on the results of a subsequent environmental assessment. Under no circumstances may the Borrower engage in an activity that may result in an adverse environmental condition or limit the choice of reasonable alternatives. If the Borrower is unsure if an activity is a physical or choice-limiting activity it must immediately contact the Agency for guidance prior to any undertaking. Examples of a physical or choice-limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property. Any violation of this provision may result in the denial of funds under this conditional commitment.**

**In the event Borrower has questions about the Environmental Assessment process, including what is considered a prohibited activity, Borrower should email the Agency at EAQuestions@nchfa.com for additional information and guidance prior to taking any action.**

**Other Terms:** The Agency may treat any promise, representation or other statement in the Application as material to its obligation under this Conditional Commitment Letter. The RPP Loan amount may be reduced or the repayment terms of the RPP Loan may be revised based on the Agency's underwriting and/or changes in any underlying assumption. This commitment expires 120 days from the date of this Conditional Commitment Letter.

**Electronic Signatures:** Each party agrees that the electronic signatures of the parties included in this Agreement are intended to authenticate this writing and to have the same force and effect as manual signatures.

Electronic signature means any electronic symbol or process attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record.

The Agency may require additional requirements be fulfilled as it deems necessary. Please sign this letter to indicate your acceptance of the conditions for funding, and return the original to the Agency.

Sincerely,

NORTH CAROLINA HOUSING FINANCE AGENCY

By: _____

Name: Tara S. Hall

Title: Manager of Rental Development

Date: _____

Tmj

On behalf of «Borrower.BorrowerName», I acknowledge that I understand and agree to comply with the terms and conditions of this Conditional Commitment letter and the RPP Loan (as described herein).

Accepted:

Borrower Name:

«Borrower.BorrowerName»,
a North Carolina «rpmprojectinfo.businessentitydesc»

By: _____,
a North Carolina _____,
its _____

By: _____

Name: _____

Title: _____

Date: _____

T m l

NORTH CAROLINA HOUSING FINANCE AGENCY

3508 Bush Street
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January 30, 2024

Matthew T. King, Director

Office of Community Planning & Development

1500 Pinecroft Road

Greensboro, NC 27407-3838

Re: Corrective Actions – Balsam Edge project site

Dear Mr. King:

This letter is in response to HUD's letter dated January 8, 2024 responding to the North Carolina Housing Finance Agency's (NCHFA) request to waive the requirements of 24 CFR 58.22 in anticipation of submitting a Request for Release of Funds (RROF) and seeking issuance of an Authority to Use Grant Funds (AUGF) for the proposed project known as Balsam Edge. HUD recommended that upon receipt of the RROF the AUGF should be approved provided the mitigation actions that the developer, Mountain Housing Opportunities (MHO), has agreed to act upon are implemented. As a result of the recommendations, the Office of Community Planning and Development (CPD) issued a finding requiring corrective actions.

Please see below a summary of the condition, HUD's required corrective actions and steps NCHFA has implemented for remediation.

**Condition:** MHO cleared trees from the Balsam Edge project site between March 6 and 10, 2023, prior to completion of the environmental review process and HUD's issuance of an AUGF.

**Required Corrective Action:** The NCHFA must add language in its application packages and conditional commitment letters indicating that choice limiting actions also include activities that could have an adverse environmental impact or limit the choice of reasonable alternatives (for example, tree removal actions that could adversely affect threatened or endangered species or prejudice the site layout); The NCHFA must also establish a process for applicants to communicate with NCHFA when questions arise regarding activities that may constitute choice-limiting actions.

**NCHFA Implemented Corrective Actions:**

1. Application Packages: Developers submit an online application for all NCHFA Rental Production Program (RPP) loans, including those funded with HOME funds as part of the application to participate in the Low-Income Housing Tax Credit Program (LIHTC). Once an application is approved for LIHTC, an RPP loan is automatically considered under this program. Effective May 10, 2024 the online application will require applicants to attest to the following:

> **"Applicant is requesting RPP funds and understands that the RPP loan may be funded with federal funds such as the HOME Investment Partnership Act (HOME). Applicant, developer or any related entity is prohibited from undertaking or committing any funds to physical or choice-limiting actions until the Environmental Assessment is complete. Examples of a physical or choice-**

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**limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property. Any violation of this provision may result in the denial of funds.**

**In the event Applicant has questions about the Environmental Assessment process, including what is considered a prohibited activity, Applicant should email the Agency at EAQuestions@nchfa.com for additional information and guidance prior to taking any action."**

**2.** Conditional Commitment Letters (CLL): The below language has been added to NCHFA's CLL's for all multi-family projects that will receive a HOME funded Rental Production Program (RPP) loan from NCHFA. The effective date of the revised template is January 23, 2024.

**"A completed environmental assessment includes the Agency's receipt of form HUD-7015.16 (Authority to Use Grant Funds) from HUD.**

An environmental assessment is required on all projects receiving HOME funds. An environmental assessment is comprised of two items: the Statutory Checklist and the Environmental Assessment. The Borrower must submit to the Agency fifteen (15) copies of the Environmental Assessment with supporting documentation, one (1) copy of the Statutory Checklist with supporting documentation, and one (1) copy of the Phase I Environmental Review. These items should be submitted to the Agency as soon as possible in order to expedite approval for the release of funds from the U. S. Department of Housing and Urban Development.

**Important: Notwithstanding any provision of this conditional commitment letter to the contrary, the parties hereto agree and acknowledge that this is a conditional commitment and does not constitute a final commitment of funds or site approval, and that such final commitment of funds or approval may occur only upon satisfactory completion of environmental assessment and receipt by the Agency of a release of funds from the U. S. Department of Housing and Urban Development under 24 CFR Part 58. The parties further agree that the provision of any funds to the project is conditioned on the Agency's determination to proceed with, modify or cancel the project based on the results of a subsequent environmental assessment. Under no circumstances may the Borrower engage in an activity that may result in an adverse environmental condition or limit the choice of reasonable alternatives. If the Borrower is unsure if an activity is a physical or choice-limiting activity it must immediately contact the Agency for guidance prior to any undertaking. Examples of a physical or choice-limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration**

NORTH CAROLINA HOUSING FINANCE AGENCY

3508 Bush Street
Raleigh, NC 27609
919-877-5700
www.HousingBuildsNC.com

**of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property. Any violation of this provision may result in the denial of funds under this conditional commitment.**

**In the event Borrower has questions about what is considered a prohibited activity or the Environmental Assessment process, Borrower should email the Agency at EAQuestions@nchfa.com for guidance prior to taking any action and additional information.**"

3. Qualified Allocation Plan (QAP): The QAP details the selection criteria and application requirements for the Low-Income Housing Tax Credit Program (LIHTC). NCHFA publishes the first draft QAP for public comment annually, generally no later than September of each year. The 2025 QAP will include a revision to Appendix G (Rental Production Program Guidelines), to include, at a minimum, the below language.

**"Applying for a Rental Production Program (RPP) loan and prohibition on choice-limiting activities.**

**The source of proceeds for an RPP loan will be selected by the Agency. Since the HOME Investment Partnership Act (HOME) is a source of funding, upon submission of an RPP application, RPP applicants, or related entities, are prohibited from undertaking or committing any funds to physical or choice-limiting actions, including property acquisition, demolition, movement, rehabilitation, conversion, repair or construction until such time as a funding source is designated.**

**If it is determined that HOME is the source of funds for the RPP loan then the prohibitions in the preceding paragraph regarding undertaking or committing any funds to physical or choice-limiting actions remains in effect until satisfactory completion of environmental review and receipt by the Agency of a release of funds from the U.S. Department of Housing and Urban Development under 24 CFR Part 58.**

**If the RPP applicant is unsure if an activity is a physical or choice-limiting activity it must immediately contact the Agency for guidance prior to any undertaking. Examples of a physical or choice-limiting action include, but are not limited to, entering into a purchase agreement for the subject property, purchasing the property, clearing trees, taking action that would impact the natural migration of an endangered species, removal of an endangered plant or species, installation of a sewer, and any other activity that would alter or impact the environmental evaluation of the property.**

**In the event the RPP applicant has questions about what is considered a prohibited activity or the Environmental Assessment process, Developer/Borrower should**

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**email the Agency at EAQuestions@nchfa.com for guidance prior to taking any action and additional information."**

NCHFA believes adding clarifying language around choice limiting actions and providing a dedicated email address for Environmental Assessment questions in the QAP, the online application, and the Conditional Commitment Letters will ensure potential borrowers are well informed about the prohibition on taking any choice limiting actions, have a better understanding of what is considered a choice limiting action, and have access to ask questions and the opportunity to gain better clarification when questions arise. Please let me know if you have any questions.

Sincerely,

Jennifer Percy
General Counsel

Cc:
Scott Farmer, NCHFA
Claudia Young, NCHFA
Lorenzo Claxton, HUD
Lenwood Smith, HUD

# NCHFA Closeout Letter, AUGF, RROF, and FONSI with Affidavit

NORTH CAROLINA HOUSING FINANCE AGENCY

3508 Bush Street
Raleigh, NC 27609
919-877-5700
www.HousingBuildsNC.com

July 18, 2024

**Balsam Edge LLC**
**64 Clingman Ave, Suite 101**
**Asheville, NC 28801**

**IMPORTANT– PLEASE READ**
**AUTHORITY TO USE GRANT FUNDS**

**RE: Balsam Edge**
**291 Howell Mill Road**
**Waynesville, NC 28786**

As it relates to the above referenced project, the North Carolina Housing Finance Agency has received the attached Authority to Use Grant Funds from the U. S. Department of Housing and Urban Development and the environmental review process required under 24 CFR Part 58 as a condition of receiving federal funds is complete. The prohibition form undertaking any physical or choice-limiting actions is removed.

If you have any questions, please call me at 919-981-2643.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

# Authority to Use Grant Funds

**U.S. Department of Housing and Urban Development**
Office of Community Planning and Development

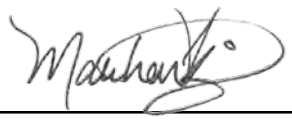
| **To:** (name & address of Grant Recipient & name & title of Chief Executive Officer) | **Copy To:** (name & address of SubRecipient) |
|---|---|
| Mr. Scott Farmer<br>North Carolina Housing Finance Agency<br>P.O, NC 27611-60, Box 28066<br>Raleigh, NC 27601 | |

| | |
|---|---|
| We received your Request for Release of Funds and Certification, form HUD-7015.15 on | July 1, 2024 |
| Your Request was for HUD/State Identification Number | M22-SG-37-0100 |

All objections, if received, have been considered. And the minimum waiting period has transpired.
You are hereby authorized to use funds provided to you under the above HUD/State Identification Number.
File this form for proper record keeping, audit, and inspection purposes.

Balsam Edge

Balsam Edge is the proposed new construction of 84-units affordable housing apartment complex for low to moderate income families. The project will consist of the new construction of 3 buildings. The site will be located at the approximate address of 291 Howell Mill Road, Waynesville, NC 28786. Project activities, occurring over an anticipated 2-year period, will include land acquisition, site preparation, utility installation, and construction. The total estimated cost for this project is $16,348,670.00 with approximately $1,450,000.00 (8.87%) contributed from federal HOME funds under the Act.

| Typed Name of Authorizing Officer | Signature of Authorizing Officer | Date (mm/dd/yyyy) |
|---|---|---|
| Matthew T. King, PhD<br>Title of Authorizing Officer<br>Director, Office of Community Planning & Development | X  | 07/17/2024 |

Previous editions are obsolete.

form **HUD-7015.16** (2/94)
ref. Handbook 6513.01

# Request for Release of Funds and Certification

**U.S. Department of Housing and Urban Development**
Office of Community Planning and Development

OMB No. 2506-0087
(exp. 08/31/2023)

This form is to be used by Responsible Entities and Recipients (as defined in 24 CFR 58.2) when requesting the release of funds, and requesting the authority to use such funds, for HUD programs identified by statutes that provide for the assumption of the environmental review responsibility by units of general local government and States. Public reporting burden for this collection of information is estimated to average 36 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless that collection displays a valid OMB control number.

## Part 1. Program Description and Request for Release of Funds (to be completed by Responsible Entity)

| 1. Program Title(s)<br>**Rental Production Program** | 2. HUD/State Identification Number<br>**M22-SG-37-0100** | 3. Recipient Identification Number (optional)<br>**9279087** |
|---|---|---|
| 4. OMB Catalog Number(s)<br>**CFDA # 14.239** | 5. Name and address of responsible entity<br>**North Carolina Housing Finance Agency**<br>**3508 Bush Street**<br>**Raleigh, NC 27609** | |
| 6. For information about this request, contact (name & phone number)<br>**Scott Farmer 919-877-5641** | | |
| 8. HUD or State Agency and office unit to receive request<br>**HUD-Greensboro, NC**<br>**Attn: Lenwood Smith**<br>**1500 Pinecroft Road**<br>**Greensboro, NC 27407** | 7. Name and address of recipient (if different than responsible entity)<br>**Balsam Edge LLC**<br>**64 Clingman Ave, Suite 101**<br>**Asheville, NC 28801** | |

**The recipient(s) of assistance under the program(s) listed above requests the release of funds and removal of environmental grant conditions governing the use of the assistance for the following**

| 9. Program Activity(ies)/Project Name(s)<br>**Balsam Edge** | 10. Location (Street address, city, county, State)<br>**333 Howell Mill Road**<br>**Waynesville, Haywood County, North Carolina** |
|---|---|

11. Program Activity/Project Description

Balsam Edge is the proposed new construction of 84-units affordable housing apartment complex for low to moderate income Family. The project will consist of the new construction of 3 buildings. The site will be located at the approximate address of 291 Howell Mill Road, Waynesville, NC 28786. Project activities, occurring over an anticipated 2-year period, will include land acquisition, site preparation, utility installation, and construction. The total estimated cost for this project is $16,348,670.00 with approximately $1,450,000.00 (8.87%) contributed from federal HOME funds under the Act.

**Part 2. Environmental Certification** (to be completed by responsible entity)

**With reference to the above Program Activity(ies)/Project(s), I, the undersigned officer of the responsible entity, certify that:**

1. The responsible entity has fully carried out its responsibilities for environmental review, decision-making and action pertaining to the project(s) named above.
2. The responsible entity has assumed responsibility for and complied with and will continue to comply with, the National Environmental Policy Act of 1969, as amended, and the environmental procedures, permit requirements and statutory obligations of the laws cited in 24 CFR 58.5; and also agrees to comply with the authorities in 24 CFR 58.6 and applicable State and local laws.
3. The responsible entity has assumed responsibility for and complied with and will continue to comply with Section 106 of the National Historic Preservation Act, and its implementing regulations 36 CFR 800, including consultation with the State Historic Preservation Officer, Indian tribes and Native Hawaiian organizations, and the public.
4. After considering the type and degree of environmental effects identified by the environmental review completed for the proposed project described in Part 1 of this request, I have found that the proposal did ☐ did not ☑ require the preparation and dissemination of an environmental impact statement.
5. The responsible entity has disseminated and/or published in the manner prescribed by 24 CFR 58.43 and 58.55 a notice to the public in accordance with 24 CFR 58.70 and as evidenced by the attached copy (copies) or evidence of posting and mailing procedure.
6. The dates for all statutory and regulatory time periods for review, comment or other action are in compliance with procedures and requirements of 24 CFR Part 58.
7. In accordance with 24 CFR 58.71(b), the responsible entity will advise the recipient (if different from the responsible entity) of any special environmental conditions that must be adhered to in carrying out the project.

As the duly designated certifying official of the responsible entity, I also certify that:

8. I am authorized to and do consent to assume the status of Federal official under the National Environmental Policy Act of 1969 and each provision of law designated in the 24 CFR 58.5 list of NEPA-related authorities insofar as the provisions of these laws apply to the HUD responsibilities for environmental review, decision-making and action that have been assumed by the responsible entity.
9. I am authorized to and do accept, on behalf of the recipient personally, the jurisdiction of the Federal courts for the enforcement of all these responsibilities, in my capacity as certifying officer of the responsible entity.

| Signature of Certifying Officer of the Responsible Entity | Title of Certifying Officer |
|---|---|
| X Scott Farmer | **Executive Director** |
| | Date signed<br>**6/25/2024 1:04:43 PM** |

Address of Certifying Officer
**3508 Bush St. Raleigh, NC 27609**

**Part 3. To be completed when the Recipient is not the Responsible Entity**

The recipient requests the release of funds for the programs and activities identified in Part 1 and agrees to abide by the special conditions, procedures and requirements of the environmental review and to advise the responsible entity of any proposed change in the scope of the project or any change in environmental conditions in accordance with 24 CFR 58.71(b).

| Signature of Authorized Officer of the Recipient | Title of Authorized Officer |
|---|---|
| X | President of the Managing Member |
| | Date signed<br>6/26/2024 |

**Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties. (18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

# THE MOUNTAINEER

220 North Main Street
P.O. Drawer 129
Waynesville, NC 28786
828-452-0661

ECS Southeast, LLC
1200 Woodruff Rd, STE H-12
Greenville, SC 29607

**LEGAL NO.** 37787

Notice of Finding
Balsam Edge

## INVOICE AND STATEMENT

| DATE | FOLIO | DESCRIPTION | | CHARGES | CREDITS | BALANCE |
|---|---|---|---|---|---|---|
| 2024 | | **Legal # 37787** | | | | |
| 5-Jun | | PrePayment | $ | 434.18 | $434.18 | $ - |
| 5-Jun | | | | | | |
| | | **ADMINISTRATIVE FEE** | **$** | **10.00** | n/c | |
| | | **PAYABLE UPON RECEIPT** | | | | |

**Billing Affidavit Sent:**

**COMBINED NOTICE OF FINDING OF NO SIGNIFICANT IMPACT and NOTICE OF INTENT TO REQUEST RELEASE OF FUNDS**

North Carolina Housing Finance Agency
3508 Bush Street
Raleigh, NC 27609
919-877-5700

These notices shall satisfy two separate but related procedural requirements for activities to be undertaken by the North Carolina Housing Finance Agency.

**REQUEST FOR RELEASE OF FUNDS**

***On or about At least one day after the end of the comment period the North Carolina Housing*** Finance Agency will submit a request to the HUD/Greensboro Field Office for the release of HOME Investment Partnership / Rental Production Program ("Program") funds under Section II of the Cranston-Gonzalez National Affordable Housing Act of 1990, as amended (Act), to undertake a project known as Balsam Edge, for the purpose of constructing an 84-unit affordable housing apartment complex for low to moderate income families. The project will consist of the new construction of 3 buildings. The site will be located at 291 Howell Mill Road, Waynesville, NC 28786 and is approximately 5 acres. Project activities, occurring over an anticipated 2-year period, will include land acquisition, site preparation, utility installation, and construction. The total estimated cost for this project is $16,348,670.00 with approximately $1,450,000.00 (8.87%) contributed from federal HOME funds under the Act.

**FINDING OF NO SIGNIFICANT IMPACT**

The North Carolina Housing Finance Agency has determined that the project will have no significant impact on the human environment. Therefore, an Environmental Impact Statement under the National Environmental Policy Act of 1969 (NEPA) is not required. Additional project information is contained in the Environmental Review Record (ERR) on file at The North Carolina Housing Finance Agency, 3508 Bush Street, Raleigh, NC 27609 and ***may be examined or copied weekdays 9 A.M. to 4 P.M.***

**PUBLIC COMMENTS**

Any individual, group, or agency may submit written comments on the ERR to Scott Farmer, Executive Director, North Carolina Housing Finance Agency, 3508 Bush Street, Raleigh, NC. ***All comments received by June 21, 2024,*** will be considered by the North Carolina Housing Finance Agency prior to authorizing submission of a request for release of funds. Comments should specify which Notice they are addressing.

**ENVIRONMENTAL CERTIFICATION**

The North Carolina Housing Finance Agency certifies to the HUD/Greensboro Field Office that Scott Farmer in his capacity as Executive Director consents to accept the jurisdiction of the Federal Courts if an action is brought to enforce responsibilities in relation to the environmental review process and that these responsibilities have been satisfied. The HUD/Greensboro Field Office's approval of the certification satisfies its responsibilities under NEPA and related laws and authorities, and allows Balsam Edge, LLC to use Program funds.

**WAIVER TO THE REQUIREMENTS OF 24 CFR 58.22**

Balsam Edge, LLC, acting in good faith, inadvertently completed tree removal from the Balsam Edge project site between March 6 and 10, 2023, the environmental review process resulting in a regulatory violation to 24 CFR 58.22. Because the tree clearing action occurred within the U.S. Fish and Wildlife Service's (USFWS) approved cutting window, it is extremely unlikely that it resulted in harm or adverse effects to federally endangered bat species. The North Carolina Housing Finance Agency submitted a request to HUD to waive the violation of 24 CFR 58.22. On January 8, 2024 HUD issued a letter approving the waiver.

**OBJECTIONS TO RELEASE OF FUNDS**

HUD will accept objections to its release of funds and the North Carolina Housing Finance Agency's certification for a period of fifteen days following the anticipated submission date or its actual receipt of the request (whichever is later) only if they are on one of the following bases:

(a) the certification was not executed by the Certifying Officer of the North Carolina Housing Finance Agency;

(b) the North Carolina Housing Finance Agency has omitted a step or failed to make a decision or finding required by HUD regulations at 24 CFR Part 58;

(c) the grant recipient or other participants in the development process have committed funds, incurred costs or undertaken activities not authorized by 24 CFR Part 58 before approval of a release of funds by HUD; or

(d) another Federal agency acting pursuant to 40 CFR Part 1504 has submitted a written finding that the project is unsatisfactory from the standpoint of environmental quality.

Objections must be prepared and submitted in accordance with the required procedures (24 CFR Part 58, Sec. 58.76) and shall be addressed to:

**Lenwood Smith**
HUD - Greensboro Field Office
1500 Pinecroft Road
Suite 401
Greensboro, NC 27407-3838

Potential objectors should contact the HUD at 336-547-4002 to verify the actual last day of the objection period.

**Scott Farme**
Executive Director
North Carolina Housing Finance Agency
No. 37787
June 5 2024

CLIPPING OF LEGAL ADVERTISEMENT ATTACHED HERE

NORTH CAROLINA
HAYWOOD COUNTY

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared

Jonathan Key who being first duly sworn, deposes and says: that he (she) is

Publisher (Owner, partner, publisher, or other officer or employee authorized to make this affidavit)

of THE MOUNTAINEER
engaged in the publication of a newspaper known as THE MOUNTAINEER published, issued, and entered as second class mail in the City of WAYNESVILLE in said County and State; that he (she) is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in THE MOUNTAINEER on the following dates:

June 5 2024

and that the said newspaper in which such notice, paper, document, or legal advertisement was published was, at the time of each and every such publication, a newspaper meeting all of the requirements and qualifications of Section 1-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Section 1-597 of the General Statutes of North Carolina.

This 5th of June, 20 24

Signature of person making affidavit

Sworn to and subscribed before me, this 5th day of June, 20 24

Amanda K Cooke

My Commission expires: Oct 20 2024

Notary Public

AFFIDAVIT OF PUBLICATION
Issued by
THE MOUNTAINEER
Waynesville, NC 28786

AMANDA K. COOKE
NOTARY PUBLIC
Haywood County
North Carolina
My Commission Expires October 20, 2024

# Previous NCHFA Balsam Edge EAs

U.S. Department of Housing and Urban Development
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

# Environmental Assessment
# Determinations and Compliance Findings for HUD-assisted Projects
# 24 CFR Part 58

## Project Information

**Project Name:** Balsam Edge

**Responsible Entity:** North Carolina Housing Finance Agency

**Grant Recipient**: Balsam Edge, LLC

**State/Local Identifier**: M22-SG-37-0100

**Preparer:** Claudia Young, North Carolina Housing Finance Agency

**Certifying Officer Name and Title:** Scott Farmer, Executive Director, North Carolina Housing Finance Agency

**Consultant**: ESC Southeast, LLP

**Direct Comments to:** Scott Farmer, Executive Director, North Carolina Housing Finance Agency, 3508 Bush Street, Raleigh, NC 27609

**Project Location:** 333 Howell Mill Road in Waynesville, Haywood County, North Carolina.

**Description of the Proposed Project** [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:
The subject property includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western
portion of the property.

Balsam Edge is proposed to be an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All units will include washer/dryer hookups, central AC, ceiling fans, Energy Star kitchen appliances (including dishwashers), and mini-blinds. 12 of the 84 units will be fully accessible with grab bars in the bathrooms and other features for mobility impaired residents. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities for energy efficiency.

**Statement of Purpose and Need for the Proposal** [40 CFR 1508.9(b)]:
The City of Waynesville Comprehensive Land Use Plan for 2035 reports that the lack of new housing stock has caused rental rates and real estate prices to rise significantly, resulting in a need for workforce and affordable housing. The plan further states that 40 percent of individuals that pay rent are paying 35 percent of more of their annual household income on housing. Reported demands for seasonal homes in Waynesville and Haywood County have led to increases in housing value and concerns over availability of affordable housing for a varying income levels.

All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI. A regional housing needs assessment conducted by Dogwood Health Trust in 2021 demonstrated a housing gap of 768 units affordable to families at or below 50% AMI in Haywood County. A market study conducted for the Balsam Edge development shows a total demand for 751 rental units affordable at or below 60% AMI with only 54 units currently in development, meaning Balsam Edge's 84 units will have a prospective capture rate of 12%. The Proposed Action addresses a critical need to provide affordable rental units to residents and meets the demand for affordable rental units as outlined in the City of Waynesville Comprehensive Land Use Plan for 2035 and the regional housing needs assessment conducted by Dogwood Health Trust.

**Existing Conditions and Trends** [24 CFR 58.40(a)]:
The subject property is located in a residential and commercial area of Waynesville, North Carolina. The approximately 5.1-acre subject property consists of grass-covered and wooded land. The southeastern portion of the property is developed with a paved driveway and a vacant, approximate 1,880 square foot single-family residence that was reportedly constructed in 1950. A dilapidated modular movable shed is located in the eastern portion of the property. Logged trees are located in the central portion of the property. The subject property currently consists of wooded land, fields, a residential structure, and a shed.

Balsam Edge sits on the western side of Howell Mill Road directly off of Russ Avenue, and is less than a mile from the commuting corridor of the Great Smoky Mountains Expressway. Due to its location, Balsam Edge is surrounded with ample amenities, most of which are within 10 minutes walking distance. The heart of Historic Downtown Waynesville is only a mile away. Additionally, Balsam Edge enjoys close proximity to several major industrial employers along with continuous sidewalk access to the Waynesville Parks and Recreation Complex with trail systems connecting to Lake Junaluska.

## Funding Information

| Grant Number | HUD Program | Funding Amount |
|---|---|---|
| | HOME | $1,450,000.00 |
| | | |

**Estimated Total HUD Funded Amount:** $1,450,000.00

| FUNDING SOURCE SUMMARY | |
|---|---|
| RPP Loan (1) | $1,450,000 |
| RD 538 Loan | $3,987,638 |
| Other Loan 1 | $965,000 |
| Equity Federal LIHTC | $9,942,099 |
| Deferred Developer Fees | $3,933 |
| **Total** | **$16,348,670** |

**Estimated Total Project Cost** (HUD and non-HUD funds) [24 CFR 58.32(d)]: $16,348,670.00

## Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

| **Compliance Factors**: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6 | Are formal compliance steps or mitigation required? | Compliance determinations |
|---|---|---|
| **STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6** | | |
| **Airport Hazards**<br><br>24 CFR Part 51 Subpart D | Yes ☐ No ☒ | The project is not located within 2,500 feet of a civil airport, or 15,000 feet of a military airfield. See attached Appendix A. |
| **Coastal Barrier Resources**<br><br>Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] | Yes ☐ No ☒ | The project site is not located in a Coastal Barrier Resource System (CBRS) unit. See attached Appendix B. |
| **Flood Insurance**<br><br>Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a] | Yes ☐ No ☒ | The project site is not located in a FEMA designated Special Flood Hazard Area. The site is not located in a flood zone or a floodplain (Zone X), as determined from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) associated with the site and surrounding area. The map utilized was 3700861600J, effective 4/3/2012. See attached Appendix C. |
| **STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5** | | |
| **Clean Air**<br><br>Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93 | Yes ☐ No ☒ | Per the US EPA Green Book, Haywood County is not in non-attainment or maintenance status for any criteria pollutants. The project site is in compliance with the Clean Air Act. See attached Appendix D. |

| | | |
|---|---|---|
| **Coastal Zone Management**<br><br>Coastal Zone Management Act, sections 307(c) & (d) | Yes ☐ No ☒ | The project site is not located in one of North Carolina's 20 coastal counties and is in compliance with the Coastal Zone Management Act. See attached Appendix E. |
| **Contamination and Toxic Substances**<br><br>24 CFR Part 50.3(i) & 58.5(i)(2) | Yes ☒ No ☐ | ECS Southeast, LLP completed a Phase I ESA for the site in accordance with ASTM 1527-21 with site reconnaissance completed on May 16, 2023. A fill port and vent pipe, indicative of a UST, were observed at the southwester corner of the residence. ESC considers the potential for an undocumented release from the UST to represent a REC.<br><br>Bunnell Lammons Engineering conducted a Limited UST Closure Assessment at the site on August 18, 2023 to assess the potential impacts of the UST to the soil and groundwater. Petroleum constituents were identified in soils on the western and southern side of the UST in exceedance of NCDEQ Action Limits and Residential MSCCs and contaminates were identified in the groundwater on-site in exceedance of NCDQ 2L Standards.<br><br>In a Memorandum of Understanding dated September 11, 2023, Balsam Edge, LLC agrees to report the release incident identified in the Limited UST Closure Assessment Report dated August 30, 2023, and associated assessment date to the NCDEQ UST Section. Due to the identified presence of limited soil and groundwater impacts, a complete State approved remediation plan will be required prior to obtaining the necessary signatures to complete the environmental review and publishing or posting a combined NOI-RROF/FONSI. Removal of the UST and the abatement of grossly impacted soil and a Notice of Residual Petroleum (NRP) to address the groundwater contamination on the Site will likely be requested by the NCDEQ. See attached Appendix F. |

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| **Endangered Species**<br><br>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402 | Yes ☐ No ☒ | A biological evaluation was conducted for the project site and submitted to USFWS. In an email dated February 16, 2023, the USFWS states concurrence with "may affect, not likely to adversely affect" determinations for all bat species, including the tricolored bat, should it become listed in the future. USFWS also states that suitable habitat does not occur within the action area for any other federally protected species.<br><br>Balsam Edge, LLC contracted with ECS Southeast, LLP ("ECS") to complete an environmental assessment. While conducting that assessment in January of 2023, ECS advised MHO that the United States Fish and Wildlife Service ("USFWS") flagged a potential roosting habitat for the federally endangered gray bat within one-half mile of the Balsam Edge site. In its correspondence, USFWS outlined appropriate mitigation measures to allow USFWS to determine development of the project would be "not likely to adversely affect" the habitat for the gray bat, including "accomplish[ing] all tree clearing activities outside of the active season for [the] gray bat." During the active season, bats may forage, commute and/or roost within the action area. After consulting with USFWS staff, ECS indicated USFWS would consent to removal of the trees prior to March 15th and would issue a "may affect, not likely to adversely affect" determination regarding the effect of the development of the site on the federally protected bats. Based on this guidance from both ECS and USFWS, MHO removed the trees prior to the 3/15/23 deadline. MHO now understands that removing trees, even though recommended by USFWS as an impact avoidance and minimization measure during the Part 58 Environmental Review, constitutes a choice-limiting action. NCHFA seeks a waiver of |

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| | | 24 CFR §55.22(a), or such other approval or action the HUD deems appropriate (the "Waiver"), thereby allowing Balsam Edge, LLC to obtain federal funds in order to support development of this critical affordable housing. See attached Appendix G. |
| **Explosive and Flammable Hazards**<br><br>24 CFR Part 51 Subpart C | Yes ☐ No ☒ | The proposed project does not include a hazardous facility. Seventeen (17) aboveground storage containers were identified within one mile of the project site. The Separation Distance from the project site is acceptable based on results from HUD's ASD calculator. There are no known planned aboveground storage containers. The project is in compliance with explosive and flammable hazard requirements. See attached Appendix H. See attached Appendix H. |
| **Farmlands Protection**<br><br>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658 | Yes ☐ No ☒ | The project site is located within an "urbanized area" on the US Census Bureau and will not convert important farmland to nonagricultural uses. See attached Appendix I. |
| **Floodplain Management**<br><br>Executive Order 11988, particularly section 2(a); 24 CFR Part 55 | Yes ☐ No ☒ | The project site is not located in a FEMA designated Special Flood Hazard Area. The site is not located in a flood zone or a floodplain (Zone X), as determined from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) associated with the site and surrounding area. The map utilized was 3700861600J, effective 4/3/2012.See attached Appendix J. |
| **Historic Preservation**<br><br>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800 | Yes ☐ No ☒ | In a letter dated May 24, 2023, NC SHPO states they are aware of no historic resources which would be affected by the project and have no comment on the project as proposed.<br><br>On May 17, 2023, the Muscogee (Creek) Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and the Catawba Indian Nation were invited to consult on the proposed project. In a letter dated June 26, 2023, the Catawba Indian Nation stated no |

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| | | immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project area. In a letter dated June 23, 2023, the Cherokee Nation states they do not foresee this project imparting impacts to Cherokee cultural resources. Both Tribes are to be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of this project. No responses were received from the Muscogee (Creek) Nation or the Easter Band of Cherokee Indians. See attached Appendix K. |
| **Noise Abatement and Control**<br><br>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B | Yes ☐ No ☒ | One major road identified as a noise generator is located within 1,000 feet of the site. One railroad is located within 3,000 feet of the site. The site is not located within 15 miles of any commercial airports or military airfields. The highest DNL for the site is 61 dB and is within the acceptable noise range. See attached Appendix L. |
| **Sole Source Aquifers**<br><br>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149 | Yes ☐ No ☒ | No sole source aquifers are located in North Carolina. See attached Appendix M. |
| **Wetlands Protection**<br><br>Executive Order 11990, particularly sections 2 and 5 | Yes ☒ No ☐ | Equinox Environmental Consultation and Design, Inc. completed a wetland delineation on the project site in conformance with the 1987 US Army Corps of Engineers Wetland Delineation Manual. In a report dated June 2023, Equinox identified one riparian wetland on the southwest central portion of the property and no non-jurisdictional wetlands are present on the site. In an Memorandum of Understanding dated September 11, 2023, Balsam Edge, LLC agrees that no ground disturbance (either temporary or permanent) will occur in the on site wetland, and no portion of the project will be constructed in the wetland. The Developer futher agrees to record a restrictive covenant on the wetland within 60 days of the date of a HUD approved waiver of 24 CFR §55.22(a), or such |

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| | | other approval or action that HUD deems appropriate. See attached Exhibit N. |
| **Wild and Scenic Rivers**<br><br>Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) | Yes ☐ No ☒ | The project is not located in a county that contains a Wild and Scenic River. The project site is not located within 0.25 miles of a Nationwide River Inventory (NRI) river. See attached Appendix O. |
| **ENVIRONMENTAL JUSTICE** | | |
| **Environmental Justice**<br><br>Executive Order 12898 | Yes ☐ No ☒ | The proposed project does not suffer from adverse environmental conditions and will not have a disproportionate adverse impact on minority or low-income populations. See attached Appendix P. |

**Environmental Assessment Factors** [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

**Impact Codes**: Use an impact code from the following list to make the determination of impact for each factor.

**(1)** Minor beneficial impact
**(2)** No impact anticipated
**(3)** Minor Adverse Impact – May require mitigation
**(4)** Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| LAND DEVELOPMENT | | |
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| Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design | 2 | The project will be compatible with surrounding land uses that are currently zoned as commercial and residential with mixed-use-community and Residential-Medium to High Density. Existing utilities and city services are available at and within the vicinity of the site. According to the Haywood County, North Carolina GIS website, the subject property is zoned for Howell Mill Urban Residential (HM-UR). Ms. Elizabeth Teague, Development Service Director, stated that the property was zoned HM-UR in which multi-family is a permitted use. Ms. Teague further stated that the zoning use had been approved for the site. Based on the proposed action conforming with the approved zoning for the project site, no impact is anticipated. |
| Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff | 2 | The project site currently consists of wooded land, fields, a residential structure, and a shed. Based on ECS' site visit on November 18, 2022, there was no evidence of discernable soil problems in the project area. The site slopes to the southwest with on-site elevations ranging from 2,680 feet to 2,650 feet. Site plans indicate that the property will be leveled prior to development for the proposed action. Evidence of slope failure, slides, and slump was not observed on the project site. The USDA Soil Data Explorer was consulted to determine the susceptibility of the soil to sheet and rill erosion by water, indicated by factor K. The Explorer indicates that Dillsboro loam (DsB, DsC) has a factor K of 0.24, while Evard-Cowee complex (EvD) has a factor K of 0.1. The values for K range from 0.02 to 0.69, with the higher value indicating the soil is more susceptible to sheet and rill erosion by water. Based on the reported K factor for the on-site soils, the potential for sheet and rill erosion by water at the project site appears to be low.<br><br>The USDA Soil Data Explorer was consulted to determine the suitability of the on-site soils for residential dwellings with basements. The suitability rating is based on the soil properties which affect the capacity of a soil to support loads without movement and on the existing factors that might affect construction and excavation costs. Dillsboro loam, 2 to 8 percent slopes (DsB), has a rating of not limited indicating that the soil has features that are very favorable for the proposed use. Dillsboro loam, 8 to 15 percent slopes (DsC), has a rating of somewhat limited due to the slopes located on the project site. A rating of somewhat limited indicates that the soil has features that are moderately favorable for the proposed use. Evard-Cowee complex, 15 to 30 percent slopes (EvD), has a rating of very limited due to the slopes and depth to soft bedrock located on the project site. A rating of very limited indicates the soil has one or more features that are unfavorable for the proposed use. Based on the site plans, the property will be leveled by grading operations |

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| | | using the grading and excavation of on-site soils and, when necessary, the import of fill material.<br><br>A stormwater management feature is proposed as part of site development and will be constructed in accordance with local regulations. Significant issues associated with stormwater are not anticipated for the project and runoff of pollutants or other chemicals is not expected.<br><br>Based on the project plans, which include grading and excavation of on-site soils and implementation of stormwater management features, no impact is anticipated. |
| Hazards and Nuisances including Site Safety and Noise | 3 | The construction of a multi-family apartment complex has the potential to create a short amount of time where site safety, site hazards, or traffic issues may be a minor concern. The construction may also generate noise from machinery and power tools. Mitigation steps will include using caution control on roads as necessary and conducting any noise-generating work during the daytime hours. Site safety and adherence to OSHA safety requirements should be managed by the contracted parties engaged in the project.<br><br>A stream and wetland areas were identified along the western boundary of the subject property and could be considered a natural hazard due to the risk of slips, falls, or drowning. Moderately dense vegetation was observed within the vicinity of the stream and has the potential to provide habitat for plants, insects, and animals, some of which may be considered poisonous. Based on the site plans and correspondence with the relying entity, the proposed development will be restricted from the stream, wetland areas, and dense vegetation on the western portion of the subject property by implementation of a retaining wall along which the structures will be constructed. Current site plans indicate there will be no entry or egress on the rear (western exterior) of the structures. The implementation of the retaining wall and limitations on rear access to the structures within the development is considered a man-made buffer to protect individuals from these natural hazards.<br><br>Based on our site observations, a sidewalk is located along the southern edge of Howell Mill Road. The proposed development is located to the north of Howell Mill Road and current site plans indicate the construction of a sidewalk along the northern edge of Howell Mill Road. However, there are currently no plans to extend the sidewalk to nearby commercial facilities or public transportation points. The implementation of a cross-walk and adequate street lighting is recommended for pedestrian traffic to access the existing sidewalk system to the south of Howell Mill Road prior to implementation of the proposed action. |

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| | | Other natural hazards, built hazards, and nuisances were not observed at the subject property. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **SOCIOECONOMIC** | | |
| Employment and Income Patterns | 1 | This project is expected to create temporary jobs during the construction and development phases, and then permanent local jobs to service the facility leasing office, maintenance, grounds keeping, and other tenant-supportive services. Additionally, the implementation of the proposed action will increase the local workforce as tenants will be able to work at local businesses, retail stores, and other employers. The project is anticipated to have a minor beneficial impact to the employment and income patterns of the area. |
| Demographic Character Changes, Displacement | 2 | Because the proposed action will result in the addition of affordable housing units and does not displace any current residents, no impact is anticipated. |
| Environmental Justice | 2 | The proposed project does not suffer from adverse environmental conditions and will not have a disproportionate adverse impact on minority or low-income populations. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **COMMUNITY FACILITIES AND SERVICES** | | |
| Educational and Cultural Facilities | 2 | Mr. Graham Haynes, Haywood County Schools Assistant Superintendent, provided correspondence on January 4, 2023, that the project is located in the Haywood County School District and will not adversely affect the schools serving this project. Mr. Haynes said the schools located in the district are not considered high risk or poor performing schools per state or federal performance standards. The schools that will serve this project are Junaluska Elementary, Waynesville Middle School, and Tuscola High School. Because the proposed action will not adversely affect the schools serving the project site, no impact is anticipated. |
| Commercial Facilities | 2 | The proposed project is located in a residential and commercial area and currently contains an uninhabited single-family residence. The subject property is zoned for HM-UR in which multi-family is a permitted use. The project is being developed as a multi-family residential development that will be affordable to families at or below 60% of the area median income (AMI). |

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| Health Care and Social Services | 2 | The Haywood Regional Medical Center is located approximately 3 miles northeast of the proposed project. Multiple medical offices and urgent care facilities are located within 3 miles of the proposed project. According to correspondence dated November 18, 2022 with Sarah Henderson, Public Health Services Division Director, adequate and appropriate health services are available for this project, and health services will not be adversely affected by this project. Ms. Henderson stated that Haywood Regional Medical Center, Haywood County EMS, Haywood County Health and Human Services Agency, Mercy Urgent Care, HRMC Urgent Care (Canton), HRMC Urgent Care (Hazelwood), and other various primary care providers were in the area. Because the proposed action will not adversely affect the health services serving the project site, no impact is anticipated. |
| Solid Waste Disposal / Recycling | 2 | Mr. Kris Boyd, Assisting County Manager for Haywood County, provided correspondence on January 3, 2023, that states solid waste disposal for the project can be adequately handled by public or private collectors without adversely affecting landfill capacity. Because the proposed action will not adversely affect the landfills serving the project site, no impact is anticipated. |
| Waste Water / Sanitary Sewers | 2 | Mr. Jeffrey Stines of the Public Services Department at the Town of Waynesville reported that public sewer is available and adequate to serve the project per a certification letter signed and dated January 30, 2023. Mr. Stines further reported that the closest tap is an eight inch line located 1,135 feet from the subject property and buried approximately three feet deep. Mr. Stines remarked that the line and connection point are located at the southernmost end of Abel Lane. Due to the existing available and adequate public sewer, no impact is anticipated for the proposed action. |
| Water Supply | 2 | Mr. Jeffrey Stines of the Public Services Department at the Town of Waynesville reported that public water is available and adequate to serve the project per a certification letter signed and dated January 30, 2023. Mr. Stines further reported that the closest tap is an ten inch line located adjacent to the subject property. Due to the existing available and adequate public water supply, no impact is anticipated for the proposed action. |
| Public Safety - Police, Fire and Emergency Medical | 2 | Police: ECS spoke with Josh Nichols, dispatcher for the Town of Waynesville Police Department, via telephone on February 22, 2023. Mr. Nichols reported that the subject property is currently within the jurisdiction of Haywood County; however, if the subject property is annexed within the town limits, any calls originating from the address of the subject property would be covered by the Town of Waynesville Police Department. ECS submitted an email request to Greg Christopher, Sheriff of Haywood County, on November 11, 2022, and again on January 3, 2023. ECS also emailed requests to Elizabeth Teague and Gina Zachary with |

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| | | Haywood County to request information regarding police response time and coverage for the subject property. Responses have not been received at the time of this submittal.<br><br>Fire: The City of Waynesville Fire Department currently provides services to the subject property and will continue to do so with the development of the proposed multi-family complex. According to the Haywood County GIS, the property is serviced by the Howell Mill Fire District. The Waynesville Fire Department (1022 N. Main Street) is located approximately 1 mile from the subject property. According to correspondence dated November 14, 2022, with Darrell Calhoun, Waynesville Fire Marshal, Fire Protection is available and adequate for the project as the average response time of four minutes falls withing the average community response time of four minutes. Further, Mr. Calhoun reported that Fire Protection would not be adversely affected by the project; therefore, no impact is anticipated by the proposed action.<br><br>Emergency Medical: The Haywood County Department of Emergency Medical Services is responsible for services throughout Haywood County. The closest EMS services facility (Haywood County Rescue Squad) is located approximately one mile from the proposed development. According to correspondence dated November 14, 2022, with Travis Donaldson, Director of Haywood County Emergency Services, Emergency Medical Services are available and adequate for the project as the average response time of 9 minutes falls within the average community response time of 9 minutes and 30 seconds. Additionally, Mr. Donaldson reported on February 14, 2023, that Emergency Medical Services would not be adversely affect by the project; therefore, no impact is anticipated by the proposed action. |
| Parks, Open Space and Recreation | 2 | ECS submitted an email request to Ian Smith, Director of Recreation and Parks with Haywood County, on November 11, 2022, and again on January 3, 2023. To date, a response has not been received from Mr. Smith. The City of Waynesville Parks, Recreation, and Cultural Resources Department has several parks with various amenities within the City of Waynesville. The Waynesville Recreation Park is located approximately one mile from the property and consists of 12 acres that includes six asphalt tennis courts, playgrounds, restrooms, sports fields, skate park, greenway, and three picnic shelters. Vance Street Park is located approximately 0.5 miles from the property and consists of 16 acres that contains the 64,000 square foot Waynesville Recreation Center, a softball field, soccer field, picnic shelter, restrooms, two sand volleyball courts, green space, a walking trail beside Richland Creek, and a handicapped fishing pier. Based on the availability of public parks within a mile of the subject property, no impact is anticipated by the implementation of the proposed action. |

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| Transportation and Accessibility | 2 | The proposed property will have access from Howell Mill Road. Public Transportation via the City of Waynesville public transportation system can be accessed with a bus stop at Ingles Market located on the western adjoining property (201 Barber Boulevard). According to Si Simmons, Director of Haywood Public Transit, on January 3, 2023, public transportation is available for the project site and is available through bus transportation. In addition, ECS corresponded with the North Carolina Department of Transportation. Based on the availability of public transportation adjacent to the subject property, no impact is anticipated by the implementation of the proposed action. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **NATURAL FEATURES** | | |
| Unique Natural Features, Water Resources | 2 | Based on the site visit conducted on November 18, 2022, there are no unique natural features that would be affected by the proposed action. Additionally, there are no impacts to the wetlands or stream located on the subject property as part of the proposed action. As the proposed action avoids impacting unique natural features and water resources, no impact is anticipated by the implementation of the proposed action. |
| Vegetation, Wildlife | 3 | Based on the current site plans, removal of the vegetation on portions of the wooded land and fields will be necessary for the development of the project. Following construction, the areas not developed with impervious surfaces will consist of landscaped areas that will be routinely maintained. Based on the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action. |
| Other Factors | | n/a |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
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| **CLIMATE AND ENERGY** | | |
| Climate Change Impacts | | Natural hazards that may be affected by climate change and affect residents of HUD-assisted housing include the following:<br><br>• Flooding - The subject property is located up-gradient and outside the mapped flood hazard zones. A stream was |

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| | | observed transecting the western portion of the site; however, no indicators of recent flooding events were observed. Additionally, current site plans indicate the structures will be placed at an elevation of over 2,655 feet, approximately 20 feet higher in elevation than the stream (2,635 feet).<br>• Sea Level Rise - The subject property is located approximately 320 miles from the coastline of the Atlantic Ocean.<br>• Hurricanes and Extreme Storms - North Carolina, and respectively the subject property, are located within a humid climate zone. Hurricanes and other extreme storms originating from the Gulf of Mexico or the Atlantic Ocean have a potential to reach the subject property; however, site plans indicate that stormwater features will be placed on the site to accommodate rain events on the impervious surfaces of the parking lots, structures, and roads. Additionally, site plans show the placement (post-development) of canopy trees, evergreen trees, and shrubs. As part of the development, it is assumed that the vegetation will be routinely maintained to prevent damage to persons or property from dead trees, falling branches, etc.<br>• Drought - The subject property will be serviced by municipal water supply. Although vegetation on the project site may be impacted by drought, there are no expected impacts to residents from drought conditions.<br>• Extreme Heat - According to temperature data obtained from the National Oceanic and Atmospheric Administration (NOAA), the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the subject property will utilize electric HVAC units for heating and cooling the residential units.<br>• Wildfire - The subject property is not located within close proximity (<1,000 feet) of large, contiguous forested areas.<br>• Landslides - The proposed site plans indicate the site will be leveled and retained using walls for the proposed action, reducing the risk of landslides on the subject property.<br>• Extreme Cold - According to temperature data obtained from the National Oceanic and Atmospheric Administration (NOAA), the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the subject property will utilize electric HVAC units for heating and cooling the residential units. |

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| | | Based on the site topography, location, and climate, the risk of natural hazards associated with climate change appears to be minimal. There are no pre-existing conditions regarding air quality, urban heat island effects, soil stability, and water resources; therefore, no site suitability factors are expected to be altered before or after implementation of the proposed action. |
| Energy Efficiency | 3 | According to the Waynesville 2035 Comprehensive Land Use Plan, one of the goals for the city is to protect and enhance Waynesville's natural resources which includes the engagement and promotion of best management practices related to energy use, efficiency, and waste management. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. Energy Star Certification for multifamily new construction projects requires one of three paths to earn the certification based on energy rating and/or modeling software and use of energy efficient measures. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and mult-family developments.<br><br>The project is located within close proximity to major transportation arteries including Howell Mill Road, Russ Avenue, and Great Smoky Mountain Expressway (US-23). Nearby daily conveniences to the site include Ingles Market, Big Lots, Walmart, and Publix Super Market, which are located within a 10-minute drive from the site, as well as restaurants, pharmacies, and other retailers. County educational facilities and higher education institutional facilities are also located within close proximity to the Project.<br><br>With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency. |

**Additional Studies Performed**:
n/a

**Field Inspection** (Date and completed by)**:**
Phase I Environmental Site Assessment – ECS Southeast, LLP – May 22, 2023
Limited UST Closure Assessment Report – Bunnell Lammons Engineering – August 30, 2023
Water of the US Assessment – Equinox Environmental Consultation and Design, Inc. – July 2023

**List of Sources, Agencies and Persons Consulted** [40 CFR 1508.9(b)]:
NC Department of Administration

NC Department of Environmental Quality: Division of Environmental Assistance and Customer Service
NC Department of Environmental Quality: Division of Waste Management
NC Department of Environmental Quality: Division of Emergency Management
NC Department of Environmental Quality: Solid Waste Section
NC Department of Natural & Cultural Resources
NC Wildlife Resource Commission
NC State Historic Preservation Office
US Fish and Wildlife Services
Town of Waynesville – Development Services Department
Haywood County Schools
Haywood County Health and Human Services Agency
Haywood County – County Manager
Director of Public Services
Waynesville Fire Department
Haywood County Emergency Services
Haywood Public Transit

Muscogee (Creek) Nation
Cherokee Nation
Eastern Band of Cherokee Indians
Catawba Indian Nation

Cherokee Nation: ECS Email Request
City of Waynesville, NC Website: https://www.waynesvillenc.gov/
City of Waynesville Comprehensive Land Use Plan for 2035
Department of Military and Veterans Affairs website, https://www.milvets.nc.gov/services/military-bases-north-carolina
Eastern Band of Cherokee Indians: ECS Email Request
EJScreen, https://www.epa.gov/environmentaljustice
EPA Air Data website, http://www.epa.gov/airdata/
EPA Green Book: https://www.epa.gov/green-book
EPA NEPA Assist GIS website, https://www.epa.gov/nepa/nepassist
EPA Radon Map, https://www.epa.gov/sites/default/files/2014-08/documents/north_carolina.pdf
EPA Sole Source Aquifers mapping program (https://www.epa.gov/dwssa/map-sole-source-aquifer-locations)
FEMA Flood Map Service Center: https://msc.fema.gov/portal
Google Earth Website: https://www.google.com/earth/
Haywood County GIS Website: https://maps.haywoodcountync.gov/gisweb/default.htm
Haywood County, NC Website: https://www.haywoodcountync.gov/
HUD Exchange Acceptable Separation Distance Tool, https://www.hudexchange.info/programs/environmental-review/asd-calculator/
HUD Exchange DNL Calculator, https://www.hudexchange.info/programs/environmental-review/dnl-calculator/
Inactive Hazardous Sites and Pollutant-Only Sites Inventory by County (https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program)
Muscogee (Creek) Nation: ECS Email Request & Response
National Park Services Nationwide Rivers Inventory, https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm
National Transportation Noise Map by the Bureau of Transportation Statistics, https://www.bts.gov/geospatial/national-transportation-noise-map

National Wild and Scenic Rivers System Website: https://www.rivers.gov/mapping-gis.php
North Carolina Department of Agricultural (NCDA)
North Carolina Department of Environmental Quality Coastal Area Management Counties website, https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/cama-counties
North Carolina Department of Environmental Quality Laserfische website, Laserfische https://edocs.deq.nc.gov/WasteManagement/Welcome.aspx
North Carolina Department of Transportation (NCDOT) mapping website, https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx
North Carolina Department of Transportation (NCDOT) – Division Office, Aviation website (https://www.ncdot.gov/divisions/aviation/Pages/nc-airports.aspx)
NCDOT Traffic Volume GIS Viewer (https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx)
NC Coastal Area Management Act – Coastal Counties:
https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/camacounties
North Carolina Natural Heritage Program Letter Correspondence
North Carolina State Historic Preservation Office GIS Web Service: http://gis.ncdcr.gov/hpoweb/
North Carolina State Historic Preservation Office letter correspondence
Tribal Directory Assessment Tool website: https://egis.hud.gov/tdat/Tribal.aspx
U.S. Census Bureau, Census 2010 website: http://www.census.gov/
U.S. Department of Agriculture Web Soil Survey website, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
U.S. Department of Housing and Urban Development Environmental Guidance Website:
https://www.hud.gov/states/shared/working/r4/environment/guidancenc
https://www.hudexchange.info/environmental-review/federal-related-laws-and-authorities/
U.S. Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper Website: https://www.fws.gov/wetlands/data/mapper.html
U.S. Fish and Wildlife Service, Asheville Field Office letter correspondence
US Fish and Wildlife Service (FWS) Information for Planning and Consultation (IPaC) tool (https://ecos.fws.gov/ipac/)
U.S. Fish and Wildlife Service – Coastal Barrier Resources System Mapper website:
https://www.fws.gov/cbra/Maps/Mapper.html
U.S. Geological Survey website: http://www.usgs.gov/

**List of Permits Obtained:**
None to date

**Public Outreach** [24 CFR 50.23 & 58.43]**:**
Public hearing for "Major Site Plan Review" at the Town of Waynesville Planning Board – 2021
Posting or publishing of the combined NOI RROF/FONSI for public comment will be completed as part of the Part 58 environmental assessment process.

**Cumulative Impact Analysis** [24 CFR 58.32]**:**
This project is a single and discrete project, not linked with other on-going or planned future projects. As such, its impacts are definable to the time and location of their implementation. As a discrete project, there are no cumulative impacts from associated or future projects related to this site.

**Alternatives** [24 CFR 58.40(e); 40 CFR 1508.9]
Only two possible courses of action were considered: (1) implement project or (2) the no action alternative. The first would be to construct the Proposed Action according to the plans describe herein. The second No

Action Alternative would not construct the proposed multifamily residential development on the site and the property would remain with a vacant single-family residence, wooded land, and fields. Under this alternative, there would be no multi-family housing development and the creation of affordable rental units to meet the demands outlined in the City of Waynesville Comprehensive Land Use Plan for 2035 and the regional housing needs assessment conducted by Dogwood Health Trust. City's Comprehensive Future Land Use Plan would not be met.

**No Action Alternative** [24 CFR 58.40(e)]:
The selection of the No Action Alternative would not meet the stated Purpose and Need, which is to provide affordable housing for low- and moderate-income families.

**Summary of Findings and Conclusions:**

The Proposed Balsam Edge Apartments Site is located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The subject property includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as PIN 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed.

The scope of work for the subject property includes an 84 unit, family oriented affordable apartment community consisting of one, two, and three bedroom units. All units will include washer/dryer hookups, central AC, ceiling fans, Energy Star kitchen appliances (including dishwashers), and mini-blinds. 12 of the 84 units will be fully accessible with grab bars in the bathrooms and other features for mobility impaired residents. The subject property will also include a standalone community building with a fitness room, community room with kitchen, computer center, and laundry facilities, while the outdoor amenities will include a picnic/grilling area and an on-site playground. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities for energy efficiency.

Site information used to develop this Environmental Assessment was obtained during walking and driving reconnaissance efforts on and around the property. Environmental resource information was also obtained from letter submittals and responses from state and federal agencies, from information that was obtained through local, state and federal government websites, and other appropriate sources. Based on the proposed development plan and the information reviewed and obtained as part of this Environmental Assessment, the following compliance issues and/or environmental impacts were identified:

- (Contamination and Toxic Substances) - An underground storage tank (UST) was observed on the southern exterior of the residence at 333 Howell Mill Road and is considered a potential risk for contamination if an unknown release has occurred during refueling or decomposition of tank materials. Based on the presence of the UST within the proposed action area, this project is not in compliance with Contamination and Toxic Substances requirements.

- (Endangered Species Act) - Based on correspondence from USFWS, Gray Bat (endangered) and Tricolored Bat (proposed endangered) are known to roost with 0.5-mile of the proposed action. USFWS recommend that tree-clearing be conducted outside the active season for Gray Bat (March 15 - November 15). Additionally, the on-site structures must be surveyed within two weeks of their proposed demolition. The aforementioned actions are proposed for implementation, and based on correspondence with USFWS, following the aforementioned recommendations would allow the project to proceed under a "may affect, not likely to adversely affect" concurrence. Therefore, the project is in compliance with the Endangered Species Act **if** the proposed mitigation measures are followed.

- (Wetlands Protection) - Based on the current site plans and information reviewed, there are no impacts proposed to wetlands, streams, or other waters on the subject property for the proposed action. According to 24 24 CR § 55.12(c)(7) if an activity, which is not excluded under 24 CFR §§ 55.12 occurs on a property which contains wetlands, and the activity will not occur in the wetlands, a permanent covenant or deed restriction must be placed on the property with intent to preserve the wetlands or an 8-step decision making process must be completed. Based on the aforementioned requirement, the wetlands located on the subject property should be conserved with deed-restrictive covenants in order to be in compliance with Executive Order 11990.

- (Hazards and Nuisances) - Based on our site observations, a sidewalk is located along the southern edge of Howell Mill Road. The proposed development is located to the north of Howell Mill Road and current site plans indicate the construction of a sidewalk along the northern edge of Howell Mill Road. However, there are currently no plans to extend the sidewalk to nearby commercial facilities or public transportation points which could represent a site safety hazard. Implementation of a cross-walk, pedestrian signage, and/or extension of the proposed sidewalk on the north side of Howell Mill Road could reduce traffic hazards.

- (Energy Consumption/Efficiency) - The development will be built to achieve Energy Star Multifamily New Construction certification and will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and multi-family developments. With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency.

- (Vegetation/Wildlife) - Due to the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action.

## Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

| Law, Authority, or Factor | Mitigation Measure |
|---|---|
| **Contamination and Toxic Substances:** 24 CFR Part 50.3(i) & 58.5(i)(2) | Due to the identified presence of limited soil and groundwater impacts, the Developer agrees to report the release incident and associated assessment data to the North Carolina Department of Environmental Quality (NCDEQ) UST Section. A complete State approved remediation plan will be required prior to obtaining the necessary signatures to complete the environmental review and publishing or posting a combined NOI-RROF/FONSI. Removal of the UST and the abatement of grossly impacted soil and a Notice of Residual |

| | |
|---|---|
| | Petroleum (NRP) to address the groundwater contamination on the Site will likely be requested by the NCDEQ. |
| **Wetlands Protection:** Executive Order 11990, particularly sections 2 and 5 | A reparian wetland is located on the southwest central portion the Site (see attached Exhibit A).The Developer agrees that no ground disturbance (either temporary or permanent) will occur in the on site wetland, and no portion of the project will be constructed in the wetland. The Developer futher agrees to record a restrictive covenant on the wetland within 60 days of the date of a HUD approved waiver of 24 CFR §55.22(a), or such other approval or action that HUD deems appropriate. |

**Determination:**

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Claudia Young Date: 9/21/2023

Name/Title/Organization: Claudia Young/Manager of Compliance and Quality Assurance/North Carolina Housing Finance Agency

Certifying Officer Signature: Date: 9/21/2023

Name/Title: Scott Farmer/Executive Director/North Carolina Housing Finance Agency

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

# HUD ENVIRONMENTAL ASSESSMENT

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PROPOSED BALSAM EDGE APARTMENTS SITE

333 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA 28786

ECS PROJECT NO. 49:18762

FOR: MOUNTAIN HOUSING OPPORTUNITIES, INC.

MARCH 6, 2023

March 6, 2023

Adeline Wolfe
Mountain Housing Opportunities, Inc.
64 Clingman Avenue, Suite 101
Suite 200
Asheville, North Carolina, 28801

ECS Project No. 49:18762

Reference: HUD Environmental Assessment, Proposed Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, North Carolina

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Dear Ms. Wolfe:

ECS Southeast, LLP (ECS) is pleased submit this Environmental Assessment for the above-referenced site. ECS services were provided in general accordance with ECS Proposal No. 49:34042 authorized on October 17, 2022.

If there are questions regarding this report, or a need for further information, please contact the undersigned.

ECS Southeast, LLP

Signature for Thomas S. Hawkins, Jr., PWS
Thomas S. Hawkins, Jr., PWS
Environmental Project Manager
thawkins@ecslimited.com
864-350-2414

Signature for Paul M. Stephens IV, P.E., PWS
Paul M. Stephens IV, P.E., PWS
Associate Principal
pstephens@ecslimited.com
843-654-4448

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## 1.0 PROPOSED PROJECT DESCRIPTION

The Proposed Balsam Edge Apartments Site is located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The subject property includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property.

Balsam Edge is proposed to be an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All units will include washer/dryer hookups, central AC, ceiling fans, Energy Star kitchen appliances (including dishwashers), and mini-blinds. 12 of the 84 units will be fully accessible with grab bars in the bathrooms and other features for mobility impaired residents. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities for energy efficiency.

Balsam Edge sits on the western side of Howell Mill road directly off of Russ Avenue, and is less than a mile from the commuting corridor of the Great Smoky Mountains Expressway. Due to its location, Balsam Edge is surrounded with ample amenities, most of which are within 10 minutes walking distance. The heart of Historic Downtown Waynesville is only a mile away. Additionally, Balsam Edge enjoys close proximity to several major industrial employers along with continuous sidewalk access to the Waynesville Parks and Recreation Complex with trail systems connecting to Lake Junaluska.

## 2.0 PURPOSE AND NEED FOR PROPOSED PROJECT

The City of Waynesville Comprehensive Land Use Plan for 2035 reports that the lack of new housing stock has caused rental rates and real estate prices to rise significantly, resulting in a need for workforce and affordable housing. The plan further states that 40 percent of individuals that pay rent are paying 35 percent of more of their annual household income on housing. Reported demands for seasonal homes in Waynesville and Haywood County have led to increases in housing value and concerns over availability of affordable housing for a varying income levels.

All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI. A regional housing needs assessment conducted by Dogwood Health Trust in 2021 demonstrated a housing gap of 768 units affordable to families at or below 50% AMI in Haywood County. A market study conducted for the Balsam Edge development shows a total demand for 751 rental units affordable at or below 60% AMI with only 54 units currently in development, meaning Balsam Edge's 84 units will have a prospective capture rate of 12%. The Proposed Action addresses a critical need to provide affordable rental units to residents and meets the demand for affordable rental units as outlined in the City of Waynesville Comprehensive Land Use Plan for 2035 and the regional housing needs assessment conducted by Dogwood Health Trust.

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## 3.0 COMPLIANCE WITH 24 CFR §50.4, §58.5 AND §58.6 LAWS AND AUTHORITIES

| Compliance Factors | Formal compliance steps or mitigation required? | Compliance Determination |
|---|---|---|
| **Airport Hazards** Clear Zones and Accident Potential Zones; 24 CFR Part 51 Subpart D | No | The project is in compliance with the requirements of Airport Hazards. |
| **Coastal Barrier Resources Act** Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] | No | The project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act. |
| **Flood Insurance** Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a] | No | The project is in compliance with Flood Insurance requirements. |
| **Air Quality** Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93 | No | The project is in compliance with Air Quality requirements. |
| **Coastal Zone Management Act** Coastal Zone Management Act, sections 307(c) & (d) | No | The project is in compliance with the Coastal Zone Management Act. |
| **Contamination and Toxic Substances** 24 CFR 50.3(i) & 58.5(i)(2)] | Yes | The UST observed on the southern exterior of the residence at 333 Howell Mill Road is considered a potential risk for contamination if the integrity of the tank has been compromised. Based on the presence of the UST within the proposed action area, this project is not in compliance with Contamination and Toxic Substances requirements. |

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| Compliance Factors | Formal compliance steps or mitigation required? | Compliance Determination |
|---|---|---|
| **Endangered Species Act** Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402 | Yes | Based on correspondence from USFWS, Gray Bat (endangered) and Tricolored Bat (proposed endangered) are known to roost with 0.5-mile of the proposed action. USFWS recommends that tree-clearing be conducted outside the active season for Gray Bat (March 15 - November 15). Additionally, the on-site structures must be surveyed within two weeks of their proposed demolition. The aforementioned actions are proposed for implementation, and based on correspondence with USFWS, following the aforementioned recommendations would allow the project to proceed under a "may affect, not likely to adversely affect" concurrence. Therefore, the project is in compliance with the Endangered Species Act if the mitigation measures are followed. |
| **Explosive and Flammable Hazards** Above-Ground Tanks [24 CFR Part 51 Subpart C | No | The project complies with the requirements of Explosive and Flammable Hazards. |
| **Farmlands Protection** Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658 | No | The project is in compliance with the Farmland Protection Policy Act. |
| **Floodplain Management** Executive Order 11988, particularly section 2(a); 24 CFR Part 55 | No | The project is in compliance with Executive Order 11988. |
| **Historic Preservation** National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800 | No | Based on the historic and current residential development on the project site and the lack of known cultural resources reported for the project site, the project is in compliance with Historic Preservation requirements and Section 106. |
| **Noise Abatement and Control** Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B | No | Based on the results of the HUD Day/Night Noise Level (DNL) Calculator, the project is in compliance with regards to Noise Abatement and Control. |

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| Compliance Factors | Formal compliance steps or mitigation required? | Compliance Determination |
|---|---|---|
| **Sole Source Aquifers** Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149 | No | The project is in compliance with the requirements for Sole Source Aquifers. |
| **Wetlands Protection** Executive Order 11990, particularly sections 2 and 5 | Yes | Based on the current site plans and information reviewed, there are no impacts proposed to wetlands, streams, or other waters on the subject property for the proposed action. According to 24 24 CR § 55.12(c)(7) if an activity, which is not excluded under 24 CFR §§ 55.12 occurs on a property which contains wetlands, and the activity will not occur in the wetlands, a permanent covenant or deed restriction must be placed on the property with intent to preserve the wetlands or an 8-step decision making process must be completed. |
| **Wild and Scenic Rivers Act** Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) | No | The project is in compliance with the Wild and Scenic Rivers Act. |
| **Environmental Justice** Executive Order 12898 | No | The project is in compliance with Executive Order 12898. |

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### 3.1 Airport Hazards

Clear Zones and Accident Potential Zones; 24 CFR Part 51 Subpart D

Airport location information was reviewed on the North Carolina Department of Transportation (NCDOT) – Division Office, Aviation website (https://www.ncdot.gov/divisions/aviation/Pages/nc-airports.aspx) on November 8, 2022. According to the available mapping program on the website, the closest airport to the subject property is located approximate 18 miles to the southwest and is identified as Jackson County Airport (24A).

According to the Department of Military and Veterans Affairs website (https://www.milvets.nc.gov/services/military-bases-north-carolina), the closest military airfield to the subject property is the Army National Guard (145th Airlift Wing Charlotte) located at 4930 Minuteman Way in Charlotte, NC, located over 100 miles southeast of the of the subject property.

The subject property is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport; therefore, the project is in compliance with the requirements of Airport Hazards.

### 3.2 Coastal Barrier Resources Act

Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]

Coastal Barrier Resources information was reviewed on the U.S. Fish and Wildlife Service Coastal Barrier Resources System (CBRS) Mapper website (https://www.fws.gov/CBRA/Maps/Mapper.html) on November 8, 2022. According to the available mapping program on the website, the subject property is not located within or near a Coastal Barrier Resource Boundary. The nearest Coastal Barrier Resource Boundary is located approximately 250 miles to the southeast and along the coast adjacent to Charleston, South Carolina. Therefore, this project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act.

### 3.3 Flood Insurance

Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]

Based on a review of FEMA Flood Mapping (FIRM Panels 370032 & 370124, Map Number 3700861600J, dated April 3, 2012), the subject property is located in Zone X, which are areas determined to be outside the 0.2% annual chance and future conditions 1% annual chance floodplain. While flood insurance may not be mandatory for this project, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). This project is in compliance with Flood Insurance requirements.

### 3.4 Air Quality

Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93

The subject property will not include transportation facilities with a high traffic volume, nor will the subject property include an emergency generator; therefore, it does not appear an air permit will be needed.

Air Quality information was obtained from the U.S. EPA Green Book Map download website (https://www.epa.gov/green-book) on November 9, 2022. According to the North Carolina Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants dated October 31, 2022, Haywood County is listed with a National Ambient Air Quality Standard (NAAQS) status of 8-Hour Ozone (1997) – NAAQS Revoked. The 8-hour Ozone (1997) standard was revoked on April 6, 2015. Portions of the county were listed in non-attainment from 2004 through 2009, redesignated to maintenance on January 6, 2010, and are currently classified as Former Subpart 1.

According to the EPA's Map of Number of NAAQS by County Designated Nonattainment dated October 31, 2022, and accessed at https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information, no counties within North Carolina are currently listed in nonattainment status. The EPA's Map of Number of NAAQS by County Designated Nonattainment or Maintenance dated October 31, 2022, depicts Mecklenburg County for maintenance of two NAAQS pollutants and Union, Cabarrus, Rowan, Davidson, Forsyth, Guilford,

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Durham, Wake, Iredell, Catawba, Lincoln, and Gaston counties for maintenance of one NAAQS pollutant. Haywood County was not depicted as a county designated nonattainment or maintenance on the aforementioned maps.

Emission sources were reviewed from the EPA Air Data website (http://www.epa.gov/airdata/) on November 9, 2022. According to the Air Quality Index (AQI) Report from 2022, Haywood County recorded 174 days with good air quality, 39 days with moderate air quality, and one day with unhealthy air quality for sensitive groups. No reported days with unhealthy air quality, very unhealthy air quality, and hazardous air quality were recorded. The main pollutant of the index values measured for the AQI in Haywood County is Ozone (O3).

According to the Air Quality Statistics Report dated 2022, Haywood County reported O3 1-Hour and 8-Hour values of 0.08 parts per million (ppm) and 0.064 ppm, respectively, below the EPA Air Quality Standard of 0.12 ppm (1-Hour) and 0.07 ppm (8-Hour). Note, annual statistics for 2022 are not to be considered final until May 1, 2023. The Air Quality Statistics Report dated 2021 for Haywood County reported that no reported concentrations exceeded their respective air quality standards.

Construction related activities (land clearing, grading, etc.) could cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust leaving the construction site. Implementation of mitigation measures for dust control will reduce potential impacts to air quality during construction and there will be no significant impact to air quality from the project. The project is in compliance with Air Quality requirements.

**3.5 Coastal Zone Management Act**

Coastal Zone Management Act, sections 307(c) & (d)

Haywood County, North Carolina, is not designated by the North Carolina Department of Environmental Quality (NCDEQ) as one of the 20 Coastal Area Management Act (CAMA) Counties depicted on their website https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/cama-counties. The CAMA counties are located along the east coast of the state and approximately 330 miles from the subject property. The project is in compliance with the Coastal Zone Management Act.

**3.6 Contamination and Toxic Substances**

24 CFR 50.3(i) & 58.5(i)(2)]

ECS conducted a site reconnaissance of the subject property on November 18, 2022, in an attempt to identify potential sources of contamination and toxic substances on the site. A fill port and vent pipe, indicative of an underground storage tank (UST), was observed on the southern exterior of the brick residence at 333 Howell Mill Road. Based on the proximity to the structure, it appears that the UST would have been utilized for heating oil. The size and current contents of the UST were not confirmed at the time of the site reconnaissance.

According to the regulatory database provided by Environmental Data Resources (EDR) on November 17, 2022, the following sites were identified within 1,500 feet of the subject property:

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The North Carolina Department of Transportation (90 Howell Mill Road) was listed on the Recovery Conservation and Recovery Act (RCRA) Non-Generators (NonGen/NLR) database and is located approximately 560 feet southwest and down-gradient from the subject property.

- WR Boyd Investments (90 Howell Mill Road) is listed on the State Hazardous Waste Site (SHWS) database located approximately 560 feet southwest and down-gradient from the subject property.
- Schulhofers, Inc., (525 Howell Mill Road) is listed on the Solid Waste Recycling (SWRCY) facilities database and is located approximately 890 feet east and cross-gradient from the subject property.
- Ingles Gas Express 723 (201 Barber Boulevard) was listed on the Underground Storage Tank (UST) and Financial Assurance data base and is located approximately 1,200 feet west and cross-gradient from the subject property.
- Plaza BP (598 Russ Avenue) is listed on the Leaking Underground Storage Tank (LUST), Underground Storage Tank (UST), Incident Management Database (IMD), and financial assurance databases and is located approximately 1,370 feet southeast and down-gradient from the subject property.
- Town of Waynesville Dump ((Main Street (NC23/NC276) North through Town. Left on W.)) is listed on the North Carolina Old Landfill Inventory database (NC OLI) and is located 1,380 feet north and up-gradient from the subject property.
- Town of Waynesville Landfill (End of Bible Baptist Drive) is listed on the Land-Clearing and Inert Debris (LCID) database and is located approximately 1,380 feet north and up-gradient to the subject property.
- Town of Waynesville (End of Bible Baptist Drive) is listed on the debris database and is located approximately 1,380 feet north and up-gradient to the subject property.
- AZTEX 209 (504 Russ Avenue) is listed on the Leaking Underground Storage Tank (LUST), LUST TRUST, Underground Storage Tank (UST), asbestos, and Financial Assurance databases and is located approximately 1,460 feet southwest and down-gradient from the subject property.
- Taylor Motor Company (601 Russ Avenue) is listed on the Leaking Underground Storage Tank (LUST) and Incident Management Database (IMD) databases and is located approximately 1,470 feet southwest and down-gradient from the subject property.

The EPA NEPA Assist GIS website was utilized and identified four facilities within 1,500 feet in addition to those identified by EDR:

- Sonoco Plastics, Formerly Assoc Packaging Technologies (288 Howell Mill Road) is listed on the National Pollutant Discharge Elimination System (NPDES) database and is located southern adjoining property and down-gradient.
- Schulhofers Inc. (525 Howell Mill Road) is listed on the NPDES database and is located approximately 890 feet east and cross-gradient from the subject property.
- Walgreens 19219 (590 Russ Avenue) is listed on the RCRA- Very Small Quantity Generator database (VSQG) database and is located approximately 1,270 feet southwest and down-gradient from the subject property.
- Taylor Motor Company (601 Russ Avenue) is listed on the RCRA- VSQG database and is located approximately 1,470 feet southwest and down-gradient from the subject property.

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EDR and the EPA NEPA Assist GIS website were utilized to search for Superfund (NPL) and Brownfields sites within a 3,000 feet search radius of the subject property and did not depict Superfund or Brownfields sites within 3,000 feet of the subject property. Based on the distance and gradient from the subject property, the aforementioned listings reported in the EDR database and EPA NEPA Assist GIS website do not appear to pose a risk of contamination or release of toxic substances that would impact the subject property.

A Public Records Information Request was submitted to the North Carolina Department of Environmental Quality (NC DEQ) on January 23, 2023, and responses were received from the Brownfields Program, Hazardous Waste Section, Inactive Hazardous Sites Branch, Solid Waste Section, and Underground Storage Tank Section. Shirley Liggins of the Brownfields Program reported that no information was found at the address of the subject property. Nicholas Guglielmi of the Hazardous Waste Section responded that they have no data indicating that a site inspection has been conducted at the subject property and neither address (271/333 Howell Mill Road) were associated with an EPA Hazardous Waste ID Number. Mr. Guglielmi further reported that two properties with assigned EPA ID numbers were located within one mile of the subject property:

1) 90 Howell Mill Road, notified as a temporary large quantity generator of hazardous waste for removing soils impacted by automotive debris (EPA ID NCP090314036). An inspection of the property was reportedly not conducted and the ID number was re-notified as "not a generator of hazardous waste."

2) 1329 Howell Mill Road, under the name Waynesville Extrusion Coating Facility, was reported as a very small quantity generator of hazardous waste (EPA ID NCD982145047). A Compliance Evaluation Inspection was conducted in 1992 with no violations cited.

Collin Day of the Inactive Hazardous Sites Branch responded with several links to sites on the NC DEQ website. ECS utilized the Inactive Hazardous Sites and Pollutant-Only Sites Inventory by County (https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program) and searched Haywood County. The following listings were reported within Waynesville, Haywood County:

- Dayco Cochran Landfill (NONCD0000059), Rt 1 Hyatt Creek Road - Using the NC DEQ Laserfische website, ECS reviewed a Notification of an Inactive Hazardous Substance or Waste Disposal Site Form for the Dayco Cochran Landfill. According to the form, the site is located off SR 1160 and near the intersection with Nightingale Place, approximately 3.8 miles southwest of the subject property.
- Dayco Corp (NCD003148798), Balsam Road - According to a Hazardous Waste Section File Room Document Transmittal Sheet dated September 4, 2001, the facility is now developed as a Wal-Mart through a Brownfields agreement. The Wal-Mart is currently operating as a Resource Conservation and Recovery Act (RCRA) generator under the same ID as Dayco Corp. The facility is reportedly located at 135 Town Center Loop and approximately three miles southwest of the subject property.
- Dayco Landfill Cryme Cove Road (NCD982119463), SR 1134 - According to a document titled "CERCLIS Site Addition," the Dayco Landfill-Crymes Cover Road site is located along the south side of Crymes Cove Road (SR 1134) and 0.7-mile from the intersection of US 276 and Crymes Cove Road, approximately 2.2 miles southeast of the subject property.

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- Schulhoffer Junkyard (NCD024852675), Howell Mill Road - According to correspondence review from the NC DEQ Laserfische website, the Schulhoffer Junkyard is located at 816 Howell Mill Road and approximately 0.4-mile east/northeast from the subject property. The Schulhoffer Junkyard was used as an auto salvage yard and waste incineration facility. The Schulhoffer Junkyard site has confirmed soil contamination and although the site is located within close proximity to the subject property, the site is bordered to the south by a stream and any impacted groundwater would be expected to flow to the south and towards the stream, away from the subject property.
- WR Boyd Investments (NONCD0002469), 90 Howell Mill Road - The WR Boyd Investments property is located at 90 Howell Mill Road, approximately 0.05-mile southwest of the subject property. According to a Soil Excavation Report dated February 4, 2015, the site was formerly used as a junkyard and automotive recycling facility. Soil contamination was reported within the borings acquired on the western portion of the site from petroleum constituents, oil and grease, heavy metals, and polychlorinated biphenyls (PCBs). Although the site is located within close proximity to the subject property, it appears that surface flow via the streams observed in aerial imagery flow to the south/east and towards Shelton Branch to the southeast.

Mr. Lee Hill of the Solid Waste Section responded that no solid waste records were found relating to the properties at 271 and 333 Howell Mill Road. Ms. Caroline LaFond of the Underground Storage Tank Section responded that the Petroleum Underground Storage Tank and Non-UST Databases did not identify any petroleum incidents on or adjacent to the proposed project area.

Nearby toxic, hazardous, or radioactive substances that could affect the health of safety of project occupants or conflict with the intended use of the property were not found. However, the UST observed on the southern exterior of the residence at 333 Howell Mill Road is considered a potential risk for contamination if the integrity of the tank has been compromised. To date, no assessments have been conducted to confirm the size, contents, and integrity of the UST. Based on the presence of the UST within the proposed action area, this project is not in compliance with Contamination and Toxic Substances requirements.

**3.7 Endangered Species Act**

Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402

ECS utilized the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (https://ecos.fws.gov/ipac/) to determine threatened or endangered species that are known to occur in the area which may be affected by activities in the subject property area. Based on the information reviewed on IPAC, there are no critical habitats within the project area under USFWS jurisdiction. The IPAC listed the following species with potential to occur within the project area: Gray Bat (Endangered), Indiana Bat (Endangered), Northern Long-eared Bat (Threatened), Tricolored Bat (Proposed Endangered), Monarch Butterfly (Candidate), Small Whorled Pogonia (Threatened), and Rock Gnome Lichen (Endangered). ECS conducted an assessment of the subject property for evidence of habitat commonly associated with the identified species and submitted this information to the USFWS on December 11, 2022. ECS received an email response from Byron Hamstead of the USFWS on January 11, 2023. In the response, Mr. Hamstead stated that suitable habitat for federally endangered Northern Long-Eared Bat, Indiana Bat, and the proposed endangered Tricolored Bat

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occurs within the proposed action area. Additionally, Mr. Hamstead reported that a known roost supporting Tricolored Bat and the federally endangered Gray Bat is located within 0.5-mile of the proposed action area. The USFWS recommended the following impact avoidance and minimization measures to reduce probability of take of the animals and support their concurrence with a "may affect, not likely to adversely affect" determination from the appropriate action agency:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Based on conversations between ECS and the relying entity, Mountain Housing Opportunities, Inc., correspondence was submitted to USFWS on February 7, 2023, which stated that tree clearing services within the proposed development area will be contracted and completed by March 15, 2023. Additionally, the correspondence stated that manmade structures on the property will be surveyed for evidence of bats within two weeks prior to the demolition activities. Mr. Hamstead with USFWS responded on February 16, 2023, and stated that the described impact avoidance and minimization measures would support an agency concurrence with "may affect, not likely to adversely affect."

ECS also submitted a request to the NC Natural Heritage Program (NHP) GIS Portal and received a response letter on November 8, 2022. The letter states that based on a query of the NCNHP database and the project area mapped with the request, there are no records of rare species, important natural communities, natural areas, or conservation/managed areas within the proposed project boundary; however, the letter states that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence as the area may not have been surveyed. A Potential Occurrences Table within the letter summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. Of the species listed within the table, only Gray Bat and Rusty-patched Bumble Bee were reported to have a federal protection status of endangered. Rusty-patched Bumble Bee was not reported in the USFWS IPAC tool and according to the NHP response, the last observation date was in 1952. No natural areas were documented within a one-mile radius of the project area according to the NC NHP response. Managed areas were reported to the east, along Richland Creek and Raccoon Creek; to the south and along Richland Creek; and to the west near Phillips Road. Based on the distance from the project, ECS does not believe that the proposed project would affect the aforementioned managed areas.

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Based on the USFWS concurrence of "may affect, no likely to adversely affect" for all the bat species included on the IPAC tool and USFWS concurrence with our findings of no suitable habitat for the other listed species within the action area, this project is in compliance with the Endangered Species Act if the mitigation measures are followed.

**3.8 Explosive and Flammable Hazards**

Above-Ground Tanks [24 CFR Part 51 Subpart C]

According to a Radius Map Report provided by Environmental Data Resources (EDR) dated November 17, 2022, there are eight sites listed in association with the Aboveground Storage Tank (AST) and/or Leaking Aboveground Storage Tank (LAST) databases within one mile of the subject property:

- Brown NCDOT Parcel 32, 838 Howell Mill Road – 2,410 feet east of the project site. No visible ASTs were observed on the google earth aerial imagery dated 2022.
- Private Residence, 1460 Russ Avenue – 2,965 feet northwest of the project site. No visible ASTs were observed on the google earth aerial imagery dated 2022.
- Town of Waynesville-N. Main Fire Department AST, 960 N. Main Street – 3,077 feet southeast of the project site. No visible ASTs were observed on the google earth aerial imagery dated 2022.
- Gathering Rock Development (Future), Phillips Road – 3,231 feet west of the project site.
- Miller's Automotive Repair, 595 North Main Street – 3,366 feet south of the project site. No visible ASTs were observed on the google earth aerial imagery dated 2022.
- Noland Property (Betty), 287 Golf Course Road – 3,462 feet north of the project site. A visible AST was observed on the google earth aerial imagery dated May 2008.
- Haywood County Branner Avenue, Branner Avenue – 3,897 feet south of the project site.
- Shirley Roberts Property, 21 Bradley Street – 4,184 feet northwest of the project site. No visible ASTs were observed on the google earth aerial imagery dated 2022.

Due to the unknown size and/or status of the ASTs report above, the Acceptable Separation Distance Assessment Tool (ASDAT) was utilized and calculated for a 10,000-gallon AST. With the exception of bulk storage plants, 10,000-gallons or less should accommodate for tanks utilized for commercial/ residential applications. According to the tool, a 10,000-gallon AST that is not under pressure has an acceptable separation distance (ASD) of 721.77 feet for Thermal Radiation for People (ASDPPU) and 145.78 feet AST for Thermal Radiation for Buildings (ASDBPU). A 10,000-gallon AST that is under pressure has an ASD for Blast Over Pressure (ASDBOP) of 468.92 feet, an ASDPPU of 721.77 feet, and an ASDBPU of 145.78 feet. Based on the distance from the aforementioned sites to the project site, the project is beyond the ASD for the stationary hazards reported in the EDR report.

ECS performed a walking and driving reconnaissance within the vicinity of the subject property on November 18, 2022. ASTs were not identified on the subject property; however, the following ASTs were identified on adjoining properties:

- Residential, 11 Palmer Drive – Eastern adjoining property. One approximate 275-gallon AST that appeared to contain heating oil was observed adjacent to the residential structure, located approximately 60 feet from the boundary of the subject property. Based on the current site plans for the proposed action, the AST is located to the east of the proposed

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entrance road to the property. Based on the estimated volume of the AST, the ASDAT was utilized and reported an ASDPPU of 161.52 feet and an ASDBPU of 27.68 feet. Based on the distance from the AST and the calculated ASD, the AST would not pose a risk for individuals within the parking areas or structures proposed for the subject property.

- Sonoco Plastic, 288 Howell Mill Road – Southern adjoining property. Approximately five silos containing plastic resin were observed adjacent to the commercial structure. The silos are located approximately 530 feet south of the subject property. The silos are located along the eastern exterior of the structure and it appears that the structure itself would act as a secondary containment (approximate 3,900 square foot diked area) during an explosive event. The ASDAT was utilized and reported a ASD for Thermal Radiation for People (ASDPNPD) of 273.25 feet and an ASD for Thermal Radiation for Buildings (ASDBNPD) of 49.78 feet. Based on the distance from the silos and the results of the ASDAT, the silos would not pose a risk for the subject property.

ECS performed a desktop review of available google earth aerial imagery (dated 2022) and USGS Topographic Maps. The following locations with apparent ASTs were identified in our review:

- Waynesville Plaza, 263 Waynesville Plaza – 1,400 feet south of the project site. One apparent 1,000-gallon propane AST was observed adjacent to the building. The ASDAT reported an ASDBOP of 219.03 feet, ASDPPU of 276.57 feet, and ASDBPU of 50.28 feet for a 1,000-gallon pressurized AST.
- Shopping Center, 385 Walnut Street – 2,100 feet south of the project site. One apparent 1,000-gallon propane AST was observed north of the structure utilized by Coin Laundry. The ASDAT reported an ASDBOP of 219.03 feet, ASDPPU of 276.57 feet, and ASDBPU of 50.28 feet for a 1,000-gallon pressurized AST.
- Commercial building, 12 Buffalo Lane – 2,800 feet southwest of the project site. Several apparent propane ASTs ranging from approximately 1,000 to 20,000 gallons were observed in the vicinity of the property. The ASDAT reported an ASDBOP of 589.69 feet, ASDPPU of 963.41 feet, and ASDBPU of 200.85 feet for a 20,000-gallon pressurized AST
- Southern Concrete Materials, 201 Boundary Street – 2,900 feet southwest of the project site. Two ASTs of unknown content and approximately 1,000-gallons in size were observed adjacent to the building. The ASDAT reported an ASDBOP of 219.03 feet, ASDPPU of 276.57 feet, and ASDBPU of 50.28 feet for a 1,000-gallon pressurized AST.
- Evergreen Packaging, 1329 Old Howell Mill Road – 3,700 feet northeast of the project site. Six silo structures were observed along the southeastern exterior of the building. As the size and contents of the silos are unknown, the ASDAT was calculated for a 10,000-gallon pressurized AST and reported an ASDBOP of 468.92 feet, ASDPPU of 721.77 feet, and ASDBPU of 145.78 feet.
- Giles Chemical, 102 Commerce Street – 4,200 feet southwest of the project site. Several apparent ASTs ranging from 500 to 10,000 gallons containing propane and other unknown contents were observed in the vicinity of the structures. As the contents are unknown, the ASDAT was calculated for a 10,000-gallon pressurized AST with cryogenic liquified gas and reported an ASDPPU of 721.77 feet and ASDBPU of 145.78 feet.
- Suburban Propane, 1388 Howell Mill Road – 4,400 feet northeast of the project site. Multiple apparent propane ASTs ranging from 1,000 to 30,000 gallons in size were observed adjacent to the building. Based on correspondence with Darrell Calhoun, Fire Marshal for the Town

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of Waynesville, the 30,000-gallon ASTs are kept at 60% capacity for a combined storage of 72,000 gallons. The ASDAT was calculated for 72,000 gallons of pressurized contents and reported an ASDBOP of 900.6 feet, ASDPPU of 1,642.72 feet, and ASDBPU of 363.12 feet.

- Residential, 129 Mill Street – 4,500 feet southwest of the project site. One approximate 275-gallon AST that appeared to contain heating oil was observed adjacent to the residential structure. The ASDAT reported an ASDPPU of 161.52 feet and an ASDBPU of 27.68 feet.

Based on the distance from the subject property and values obtained from the ASDAT, the project is beyond the ASD for the stationary hazards observed in aerial imagery.

A request for information on thermal/explosive hazards and ASTs was submitted to Haywood County. Stacy Henson of Haywood County Development Services responded on January 18, 2023, that the subject property is located in the extra-territorial jurisdiction of the Town of Waynesville and not within their jurisdiction. A request for information on existing and proposed ASTs or other thermal/ explosive hazards was sent to Darrell Calhoun, Fire Marshal for the Town of Waynesville. According to Mr. Calhoun, Suburban Propane has three 30,000-gallon propane ASTs which are kept at 60% capacity, totaling approximately 72,000-gallons for all three ASTs. Mr. Calhoun also reported the storage of small amounts of fluids at several commercial facilities but did not provide the size or specifics on the storage of the ASTs.

Based on our review of regulatory records, site reconnaissance, and desktop review, the identified ASTs would not pose an explosive or flammable hazard to the subject property. The project complies with the requirements of Explosive and Flammable Hazards.

**3.9 Farmlands Protection**

Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658

According to historic aerial imagery and topographic maps, the project site was undeveloped from at least 1893 to circa 1935, when an apparent residential structure was depicted on the northeast portion of the site. Historic topographic maps dated 1941 and 1942 depict that the residential structure was located in the center of the site. Circa 1956, an apparent residential structure was depicted on the southeast portion of the site and corresponds with the footprint of the brick residential structure observed during the field reconnaissance. The remainder of the site appears to consist of fields and wooded land. Circa 1989, an additional structure which appears to be an outbuilding was depicted on the northern portion of the site. The property appears to remain consistent through circa April, 2022. During our field reconnaissance on November 18, 2022, the structures observed on the central and northern portions of the site were no longer present.

According to the USDA Web Soil Survey website, the on-site soils consist of Dillsboro loam, 2 to 8 percent slopes (DsB); Dillsboro loam, 8 to 15 percent slopes (DsC); and,Evard-Cowee complex, 15 to 30 percent slopes (EvD). The farmland classification on the USDA website reported Dillsboro loam (DsB) as “all areas are prime farmland,” Dillsboro loam (DsC) as “farmland of statewide importance,” and Evard-Cowee complex (EvD) as “farmland of local importance.”

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Based on the 2010 Census - Urbanized Area Reference Map: Asheville, NC, the subject property and surrounding areas are included within the limits of an "urbanized area". The Haywood County GIS website depicts that the project site is not located within a farmland preservation area. The NEPA Assist Tool was also utilized and depicts that the project site and surrounding properties are located within urbanized areas. ECS submitted email correspondence to Lynne Hall and Mark Ferguson of the USDA-NRCS Waynesville Area Office on December 23, 2022, to request information on whether the proposed actions for the subject property would require additional consultation with their agency. Mr. Ferguson responded on January 18, 2023, and stated that the project would not require a Farmland Conversion Impact Rating Form (AD1006) since the tract is shown within an urbanized area on the Census Bureau map. The project is in compliance with the Farmland Protection Policy Act.

**3.10 Floodplain Management**

Executive Order 11988, particularly section 2(a); 24 CFR Part 55

Based on a review of FEMA Flood Mapping (FIRM Panels 370032 & 370124, Map Number 3700861600J, dated April 3, 2012), the subject property is located in Zone X, which are areas determined to be outside the 0.2% annual chance and future conditions 1% annual chance floodplain. This project is in compliance with Executive Order 11988.

**3.11 Historic Preservation**

National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800

ECS reviewed the North Carolina State Historic Preservation Office (NCSHPO) HPOWEB GIS Service. During our review of the NCSHPO On-Line GIS Database Decatur Phillips House is located on the subject property and was listed as ineligible under ER 03-1143; HW Co Rpt #362; U-4412. According to an Architectural Resources Survey Report dated July 27, 2004, the Decatur Phillips House did not meet the National Registry requirements for eligibility under any criteria. According to the document, numerous, more stylish expressions of the Dutch Colonial style are located in Haywood County. Thus, the house does not meet National Register requirements for eligibility under Criterion C for architecture. The house is also not eligible under Criterion A because it does not represent major patterns in Waynesville's historical development. Furthermore, the property lacks agricultural significance under Criterion A because it no longer includes much farm or pasture land or illustrative farm outbuildings. The Decatur Phillips House is also not eligible under Criterion B because it is not associated with individuals whose activities were demonstrably important within a local, state, or national historic context. Finally, the property is not considered eligible under Criterion D because the architectural components are not likely to yield information important in the history of building technology. The Decatur Phillips house was formerly located on the ridge of the northern-central portion of the project site. The house was demolished circa 2022. The adjoining parcels were reported to have originally been part of the larger farm property and subsequently subdivided for Decatur Phillip's children to construct residential dwellings.

Phillips-Messer House is located on the southwestern adjoining property and was listed as ineligible and listed under ER 03-1143; HW Co Rpt #362; U-4412. Phillips-Palmer House (Site HW0163) is located on the eastern adjoining property. The Phillips-Palmer House satisfies the requirements for National Register eligibility under Criterion C for architecture. The house is an example of the American

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Foursquare in Waynesville, and its blend of Prairie and Craftsman-style features reflects the town's emerging railroad-era urbanity. The property is not considered eligible under any other criterion. Five houses were also depicted to the southeast and were labeled “House”. These five houses were listed and ineligible according to the NCSHPO On-Line GIS Database. ECS did not identify other significant architectural or archaeological resources in the surrounding vicinity.

ECS personnel conducted a site reconnaissance on November 18, 2022. The project site currently consists of wooded land, fields, a residential structure, and a shed. The residential dwelling was constructed with a brick exterior and wood/drywall interior and was observed on the southeast portion of the site, adjacent to Howell Mill Road. A metal shed was located north of the residential structure. A potential well structure was observed west of the residential dwelling and was constructed of bricks consistent with the exterior of the residence. The remainder of the site primarily consists of wooded land and fields. A stone retaining wall was observed on the east-facing slope of the ridge on the northern-central portion of the site. The retaining wall appears to be located within the vicinity of a former residential dwelling that was reportedly demolished in 2022. A springhead well, constructed of stone, was observed alongside the stream that transects the western portion of the site.

According to historic aerial imagery and topographic maps, the project site was undeveloped from at least 1893 to circa 1935, when an apparent residential structure was depicted on the northeast portion of the site. Historic topographic maps dated 1941 and 1942 depict that the residential structure was located in the center of the site. Circa 1956, an apparent residential structure was depicted on the southeast portion of the site and corresponds with the footprint of the brick residential structure observed during the field reconnaissance. The remainder of the site appears to consist of fields and wooded land. Circa 1989, an additional structure which appears to be an outbuilding was depicted on the northern portion of the site. The property appears to remain consistent through circa April, 2022. During our field reconnaissance, the structures observed on the central and northern portions of the site were no longer present.

ECS submitted a letter to the NCSHPO on December 11, 2022. ECS was provided with a response letter from Ms. Renee Gledhill-Earley for Ms. Romano M. Bartos dated February 9, 2023. The letter states that SHPO has conducted a review of the project and the department is not aware of historic resources which would be affected by the project. The letter also states that the SHPO has no comment on the project as proposed. A copy of this correspondence is attached.

ECS utilized the Tribal Directory Assessment Tool (TDAT) - https://egis.hud.gov/TDAT/ to identify tribes with interest in projects within Haywood County. The Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation were identified on the TDAT tool. ECS submitted letters to the aforementioned tribes on December 11, 2022. ECS received return correspondence from LeeAnne Wendt of the Muscogee (Creek) Nation on February 13, 2023, which reported that the Muscogee (Creek) Nation believes that there should be no effects to any known historic properties. The Muscogee (Creek) Nation requested that they be notified if there are any inadvertent discoveries of cultural material, human remains, or funerary objects during any required repair work or ground disturbance. At the time of this submittal, return correspondence from the Cherokee Nation, Eastern Band of Cherokee Indians, and Catawba Indian Nation has not been received.

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Based on the historic and current residential development on the project site and the lack of known cultural resources reported for the project site, the project is in compliance with Historic Preservation requirements and Section 106.

### 3.12 Noise Abatement and Control

Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B

ECS reviewed the property and surrounding area to identify major roadways within 1,000 feet, railroads within 3,000 feet, and military or FAA-regulated airports that service jets within 15 miles of the subject property. According to the National Transportation Noise Map by the Bureau of Transportation Statistics, https://www.bts.gov/geospatial/national-transportation-noise-map, one major roadway (Howell Mill Road, State Road 1184) was identified within 1,000 feet of the subject property.

ECS reviewed information available on the North Carolina Department of Transportation (NCDOT) mapping and database website, (https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx). According to the NCDOT website, Average Annual Daily Traffic (AADT) volume for Howell Mill Road (Route ID 40001184044) was 5,000 vehicles in 2021. Traffic mixes were not reported on the NCDOT Traffic Volume Map; therefore, the estimated percentages for a major arterial urban road will be applied and is presumed to consist of 92% automobiles, 4% medium trucks, and 4% heavy trucks.

A request for traffic forecasts was submitted to the NCDOT on November 11, 2022. According to Keith Dixon, State Traffic Forecast Engineer with the NCDOT, requests for traffic forecasts are only accepted for NCDOT projects. Mr. Dixon provided a forecast from 2016 that encompassed SR 1184 (Howell Mill Road), US 276 (Russ Avenue), and US 23 Business in Waynesville. According to the 2016 Average Annual Daily Traffic, Howell Mill Road has an average of 4,300 vehicles per day. The 2040 Average Annual Daily Traffic (Future Year Build) estimated approximately 5,000 vehicles per day on Howell Mill Road.

Based on available mapping and other documentation, a Norfolk Southern railroad is located approximately 1,600 feet southeast of the project site. The railroad transects in an southwest-northeast direction parallel to Richland Creek. ECS submitted a request to Norfolk Southern on November 11, 2022, to request information regarding the traffic at the railroad crossings located within 3,000 feet of the project site: 720322B, 720321U, 720320M, and 720319T. According to Kristie Bowman with Norfolk Southern, approximately five to six freight trains traverse the aforementioned railroad crossings in a 24-hour period. Ms. Bowman reported that the trains are diesel with three locomotives per train and 150 cars average per train. The railroad traffic at crossings 720322B, 720320M, and 720319T include two trains during the day and two trains at night. The railroad traffic at crossing 720321U includes four trains per day and two trains at night. One switcher is reported per day at crossings 720322B, 720320M, and 720319T. Further, it was reported that the track is welded and not bolted.

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Based on available mapping tools from the North Carolina Department of Transportation (NCDOT) – Division Office, Aviation website (https://www.ncdot.gov/divisions/aviation/Pages/nc-airports.aspx) , and Department of Military and Veterans Affairs website (https://www.milvets.nc.gov/services/military-bases-north-carolina), there are no commercial airports or military airfields within 15 miles of the subject property.

Using the data collected above, ECS utilized the HUD Day/Night Noise Level (DNL) Calculator to determine the DNL for noise sources. Since airports were ruled out as possible noise sources, only data collected for Howell Mill Road and the Norfolk Southern Railroad (NS 26-27) were utilized in the calculation. Based on the proposed site plans, the nearest structure and/or parking area is approximately 200 feet from the center-lane of Howell Mill Road. According to the DNL Calculator, the current DNL for noise sources is 59dB for Howell Mill Road and 56dB for NS 26-27. The combined DNL for all road and rail sources is 61dB, below the established mitigation threshold of >65dB-75dB. The DNL Calculator was also utilized with the 2040 Traffic Projections provided by NCDOT. The projected DNL for 2040 was consistent with the current DNL with 59dB for Howell Mill Road and a combined DNL of 61dB. Based on the results of the DNL Calculator, the project is in compliance with regards to Noise Abatement and Control.

**3.13 Sole Source Aquifers**

Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149

Sole source aquifers are not located in North Carolina as per the EPA Sole Source Aquifers mapping program (https://www.epa.gov/dwssa/map-sole-source-aquifer-locations). The neared Sole Source Aquifer to the subject property is the Greater Miami Buried Aquifer & OKI Extension located approximately 250 miles to the north. The project is in compliance with the requirements for Sole Source Aquifers.

**3.14 Wetlands Protection**

Executive Order 11990, particularly sections 2 and 5

ECS performed a site visit on November 18, 2022, and reviewed the necessary National Wetlands Inventory (NWI) maps, USGS Topographic maps, the USDA-NRCS Web Soil Survey for Haywood County, and FEMA-FIRM panel concerning the subject property. During the site reconnaissance, a potential stream was observed transecting the southwest portion of the site. Low-lying areas, which may be considered wetlands, were observed along the stream that transects the site.

The soils listed for the project site in the USDA-NRCS Web Soil Survey included Dillsboro loam, 2 to 8 percent slopes (DsB); Dillsboro loam, 8 to 15 percent slopes (DsC); and,Evard-Cowee complex, 15 to 30 percent slopes (EvD). The aforementioned soils were not reported on the NRCS Hydric Soils list for Haywood County, North Carolina; however, a stream was depicted on the USFWS NWI Map and USGS Topographic Map transecting the western portion of the site. The stream was listed as R4SBC – an intermittent, riverine system with a streambed that is seasonally flooded as defined by the USFWS NWI Mapper. The USFWS NWI Mapper also reported that the project site is located in the Pigeon River Watershed (HUC 06010106).

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ECS was provided with a Notice of Jurisdictional Determination from the U.S. Army Corps of Engineers dated December 19, 2022, under Action ID SAW-2022-02495. The Notice reported that approximately 315 linear feet of stream and 0.34-acre of wetland was identified on the project site and may be subject to regulatory jurisdiction. Based on the current site plans and information reviewed, there are no impacts proposed to wetlands, streams, or other waters on the subject property for the proposed action.

According to 24 24 CR § 55.12(c)(7) if an activity, which is not excluded under 24 CFR §§ 55.12 occurs on a property which contains wetlands, and the activity will not occur in the wetlands, a permanent covenant or deed restriction must be placed on the property with intent to preserve the wetlands or an 8-step decision making process must be completed. Therefore, a deed-restrictive covenant is required before the project is considered in compliance with the requirements for Wetlands Protection.

**3.15 Wild and Scenic Rivers**

Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)

The subject property is not located near a Wild and Scenic River (WSR). According to the National Park Service (U.S. Department of the Interior) Nationwide Rivers Inventory located at https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm, the nearest depicted river is the Pigeon River (East Fork) which is a three-mile length of the river between Shining Rock Wilderness on US 276 to Sharp Mountain Road. This length of the Pigeon River is located approximately 12 miles southeast of the subject property. According to the National Wild and Scenic Rivers System map dated November, 2016, and accessed at https://www.rivers.gov/mapping-gis.php , the nearest Wild & Scenic River to the subject property is the Horsepasture River located approximately 28 miles to the south and along Whitewater Road in Sapphire, North Carolina. The project is in compliance with the Wild and Scenic Rivers Act.

**3.16 Environmental Justice**

Executive Order 12898

This project will not have any negative impacts on low-income and minority persons. The project is being developed as a low-income housing project with the purpose of helping economically disadvantaged groups to rent housing. The project will not displace or otherwise negatively impact low-income or minority persons. Although the project does require the removal of an existing residential structure located on the subject property, the residence is currently unoccupied and will not displace any persons. ECS also utilized EJScreen to perform a search of data associated with 12 environmental indicators as well as demographic variables. When using EJSCREEN, the 80th percentile is a suggested starting point for the purpose of identifying geographic areas in the United States that may warrant further consideration, analysis, or outreach. That is, if any of the EJ indexes for the areas under consideration are at or above the 80th percentile nationally, then further review may be appropriate. Based on the results of the EJScreen for the subject property, none of the environmental indicators exceeded the 80th percentile nationally. The project is in compliance with Executive Order 12898.

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## 4.0 ENVIRONMENTAL ASSESSMENT FACTORS [24 CFR 58.40; REF. 40 CFR 1508.8 &1508.27]

| Environmental Assessment Factor | Impact Code | Impact Evaluation | Mitigation |
|---|---|---|---|
| Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design | 2 | No impact anticipated. | N/A |
| Soil Suitability / Slope/ Erosion / Drainage and Storm Water Runoff | 2 | No impact anticipated. | N/A |
| Hazards and Nuisances including Site Safety and Site-Generated Noise | 3 | Minor Adverse Impact - May require mitigation. | Implementation of a cross-walk, pedestrian signage, and/or extension of the proposed sidewalk on the north side of Howell Mill Road could reduce traffic hazards. |
| Energy Consumption/ Energy Efficiency | 3 | Minor Adverse Impact - May require mitigation. | Minor impacts on energy consumption and beneficial impacts to energy efficiency expected - no mitigation proposed. |
| Employment and Income Patterns | 1 | Minor beneficial impact. | N/A |
| Demographic Character Changes / Displacement | 2 | No impact anticipated. | N/A |
| Educational and Cultural Facilities (Access and Capacity) | 2 | No impact anticipated. | N/A |
| Commercial Facilities (Access and Proximity) | 2 | No impact anticipated. | N/A |

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| Environmental Assessment Factor | Impact Code | Impact Evaluation | Mitigation |
|---|---|---|---|
| Health Care / Social Services (Access and Capacity) | 2 | No impact anticipated. | N/A |
| Solid Waste Disposal and Recycling (Feasibility and Capacity) | 2 | No impact anticipated. | N/A |
| Waste Water and Sanitary Sewers (Feasibility and Capacity) | 2 | No impact anticipated. | N/A |
| Water Supply (Feasibility and Capacity) | 2 | No impact anticipated. | N/A |
| Public Safety - Police, Fire and Emergency Medical | 2 | No impact anticipated. | N/A |
| Parks, Open Space and Recreation (Access and Capacity) | 2 | No impact anticipated. | N/A |
| Transportation and Accessibility (Access and Capacity) | 2 | No impact anticipated. | N/A |
| Unique Natural Features /Water Resources | 2 | No impact anticipated. | N/A |
| Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.) | 3 | Minor Adverse Impact - May require mitigation. | Based on the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action. |

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| Environmental Assessment Factor | Impact Code | Impact Evaluation | Mitigation |
|---|---|---|---|
| Other Factors | 2 | No impact anticipated. | N/A |

**Impact Codes**: An impact code from the following list has been used to make the determination of impact for each factor.

**(1)** Minor beneficial impact

**(2)** No impact anticipated

**(3)** Minor Adverse Impact – May require mitigation

**(4)** Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement.

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### 4.1 Conformation with Plans / Compatible Land Use and Zoning / Scale and Urban Design

The project will be compatible with surrounding land uses that are currently zoned as commercial and residential with mixed-use-community and Residential-Medium to High Density. Existing utilities and city services are available at and within the vicinity of the site. According to the Haywood County, North Carolina GIS website, the subject property is zoned for Howell Mill Urban Residential (HM-UR). Ms. Elizabeth Teague, Development Service Director, stated that the property was zoned HM-UR in which multi-family is a permitted use. Ms. Teague further stated that the zoning use had been approved for the site. Based on the proposed action conforming with the approved zoning for the project site, no impact is anticipated.

### 4.2 Soil Suitability / Slope / Erosion / Drainage and Storm Water Runoff

The project site currently consists of wooded land, fields, a residential structure, and a shed.. Based on ECS's site visit on November 18, 2022, there was no evidence of discernable soil problems in the project area. The site slopes to the southwest with on-site elevations ranging from 2,680 feet to 2,650 feet. Site plans indicate that the property will be leveled prior to development for the proposed action. Evidence of slope failure, slides, and slump was not observed on the project site. The USDA Soil Data Explorer was consulted to determine the susceptibility of the soil to sheet and rill erosion by water, indicated by factor K. The Explorer indicates that Dillsboro loam (DsB, DsC) has a factor K of 0.24, while Evard-Cowee complex (EvD) has a factor K of 0.1. The values for K range from 0.02 to 0.69, with the higher value indicating the soil is more susceptible to sheet and rill erosion by water. Based on the reported K factor for the on-site soils, the potential for sheet and rill erosion by water at the project site appears to be low.

The USDA Soil Data Explorer was consulted to determine the suitability of the on-site soils for residential dwellings with basements. The suitability rating is based on the soil properties which affect the capacity of a soil to support loads without movement and on the existing factors that might affect construction and excavation costs. Dillsboro loam, 2 to 8 percent slopes (DsB), has a rating of not limited indicating that the soil has features that are very favorable for the proposed use. Dillsboro

loam, 8 to 15 percent slopes (DsC), has a rating of somewhat limited due to the slopes located on the project site. A rating of somewhat limited indicates that the soil has features that are moderately favorable for the proposed use. Evard-Cowee complex, 15 to 30 percent slopes (EvD), has a rating of very limited due to the slopes and depth to soft bedrock located on the project site. A rating of very limited indicates the soil has one or more features that are unfavorable for the proposed use. Based on the site plans, the property will be leveled by grading operations using the grading and excavation of on-site soils and, when necessary, the import of fill material.

A stormwater management feature is proposed as part of site development and will be constructed in accordance with local regulations. Significant issues associated with stormwater are not anticipated for the project and runoff of pollutants or other chemicals is not expected.

Based on the project plans, which include grading and excavation of on-site soils and implementation of stormwater management features, no impact is anticipated.

**4.3 Hazards and Nuisances including Site Safety and Site-Generated Noise**

The construction of a multi-family apartment complex has the potential to create a short amount of time where site safety, site hazards, or traffic issues may be a minor concern. The construction may also generate noise from machinery and power tools. Mitigation steps will include using caution control on roads as necessary and conducting any noise-generating work during the daytime hours. Site safety and adherence to OSHA safety requirements should be managed by the contracted parties engaged in the project.

A stream and wetland areas were identified along the western boundary of the subject property and could be considered a natural hazard due to the risk of slips, falls, or drowning. Moderately dense vegetation was observed within the vicinity of the stream and has the potential to provide habitat for plants, insects, and animals, some of which may be considered poisonous. Based on the site plans and correspondence with the relying entity, the proposed development will be restricted from the stream, wetland areas, and dense vegetation on the western portion of the subject property by implementation of a retaining wall along which the structures will be constructed. Current site plans indicate there will be no entry or egress on the rear (western exterior) of the structures. The implementation of the retaining wall and limitations on rear access to the structures within the development is considered a man-made buffer to protect individuals from these natural hazards.

Based on our site observations, a sidewalk is located along the southern edge of Howell Mill Road. The proposed development is located to the north of Howell Mill Road and current site plans indicate the construction of a sidewalk along the northern edge of Howell Mill Road. However, there are currently no plans to extend the sidewalk to nearby commercial facilities or public transportation points which could represent a site safety hazard.

Other natural hazards, built hazards, and nuisances were not observed at the subject property.

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### 4.4 Energy Consumption / Energy Efficiency

According to the Waynesville 2035 Comprehensive Land Use Plan, one of the goals for the city is to protect and enhance Waynesville's natural resources which includes the engagement and promotion of best management practices related to energy use, efficiency, and waste management. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. Energy Star Certification for multifamily new construction projects requires one of three paths to earn the certification based on energy rating and/or modeling software and use of energy efficient measures. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and mult-family developments.

The project is located within close proximity to major transportation arteries including Howell Mill Road, Russ Avenue, and Great Smoky Mountain Expressway (US-23). Nearby daily conveniences to the site include Ingles Market, Big Lots, Walmart, and Publix Super Market, which are located within a 10-minute drive from the site, as well as restaurants, pharmacies, and other retailers. County educational facilities and higher education institutional facilities are also located within close proximity to the Project.

With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency.

### 4.5 Employment and Income Patterns

This project is expected to create temporary jobs during the construction and development phases, and then permanent local jobs to service the facility leasing office, maintenance, grounds keeping, and other tenant-supportive services. Additionally, the implementation of the proposed action will increase the local workforce as tenants will be able to work at local businesses, retail stores, and other employers. The project is anticipated to have a minor beneficial impact to the employment and income patterns of the area.

### 4.6 Demographic Character Changes / Displacement

The proposed project is located in a residential and commercial area and currently contains an uninhabited single-family residence. The subject property is zoned for HM-UR in which multi-family is a permitted use. The project is being developed as a multi-family residential development that will be affordable to families at or below 60% of the area median income (AMI). Because the proposed action will result in the addition of affordable housing units and does not displace any current residents, no impact is anticipated.

### 4.7 Educational Resources and Cultural Facilities (Access and Capacity)

Mr. Graham Haynes, Haywood County Schools Assistant Superintendent, provided correspondence on January 4, 2023, that the project is located in the Haywood County School District and will not adversely affect the schools serving this project. Mr. Haynes said the schools located in the district are not considered high risk or poor performing schools per state or federal performance standards. The

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schools that will serve this project are Junaluska Elementary, Waynesville Middle School, and Tuscola High School. Because the proposed action will not adversely affect the schools serving the project site, no impact is anticipated.

**4.8 Commercial Facilities (Access and Proximity)**

The project is located within close proximity to major transportation arteries including Howell Mill Road, Russ Avenue, and Great Smoky Expressway (US-23). Nearby daily conveniences to the site include Ingles Market, Big Lots, Walmart, and Publix Super Market, which are located within a 10-minute drive from the site, as well as restaurants, pharmacies, and other retailers. As a result, it appears that adequate retail services are located within close proximity of the site and the proposed project will not adversely impact or displace these existing retail and commercial facilities.

**4.9 Health Care / Social Services (Access and Capacity)**

The Haywood Regional Medical Center is located approximately 3 miles northeast of the proposed project. Multiple medical offices and urgent care facilities are located within 3 miles of the proposed project. According to correspondence dated November 18, 2022 with Sarah Henderson, Public Health Services Division Director, adequate and appropriate health services are available for this project, and health services will not be adversely affected by this project. Ms. Henderson stated that Haywood Regional Medical Center, Haywood County EMS, Haywood County Health and Human Services Agency, Mercy Urgent Care, HRMC Urgent Care (Canton), HRMC Urgent Care (Hazelwood), and other various primary care providers were in the area. Because the proposed action will not adversely affect the health services serving the project site, no impact is anticipated.

**4.10 Solid Waste Disposal and Recycling (Feasibility and Capacity)**

Mr. Kris Boyd, Assisting County Manager for Haywood County, provided correspondence on January 3, 2023, that states solid waste disposal for the project can be adequately handled by public or private collectors without adversely affecting landfill capacity. Because the proposed action will not adversely affect the landfills serving the project site, no impact is anticipated.

**4.11 Waste Water and Sanitary Sewers (Feasibility and Capacity)**

Mr. Jeffrey Stines of the Public Services Department at the Town of Waynesville reported that public sewer is available and adequate to serve the project per a certification letter signed and dated January 30, 2023. Mr. Stines further reported that the closest tap is an eight inch line located 1,135 feet from the subject property and buried approximately three feet deep. Mr. Stines remarked that the line and connection point are located at the southernmost end of Abel Lane. Due to the existing available and adequate public sewer, no impact is anticipated for the proposed action.

**4.12 Water Supply (Feasibility and Capacity)**

Mr. Jeffrey Stines of the Public Services Department at the Town of Waynesville reported that public water is available and adequate to serve the project per a certification letter signed and dated January 30, 2023. Mr. Stines further reported that the closest tap is an ten inch line located adjacent to the subject property. Due to the existing available and adequate public water supply, no impact is anticipated for the proposed action.

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**4.13 Public Safety - Police, Fire, and Emergency**

Police: ECS spoke with Josh Nichols, dispatcher for the Town of Waynesville Police Department, via telephone on February 22, 2023. Mr. Nichols reported that the subject property is currently within the jurisdiction of Haywood County; however, if the subject property is annexed within the town limits, any calls originating from the address of the subject property would be covered by the Town of Waynesville Police Department. ECS submitted an email request to Greg Christopher, Sheriff of Haywood County, on November 11, 2022, and again on January 3, 2023. ECS also emailed requests to Elizabeth Teague and Gina Zachary with Haywood County to request information regarding police response time and coverage for the subject property. Responses have not been received at the time of this submittal.

Fire: The City of Waynesville Fire Department currently provides services to the subject property and will continue to do so with the development of the proposed multi-family complex. According to the Haywood County GIS, the property is serviced by the Howell Mill Fire District. The Waynesville Fire Department (1022 N. Main Street) is located approximately 1 mile from the subject property. According to correspondence dated November 14, 2022, with Darrell Calhoun, Waynesville Fire Marshal, Fire Protection is available and adequate for the project as the average response time of four minutes falls withing the average community response time of four minutes. Further, Mr. Calhoun reported that Fire Protection would not be adversely affected by the project; therefore, no impact is anticipated by the proposed action.

Emergency Medical: The Haywood County Department of Emergency Medical Services is responsible for services throughout Haywood County. The closest EMS services facility (Haywood County Rescue Squad) is located approximately one mile from the proposed development. According to correspondence dated November 14, 2022, with Travis Donaldson, Director of Haywood County Emergency Services, Emergency Medical Services are available and adequate for the project as the average response time of 9 minutes falls within the average community response time of 9 minutes and 30 seconds. Additionally, Mr. Donaldson reported on February 14, 2023, that Emergency Medical Services would not be adversely affect by the project; therefore, no impact is anticipated by the proposed action.

**4.14 Parks, Open Spaces, and Recreation (Access and Capacity)**

ECS submitted an email request to Ian Smith, Director of Recreation and Parks with Haywood County, on November 11, 2022, and again on January 3, 2023. To date, a response has not been received from Mr. Smith. The City of Waynesville Parks, Recreation, and Cultural Resources Department has several parks with various amenities within the City of Waynesville. The Waynesville Recreation Park is located approximately one mile from the property and consists of 12 acres that includes six asphalt tennis courts, playgrounds, restrooms, sports fields, skate park, greenway, and three picnic shelters. Vance Street Park is located approximately 0.5 miles from the property and consists of 16 acres that contains the 64,000 square foot Waynesville Recreation Center, a softball field, soccer field, picnic shelter, restrooms, two sand volleyball courts, green space, a walking trail beside Richland Creek, and a handicapped fishing pier. Based on the availability of public parks within a mile of the subject property, no impact is anticipated by the implementation of the proposed action.

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**4.15 Transportation and Accessibility (Access and Capacity)**

The proposed property will have access from Howell Mill Road. Public Transportation via the City of Waynesville public transportation system can be accessed with a bus stop at Ingles Market located on the western adjoining property (201 Barber Boulevard). According to Si Simmons, Director of Haywood Public Transit, on January 3, 2023, public transportation is available for the project site and is available through bus transportation. Chris Lee, District Engineer with the North Carolina Department of Transportation (NCDOT) replied via email on January 23, 2023, that they are evaluating the site for traffic impacts and discussing changes for the driveway permit with the civil engineer for the project. Further correspondence from NCDOT has not been received at the time of this submittal. Based on the ongoing coordination with the NCDOT and the availability of public transportation adjacent to the subject property, no impact is anticipated by the implementation of the proposed action.

**4.16 Unique Natural Features / Water Resources**

Based on the site visit conducted on November 18, 2022, there are no unique natural features that would be affected by the proposed action. Additionally, there are no impacts to the wetlands or stream located on the subject property as part of the proposed action. As the proposed action avoids impacting unique natural features and water resources, no impact is anticipated by the implementation of the proposed action.

**4.17 Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)**

Based on the species identified on the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (https://ecos.fws.gov/ipac/) and our subsequent habitat assessment, USFWS recommended the following impact avoidance and minimization measures:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Based on conversations between ECS and the relying entity, Mountain Housing Opportunities, Inc., correspondence was submitted to USFWS on February 7, 2023, which stated that tree clearing services within the proposed development area will be contracted and completed by March 15, 2023. Additionally, the correspondence stated that manmade structures on the property will be surveyed

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for evidence of bats within two weeks prior to the demolition activities. Mr. Hamstead with USFWS responded on February 16, 2023, and stated that the described impact avoidance and minimization measures would support an agency concurrence with "may affect, not likely to adversely affect."

Mr. Hamstead further stated that based upon the information provided, if suitable habitat does not occur within the action area for any other federally protected species, the agency would not require further action at this time. Based on the avoidance measures implemented to avoid impacts to Gray Bat and the other bat species listed in IPAC, no impact to federally protected species is anticipated by the implementation of the proposed action.

Based on the current site plans, removal of the vegetation on portions of the wooded land and fields will be necessary for the development of the project. Following construction, the areas not developed with impervious surfaces will consist of landscaped areas that will be routinely maintained. Due to the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action.

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**4.18 Other Factors**

**Climate Change**

Natural hazards that may be affected by climate change and affect residents of HUD-assisted housing include the following:

- Flooding - The subject property is located up-gradient and outside the mapped flood hazard zones. A stream was observed transecting the western portion of the site; however, no indicators of recent flooding events were observed. Additionally, current site plans indicate the structures will be placed at an elevation of over 2,655 feet, approximately 20 feet higher in elevation than the stream (2,635 feet).
- Sea Level Rise - The subject property is located approximately 320 miles from the coastline of the Atlantic Ocean.
- Hurricanes and Extreme Storms - North Carolina, and respectively the subject property, are located within a humid climate zone. Hurricanes and other extreme storms originating from the Gulf of Mexico or the Atlantic Ocean have a potential to reach the subject property; however, site plans indicate that stormwater features will be placed on the site to accommodate rain events on the impervious surfaces of the parking lots, structures, and roads. Additionally, site plans show the placement (post-development) of canopy trees, evergreen trees, and shrubs. As part of the development, it is assumed that the vegetation will be routinely maintained to prevent damage to persons or property from dead trees, falling branches, etc.
- Drought - The subject property will be serviced by municipal water supply. Although vegetation on the project site may be impacted by drought, there are no expected impacts to residents from drought conditions.

- Extreme Heat - According to temperature data obtained from the National Oceanic and Atmospheric Administration (NOAA), the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the subject property will utilize electric HVAC units for heating and cooling the residential units.
- Wildfire - The subject property is not located within close proximity (<1,000 feet) of large, contiguous forested areas.
- Landslides - The proposed site plans indicate the site will be leveled and retained using walls for the proposed action, reducing the risk of landslides on the subject property.
- Extreme Cold - According to temperature data obtained from the National Oceanic and Atmospheric Administration (NOAA), the average temperature ranges from 23° to 83° degrees Fahrenheit in Waynesville, North Carolina. The structures on the subject property will utilize electric HVAC units for heating and cooling the residential units.

Based on the site topography, location, and climate, the risk of natural hazards associated with climate change appears to be minimal. There are no pre-existing conditions regarding air quality, urban heat island effects, soil stability, and water resources; therefore, no site suitability factors are expected to be altered before or after implementation of the proposed action.

## 5.0 LIST OF PERMITS OBTAINED

No permits are required for the preparation of the Environmental Assessment documentation, and no permits have been obtained for the proposed action as of the date of the preparation of this Environmental Assessment. Subsequent permits will be required from the Town of Waynesville and/or Haywood County for development of the proposed action and its components.

## 6.0 PUBLIC OUTREACH

No public outreach has been required or completed as part of the Environmental Assessment documentation review. Subsequent public outreach will be conducted as necessary for the proposed action as part of the final review process.

## 7.0 CUMULATIVE IMPACT ANALYSIS

This project is a single and discrete project, not linked with other on-going or planned future projects. As such, its impacts are definable to the time and location of their implementation. As a discrete project, there are no cumulative impacts from associated or future projects related to this site.

## 8.0 ALTERNATIVES

Only two possible courses of action were considered: (1) implement project or (2) the no action alternative. The first would be to construct the proposed action according to the plans describe herein. The second No Action Alternative would not construct the proposed multi-family residential development on the site and the property would remain with a vacant single-family residence, wooded land, and fields. Under this alternative, there would be no multi-family housing development and the creation of affordable rental units to meet the demands outlined in the City of Waynesville Comprehensive Land Use Plan for 2035 and the regional housing needs assessment conducted by

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Dogwood Health Trust. City's Comprehensive Future Land Use Plan would not be met. The selection of the No Action Alternative would not meet the stated Purpose and Need, which is to provide affordable housing for low- and moderate-income families.

## 9.0 SUMMARY OF FINDINGS AND CONCLUSIONS

The Proposed Balsam Edge Apartments Site is located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The subject property includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as PIN8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed.

The scope of work for the subject property includes an 84 unit, family oriented affordable apartment community consisting of one, two, and three bedroom units. All units will include washer/dryer hookups, central AC, ceiling fans, Energy Star kitchen appliances (including dishwashers), and mini-blinds. 12 of the 84 units will be fully accessible with grab bars in the bathrooms and other features for mobility impaired residents.The subject property will also include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities, while the outdoor amenities will include a picnic/grilling area and an on-site playground. The development will be built to achieve Energy Star Multifamily New Construction certification with energy efficient windows and HVAC. The project will also be enrolled in Duke Energy's New Construction Design Assistance Program to identify further opportunities for energy efficiency.

Site information used to develop this Environmental Assessment was obtained during walking and driving reconnaissance efforts on and around the property. Environmental resource information was also obtained from letter submittals and responses from state and federal agencies, from information that was obtained through local, state and federal government websites, and other appropriate sources. Based on the proposed development plan and the information reviewed and obtained as part of this Environmental Assessment, the following environmental impacts were identified:

- (3.6 Contamination and Toxic Substances ) - An underground storage tank (UST) was observed on the southern exterior of the residence at 333 Howell Mill Road and is considered a potential risk for contamination if an unknown release has occurred during refueling or decomposition of tank materials. Based on the presence of the UST within the proposed action area, this project is not in compliance with Contamination and Toxic Substances requirements.

- (3.7 Endangered Species Act ) - Based on correspondence from USFWS, Gray Bat (endangered) and Tricolored Bat (proposed endangered) are known to roost with 0.5-mile of the proposed action. USFWS recommend that tree-clearing be conducted outside the active season for Gray Bat (March 15 - November 15). Additionally, the on-site structures must be surveyed within two weeks of their proposed demolition. The aforementioned actions are proposed for implementation, and based on correspondence with USFWS, following the

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aforementioned recommendations would allow the project to proceed under a "may affect, not likely to adversely affect" concurrence. Therefore, the project is in compliance with the Endangered Species Act **if** the proposed mitigation measures are followed.

- (3.14 Wetlands Protection ) - Based on the current site plans and information reviewed, there are no impacts proposed to wetlands, streams, or other waters on the subject property for the proposed action. According to 24 24 CR § 55.12(c)(7) if an activity, which is not excluded under 24 CFR §§ 55.12 occurs on a property which contains wetlands, and the activity will not occur in the wetlands, a permanent covenant or deed restriction must be placed on the property with intent to preserve the wetlands or an 8-step decision making process must be completed. Based on the aforementioned requirement, the wetlands located on the subject property should be conserved with deed-restrictive covenants in order to be in compliance with Executive Order 11990.

- (4.3 Hazards and Nuisances including Site Safety and Site-Generated Noise ) - Based on our site observations, a sidewalk is located along the southern edge of Howell Mill Road. The proposed development is located to the north of Howell Mill Road and current site plans indicate the construction of a sidewalk along the northern edge of Howell Mill Road. However, there are currently no plans to extend the sidewalk to nearby commercial facilities or public transportation points which could represent a site safety hazard. Implementation of a cross-walk, pedestrian signage, and/or extension of the proposed sidewalk on the north side of Howell Mill Road could reduce traffic hazards.

- (4.4 Energy Consumption / Energy Efficiency ) - The development will be built to achieve Energy Star Multifamily New Construction certification and will also be enrolled in Duke Energy's New Construction Design Assistance Program which helps to design and construct energy-efficient buildings for commercial, institutional, industrial, and multi-family developments. With the close proximity to amenities and implementation of construction techniques to meet energy efficient design, the proposed action is expected to have minor impacts on energy consumption and a beneficial impact to energy efficiency.

- (4.17 Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.) ) - Due to the removal of the existing vegetation and conversion of wooded land and fields to landscaped areas, minor adverse impact is anticipated to vegetation and wildlife currently inhabiting the subject property; however, no mitigation is proposed as the removal of the existing vegetation is considered necessary for the implementation of the proposed action.

## 10.0 REFERENCES

Catawba Indian Nation THPO: ECS Email Request

Cherokee Nation: ECS Email Request

City of Waynesville, NC Website: https://www.waynesvillenc.gov/

City of Waynesville Comprehensive Land Use Plan for 2035

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Department of Military and Veterans Affairs website, https://www.milvets.nc.gov/services/military-bases-north-carolina

Eastern Band of Cherokee Indians: ECS Email Request

EJScreen, https://www.epa.gov/environmentaljustice

EPA Air Data website, http://www.epa.gov/airdata/

EPA Green Book: https://www.epa.gov/green-book

EPA NEPA Assist GIS website, https://www.epa.gov/nepa/nepassist

EPA Radon Map, https://www.epa.gov/sites/default/files/2014-08/documents/north_carolina.pdf

EPA Sole Source Aquifers mapping program (https://www.epa.gov/dwssa/map-sole-source-aquifer-locations)

FEMA Flood Map Service Center: https://msc.fema.gov/portal

Google Earth Website: https://www.google.com/earth/

Haywood County GIS Website: https://maps.haywoodcountync.gov/gisweb/default.htm

Haywood County, NC Website: https://www.haywoodcountync.gov/

HUD Exchange Acceptable Separation Distance Tool, https://www.hudexchange.info/programs/environmental-review/asd-calculator/

HUD Exchange DNL Calculator, https://www.hudexchange.info/programs/environmental-review/dnl-calculator/

Inactive Hazardous Sites and Pollutant-Only Sites Inventory by County (https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program)

Muscogee (Creek) Nation: ECS Email Request & Response

National Park Services Nationwide Rivers Inventory, https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm

National Transportation Noise Map by the Bureau of Transportation Statistics, https://www.bts.gov/geospatial/national-transportation-noise-map

National Wild and Scenic Rivers System Website: https://www.rivers.gov/mapping-gis.php

North Carolina Department of Agricultural (NCDA)

North Carolina Department of Environmental Quality Coastal Area Management Counties website, https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/cama-counties

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North Carolina Department of Environmental Quality Laserfische website, Laserfische https://edocs.deq.nc.gov/WasteManagement/Welcome.aspx

North Carolina Department of Transportation (NCDOT) mapping website, https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx

North Carolina Department of Transportation (NCDOT) – Division Office, Aviation website (https://www.ncdot.gov/divisions/aviation/Pages/nc-airports.aspx)

NCDOT Traffic Volume GIS Viewer (https://connect.ncdot.gov/resources/State-Mapping/Pages/Traffic-Volume-Maps.aspx)

NC Coastal Area Management Act – Coastal Counties:

https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/camacounties

North Carolina Natural Heritage Program Letter Correspondence

North Carolina State Historic Preservation Office GIS Web Service: http://gis.ncdcr.gov/hpoweb/

North Carolina State Historic Preservation Office letter correspondence

Tribal Directory Assessment Tool website: https://egis.hud.gov/tdat/Tribal.aspx

U.S. Census Bureau, Census 2010 website: http://www.census.gov/

U.S. Department of Agriculture Web Soil Survey website, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

U.S. Department of Housing and Urban Development Environmental Guidance Website:

https://www.hud.gov/states/shared/working/r4/environment/guidancenc

https://www.hudexchange.info/environmental-review/federal-related-laws-and-authorities/

U.S. Fish and Wildlife Service National Wetlands Inventory Wetlands Mapper Website: https://www.fws.gov/wetlands/data/mapper.html

U.S. Fish and Wildlife Service, Asheville Field Office letter correspondence

US Fish and Wildlife Service (FWS) Information for Planning and Consultation (IPaC) tool (https://ecos.fws.gov/ipac/)

U.S. Fish and Wildlife Service – Coastal Barrier Resources System Mapper website:

https://www.fws.gov/cbra/Maps/Mapper.html

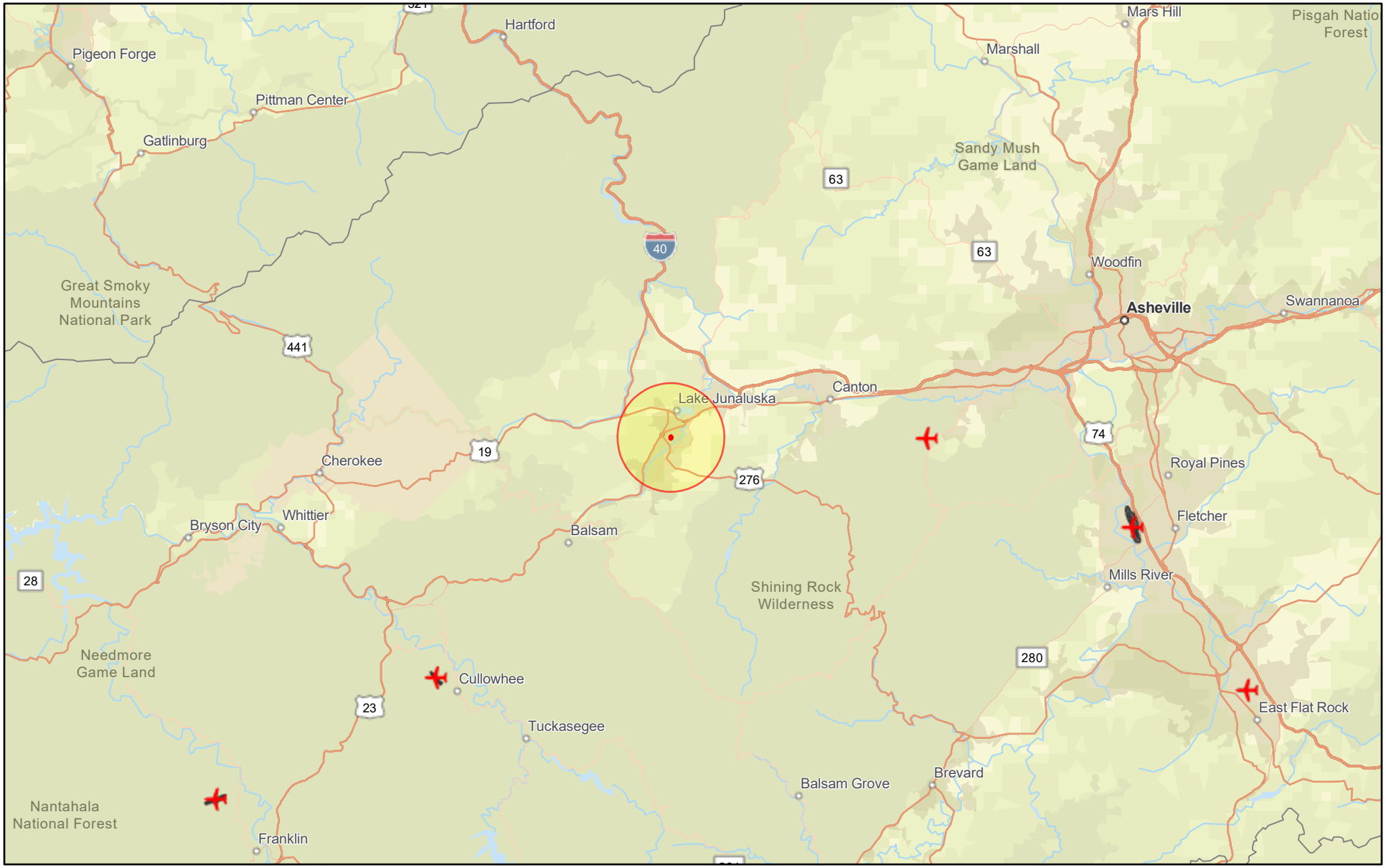
U.S. Geological Survey website: http://www.usgs.gov/

DRAFT

# ATTACHMENT 2:

# NEPAssist Airports Map with 15,000-foot Buffer

# Balsam Edge - Airports Map with 15,000-foot Buffer




October 31, 2024

Balsam Edge

Buffer graphics

Airport Points

Airport Polygons

1:577,791

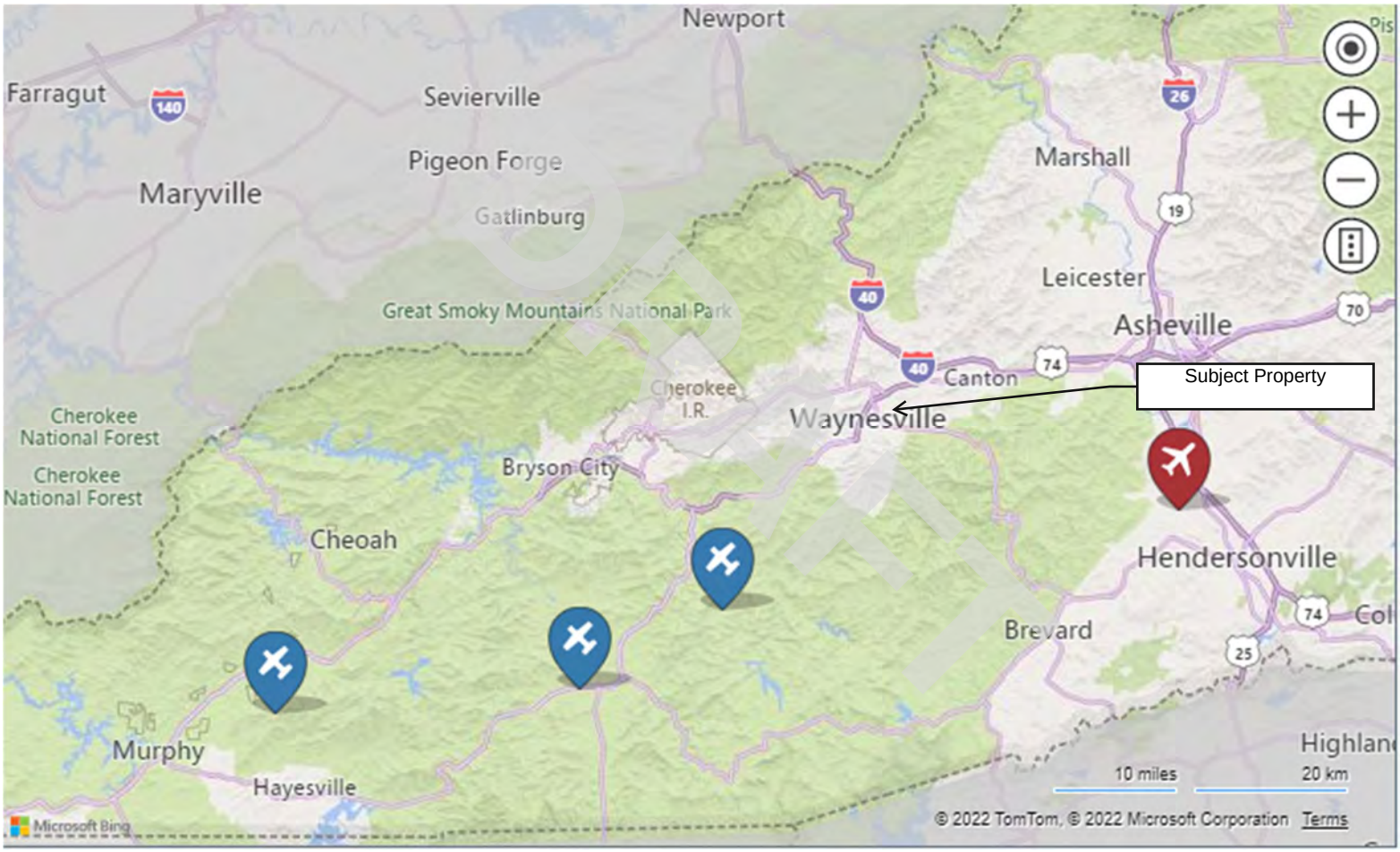
0 4 8 16 mi

0 5 10 20 km

Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS, EPA OEI

# Appendix A

# Airport Hazards


Newport
Farragut
140
Sevierville
Pigeon Forge
Maryville
Gatlinburg
Great Smoky Mountains National Park
Marshall
26
19
Leicester
40
Asheville
70
74
Canton
Subject Property
Cherokee I.R.
Waynesville
Cherokee National Forest
Cherokee National Forest
Bryson City
Cheoah
Hendersonville
Brevard
74
25
Murphy
Hayesville
10 miles
20 km
Microsoft Bing
© 2022 TomTom, © 2022 Microsoft Corporation Terms

## Jackson County Airport - 24A

Sylva 35° 19.03' 83° 12.58'

| | | |
|---|---|---|
| **Communications:** | AWOS/ASOS: 118.90 | ATIS: |
| Clearance: | Ground: | Tower: |
| CTAF: 123.00 | PCL: 123.0 | RCO: |
| Unicom: 123.00 | App/Dep: Atlanta Center 134.8 | |

| **FBO Telephone Numbers:** | | **Services:** |
|---|---|---|
| Airport Contact Number | 828-586-0321 | AVGAS, 24 hr. self-service. Hours of Operation: Unattended, Tie-Downs |
| | | |
| | | |

| **Navaids:** | **Charts:** |
|---|---|
| SOT VOR: 108.8 -199° Radial at 29.4 NM | Sectional: Atlanta |
| | Low Alt Enroute: L-25B |
| Approaches: RNAV(GPS) | **Web Site** |
| Elevation: 2857' MSL | www.co.jackson.mi.us/airport/ |

**Special Notices/Warnings:** High Terrain all Quadrants. RWY 33 Dsplcd 150'

## Asheville Regional Airport - AVL

Asheville 35° 26.07' 82° 32.57'

| | | |
|---|---|---|
| **Communications:** | AWOS/ASOS: 120.200 | ATIS: 120.2 |
| Clearance: 121.90 | Ground: 121.9 | Tower: 121.1 |
| CTAF: 121.10 | PCL: 121.1 | RCO: |
| Unicom: 122.95 | App/Dep: 125.8, 124.65, 132.625 (Atlanta Center) | |

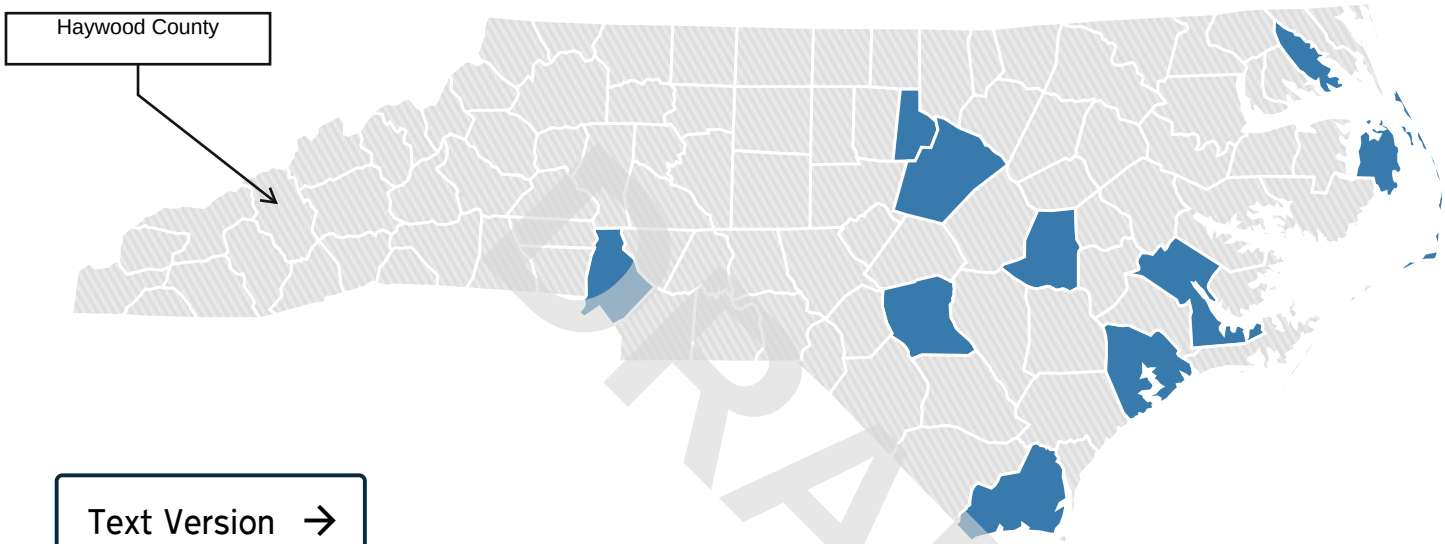
| **FBO Telephone Numbers:** | | **Services:** |
|---|---|---|
| Signature Flight Support | (828) 687-7110 | AVGAS, Jet A, 24-Hour Operation, Tie-Downs, Rental Cars, Maintenance, Hangars, WIFI |
| | | |
| Belle Aircraft Maintenance | (828) 684-9191 | |

| **Navaids:** | **Charts:** |
|---|---|
| SUG VOR: 112.2 - 280° Radial at 13.5 NM | Sectional: Atlanta |
| BRA NDB: 379 - 344 ° Radial at 10.4NM | Low Alt Enroute: L-25C |
| Approaches: ILS, RNAV(GPS), ASR | **Web Site** |
| Elevation: 2162' MSL | www.signatureflight. |

**Special Notices/Warnings:** See AFD for Class C Airspace Schedule, Communications Unavailable Below 6,000 Feet when Approach Control Closed. Rwy 34 Right Traffic when ATCT is CLSD.

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

# Military Bases in North Carolina




Text Version →

Export Map Data (/tablefield/export/paragraph/412/field_map_data/en/0)

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North Carolina has one of the largest military footprints of any state in the country, representing three out of the four branches of service and totaling 129, 049 in 2016. Military and defense industries are the second largest employers in our state, and the military has an economic impact of $66 billion annually. The military bases located in North Carolina are major drivers in our communities, allowing families and business to thrive through the synergy and partnerships that have developed between local and state government, military and defense sectors, and local businesses throughout our history.

## Marine Corps Air Station New River

Approximately 7,000 Marines, Sailors, Airmen and 1,000 civilian employees who work on a daily basis to meet the demands of operating the Corps' only East Coast rotary wing and tiltrotor Air Station. Marine Corps Air Station New River is home to two Marine Aircraft Groups, several premier training units and the first operational MV-22 squadrons.

## Seymour Johnson Air Force Base

The 4th Fighter Wing is the host unit at Seymour Johnson Air Force Base and accomplishes its training and operational missions with F-15E Strike Eagles. Two of the wings' four fighter squadrons are operational units, capable of deploying worldwide on short notice and immediately generating combat power. The other two squadrons are responsible for training all F-15E aircrews for the Air Force. The 916th ARW, a tenant unit at Seymour, is an Air Force Reserve Command Wing under Air Mobility Command. It is assigned 10 KC-135R Stratotankers. The mission of the 916th Air Refueling Wing is to fly the KC-135R Stratotanker in air to air refueling missions. This wing is capable of global deployment to support joint coalition military initiatives, as well as to support various maintenance functions that aide domestic and abroad necessities. The base encompasses 3,300 acres. Currently the SJAFB has over 530 active duty officers, and over 3,800 enlisted members and families who reside and serve at the base. Seymour Johnson is situated between the Atlantic Ocean and the Appalachian Mountains on the coastal plains of North Carolina.

## Fort Bragg

Mission and primary objective of Fort Bragg is to provide consistent combat and support forces in accordance with America's Contingency Corps. Major units of Fort Bragg include the 82nd Airborne, XVIII Airborne Corps, FORSCOM, USARC, 18th Aviation Brigade, 4th Medical Command and the US Army Special Operations Command. Fort Bragg, NC is the only Joint Strategic Deployment Platform that provides the National Command Authority the ability to respond in hours versus days, weeks or months. Enabling the US Military to seize the initiative and win the first battle of the next war. Fort Bragg is the largest military post (by population) in the US Military. Fort Bragg is one of the largest military complexes in the world and hosts the only Airborne Corps and Airborne Division known as the 82nd Airborne Division that make 100,000 parachute jumps each year. Fort Bragg spans across 160,700 acres or 251 square miles. The compound is so large that it touches four counties. The compound includes 7 Drop Zones, Four Impact Areas, and 82 Ranges, which 16 or Live Fire Ranges. Fort Bragg houses the largest Military Housing unit in the world. Ten percent of the Army's forces are assigned to Fort Bragg including 50,662 military and 14,036 DOD Civilians personnel who work there.

## Air Station Elizabeth City

Located in the heart of Northeastern North Carolina, Base Elizabeth City provides a wide variety of mission support services to units and personnel, including general administration and personnel management, medical/dental, supply, procurement and warehousing, industrial services, facilities maintenance, computer/electronics support. Base Elizabeth City coordinates and provides regional mission support activities within the Fifth Coast Guard District.

## Marine Corps Camp Lejeune

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Located in southeastern North Carolina, near the City of Jacksonville. Camp Lejeune and the City of Jacksonville are adjacent to the New River flowing to the Onslow Beach area. Camp Lejeune occupies about 153,439 acres with 14 miles of beach on the Atlantic Ocean. Camp Lejeune is the largest Marine Corps base on the East Coast; the base plays an important role in the Marine Corps' expeditionary abilities. Several training schools are housed at Camp Lejeune, including Camp Geiger, the Marine Corps School of Infantry, East; and Camp Johnson, the Marine Corps Combat Service Support School. The mission of Marine Corps Base Camp Lejeune is to support the various Marine Corps commands, a major Navy command and a Coast Guard command as well as the Marine Corps Base (MCB) itself. The largest command on the base is the II Marine Expeditionary Force. Its mission is to deploy as a Marine Air Ground Task Force (MAGTF) in support of Combatant Commander (CCDR) requirements for contingency response or Major Theater War. Marine Corps Air Station New River provides aviation support, force protection, infrastructure, and community services, which promote the readiness, sustainment and quality of life for II MEF and other military forces, tenant commands, personnel and their families.

## U.S. Coast Guard Aviation Logistics Center

The Aviation Logistics Center (ALC) is the hub for Coast Guard Aviation Logistical Support. US Coast Guard Aviation Provide Support through Depot-Level Maintenance, Engineering, Supply Procurement, Information Services and Acquisition Project Execution; sustaining and maintaining the airworthiness of the USCG Base Elizabeth City Fleet.

## Air Station Cherry Point

Marine Corps Air Station (MCAS) Cherry Point is a 13,164-acre military reservation north of the town of Havelock, in southeastern Craven County, North Carolina. Commissioned in 1942, MCAS Cherry Point currently provides support facilities and services for the Second Marine Aircraft Wing, houses facilities for training and supporting the Atlantic Fleet Marine Force aviation units and is designated as a primary aviation supply point. MCAS Cherry Point is also home to the Fleet Readiness Center East (FRCE, formerly the Naval Aviation Depot (NADEP). Units at the Air Station include: (1) Combat Logistics Company 21 (CLC 21), which provides logistics support to the Second Marine Aircraft Wing; (2) Marine Transport Squadron One (VMR 1), which provided Search and Rescue support (known operationally as "Pedro") to MCAS Cherry Point-based aircraft and currently provides transport of key personnel and critical logistics support to DoD; and (3) Center for Naval Aviation Technical Training Unit (CNATT), which provides specialized training in aviation maintenance to operate and maintain weapons systems.

## United States Coast Guard Sector North Carolina

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Primary missions include Search and Rescue, Marine Safety, Ports and Waterways Coastal Security, Marine Environmental Protection, Aids to Navigation, Maritime Law Enforcement, and Recreational Boating Safety. USCG Sector has Cutter Diligence, which is a 210-foot medium endurance cutter with a crew of approximately 76 Coast Guard members. USCG cutter's Diligence primary missions consist of Counter Drug and Migrant Interdiction, Enforcing Federal Fishery Laws and conducting Search and Rescue Operations.

## Military Ocean Terminal Sunny Point

The largest military terminal in the world. The Sunny Point facility is operated by the 596th Transportation Brigade, on a 16,000-acre, Army-owned site. The facility opened in 1955 and is the key ammunition shipping point on the Atlantic Coast for the Department of Defense. MOTSU is the largest ammunition port in the nation, and the Army's primary east coast deep-water port. MOTSU is the Department of Defense's key Atlantic Coast ammunition shipping point. It provides worldwide trans-shipment of DOD ammunition, explosives, and other dangerous cargo under the command of the 1303d Major Port Command.

## Pope Army Air field

The 440th Air Reserve Wing with its C-130E Hercules aircraft continues to provide total forces mission ready combat airlifter and equipment, anywhere and anytime to the Fort Bragg community. The 440th Airlift Wing works side-by-side with the 43rd Airlift Group. Pope Field is home for approximately 2,100 active duty members and their families. Pope also has approximately 500 plus civilians, non-appropriated fund and contract personnel supporting the mission of the 43 Airlift Group.

## 145th Airlift Wing Charlotte

Establish policies, exercise command and control, oversees the mobilization of operational units, facilitates family and employer support, and encourage active community involvement. The 145th Airlift Wing direct and support North Carolina Air National Guard units in their service to the nation, the state and the community. Establish policy, exercise command and control, oversee the mobilization of operational units and facilitate family and employer support. The 145th Airlift Wing maintains an optimal force structure of over 1400 members, over 300 full-time, between charlotte and the geographically separated units in Stanly County, North Carolina. The 145th Airlift Wing stand ready to answer the call to the state nation or country. The year of 2018 brought many first to North Carolina Air National Guard. Among those first were the NCANG's First Female Wing Commander, First Female Wing Command Chief and First Female Chief of the Maintenance Group. The retention rate for the 145th Airlift Wing is 87% and the End Strength is 98.6%. The 145th Airlift Wing is 78% male and 22% female as of January 2019.

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## 108th Training Command Charlotte

Provide professionally trained and ready Drill Sergeant units, Instructors, Leader Trainers, and Command expertise to conduct Initial Entry Training, Cadet Training, and Theater Security Cooperation Training. The 108th Training Command supports Training & Doctrine Command (TRADOC) Five Core Function Leads: The Center for Initial Military Training and Cadet Command, providing professionally trained and ready drill sergeant units, Instructors, Leader Trainers, and command expertise to conduct Initial Entry Training, Cadet Training, and Theater Security Cooperation Training.

## North Carolina National Guard

Military force comprised of citizen Soldiers and Airmen sworn to support and defend the Constitutions of the United States and the State of North Carolina. North Carolina National Guard trace its heritage back to the 1663 Carolina Charter granting authority to levy, muster, and train men.

## Army Research Office

Has 150 personnel assigned to include Active and Reserve Components. The U.S. Army Research Laboratory's Army Research Office (ARO) mission is to serve as the Army's principal extramural basic research agency in the engineering, physical, information and life sciences developing and exploiting innovative advances to insure the Nation's technological superiority. Basic research proposals from educational institutions, nonprofit organizations, and private industry are competitively selected and funded. ARO's research mission represents the most long-range Army view for changes in its technology.

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# Benefits & Services

**Benefits & Claims (/services/benefits-claims)**

**Employment (/services/employment)**

**Housing Assistance (/services/housing-assistance)**

**Hurricane Florence (/services/hurricane-florence)**

**Military Bases in North Carolina (/services/military-bases-north-carolina)**

NC State Approving Agency (/benefits-services/nc-state-approving-agency)

NC State Veterans Homes (/services/nc-state-veterans-homes-skilled-nursing-care)

NC Veterans Cemetery Program (/services/nc-veterans-cemetery-program)

Request Military Records (/services/request-military-records)

Request for a License Plate (/services/military-and-veteran-license-plates)

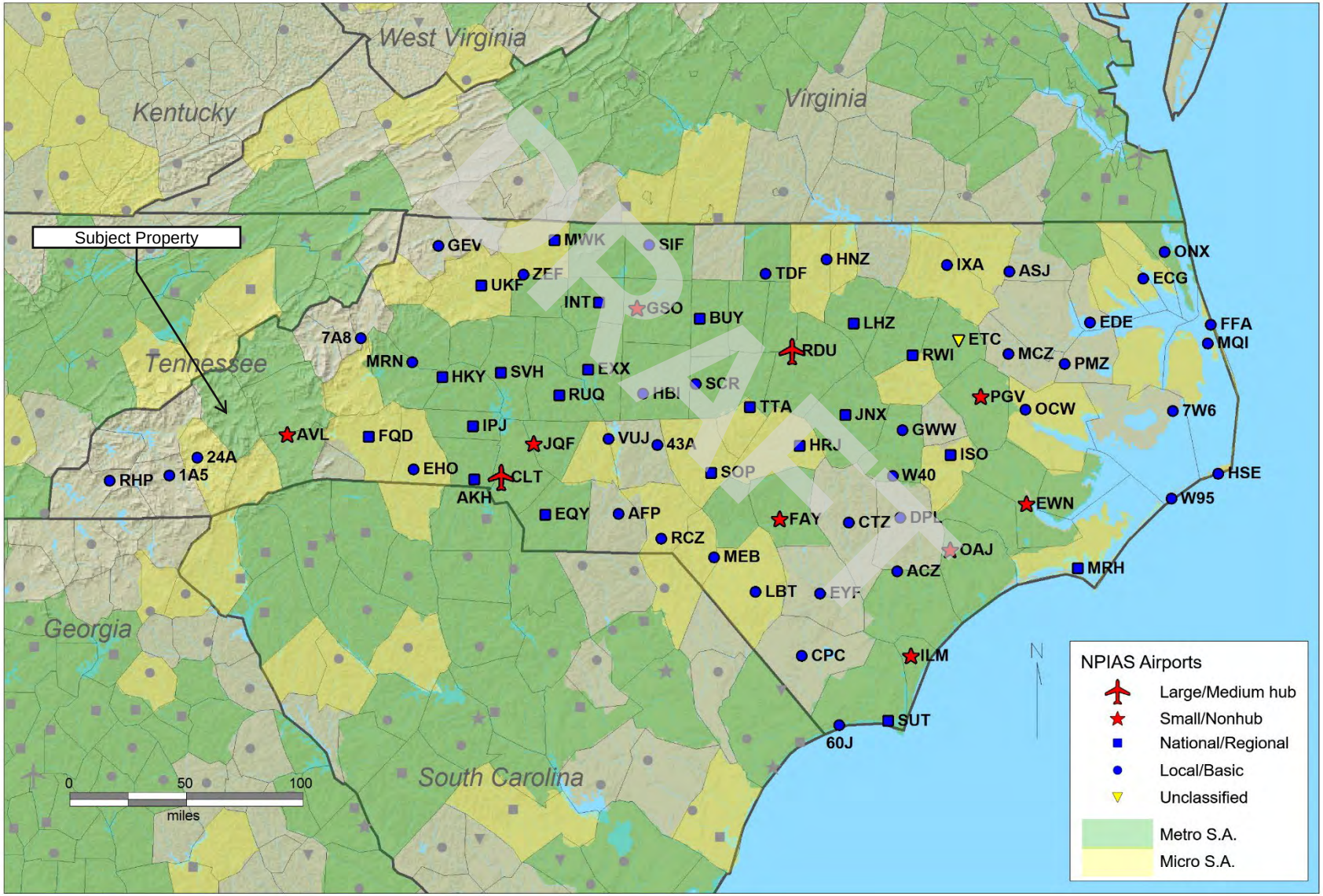
Scholarships (/services/scholarships)

Veterans Property Tax Relief (/services/veterans-property-tax-relief)

DRAFT

https://www.milvets.nc.gov/services/military-bases-north-carolina

# North Carolina

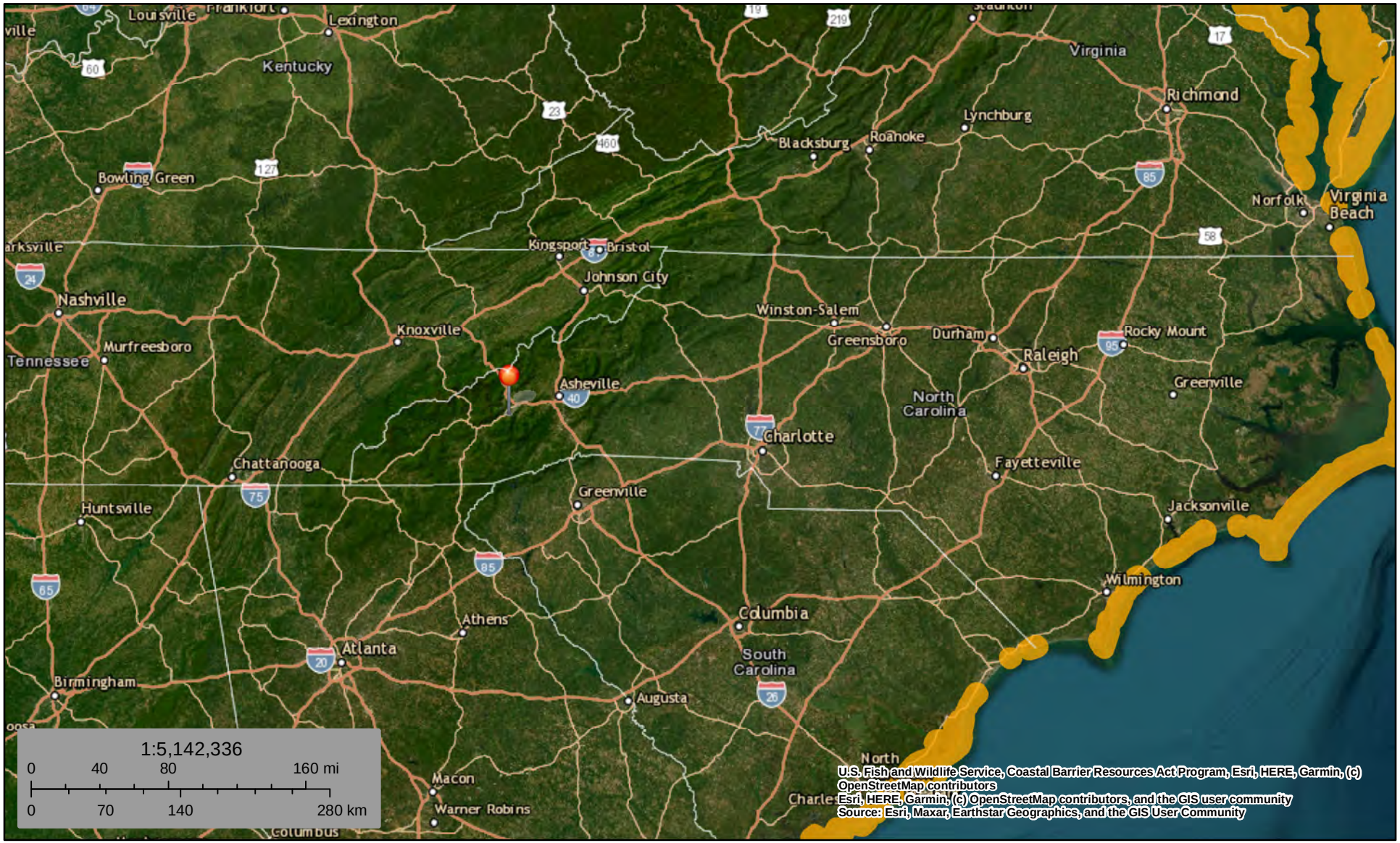


# ATTACHMENT 3:

# USFWS CBRS Map and Certification

# U.S. Fish and Wildlife Service
# Coastal Barrier Resources System

## Balsam Edge




October 31, 2024

Generalized Units

This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at https://www.fws.gov/library/collections/official-coastal-barrier-resources-system-maps. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward

# U.S. Fish and Wildlife Service

## Coastal Barrier Resources System Mapper Documentation

**CBRS Units**

Otherwise Protected Area
System Unit
CBRS Buffer Zone
-82.984323, 35.50501

0 65 130 260 390 ft

1:4,514

The pin location displayed on the map is a point selected by the user. Failure of the user to ensure that the pin location displayed on this map correctly corresponds with the user supplied address/location description below may result in an invalid federal flood insurance policy. **The U.S. Fish and Wildlife Service (Service) has not validated the pin location with respect to the user supplied address/location description below. The Service recommends that all pin locations be verified by federal agencies prior to use of this map for the provision or denial of federal funding or financial assistance**. Please note that a structure bisected by the Coastal Barrier Resources System (CBRS) boundary (i.e., both "partially in" and "partially out") is within the CBRS and therefore affected by CBRA's restrictions on federal flood insurance. A pin placed on a bisected structure must be placed on the portion of the structure within the unit (including any attached features such as a deck or stairs).

**User Name:** Andrea Gievers
**User Organization:** NCORR
**User Supplied Address/Location Description:** Balsam Edge
**Pin Location:** Outside CBRS
**Pin Flood Insurance Prohibition Date:** N/A
**Pin System Unit Establishment Date:** N/A

The user placed pin location is not within the CBRS. The official CBRS maps are accessible at https://www.fws.gov/library/collections/official-coastal-barrier-resources-system-maps.

The CBRS information is derived directly from the CBRS web service provided by the Service. This map was exported on 10/31/2024 and does not reflect changes or amendments subsequent to this date. The CBRS boundaries on this map may become superseded by new boundaries over time.

This map image may be void if one or more of the following map elements do not appear: basemap imagery, CBRS unit labels, prohibition date labels, legend, scale bar, map creation date. For additional information about flood insurance and the CBRS, visit: https://www.fws.gov/node/263838.

# Appendix B

# Coastal Barrier Resources

# U.S. Fish and Wildlife Service
## Coastal Barrier Resources System

# Proposed Balsam Edge Apartmen

November 8, 2022

CBRS Buffer Zone

System Unit

**CBRS Units**

Otherwise Protected Area

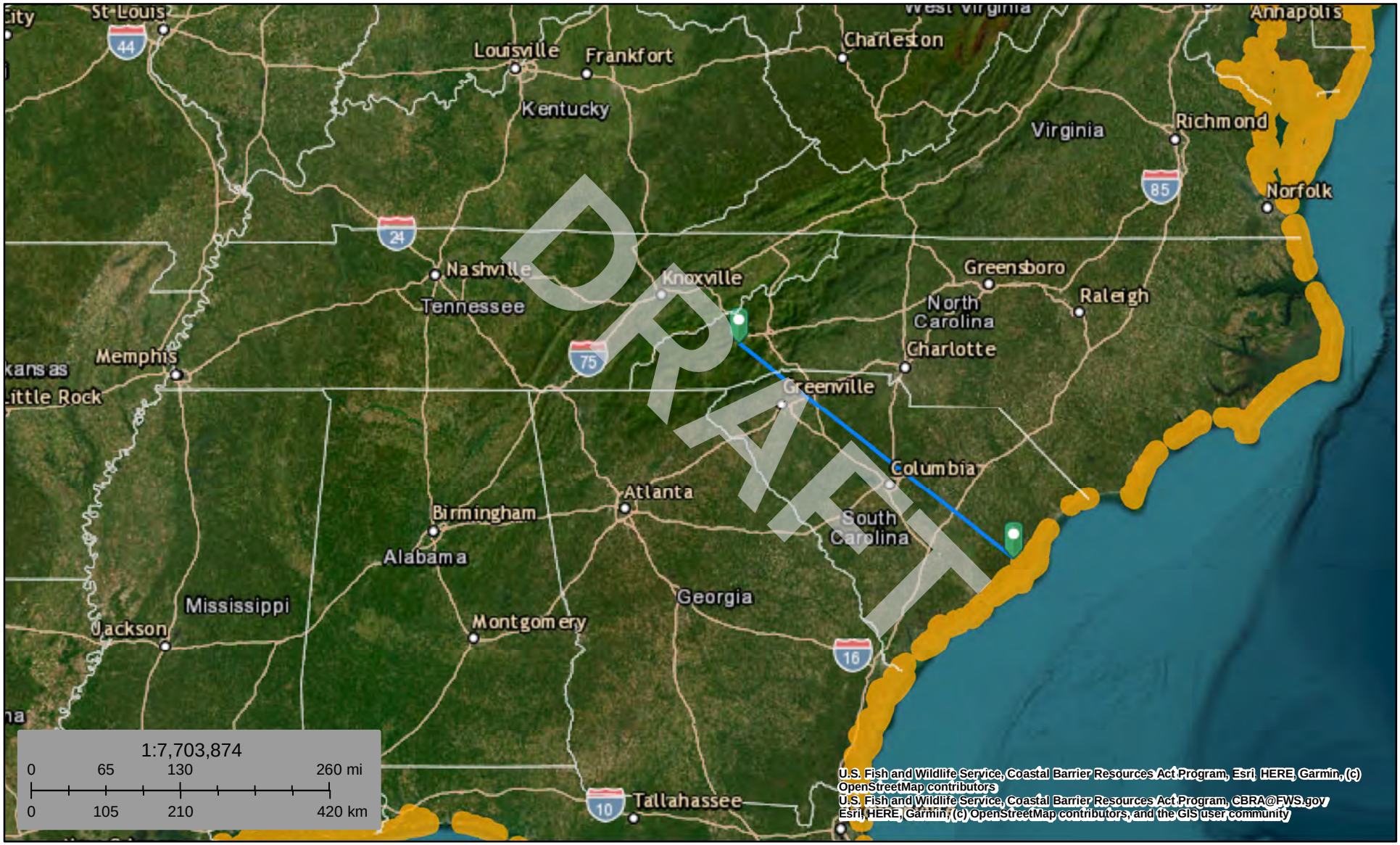
This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at https://www.fws.gov/library/collections/official-coastal-barrier-resources-system-maps. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward

# U.S. Fish and Wildlife Service
## Coastal Barrier Resources System

# CBRS Mapper




November 9, 2022

CBRS Units

This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at https://www.fws.gov/library/collections/official-coastal-barrier-resources-system-maps. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward

# ATTACHMENT 4:

# FLOOD INSURANCE

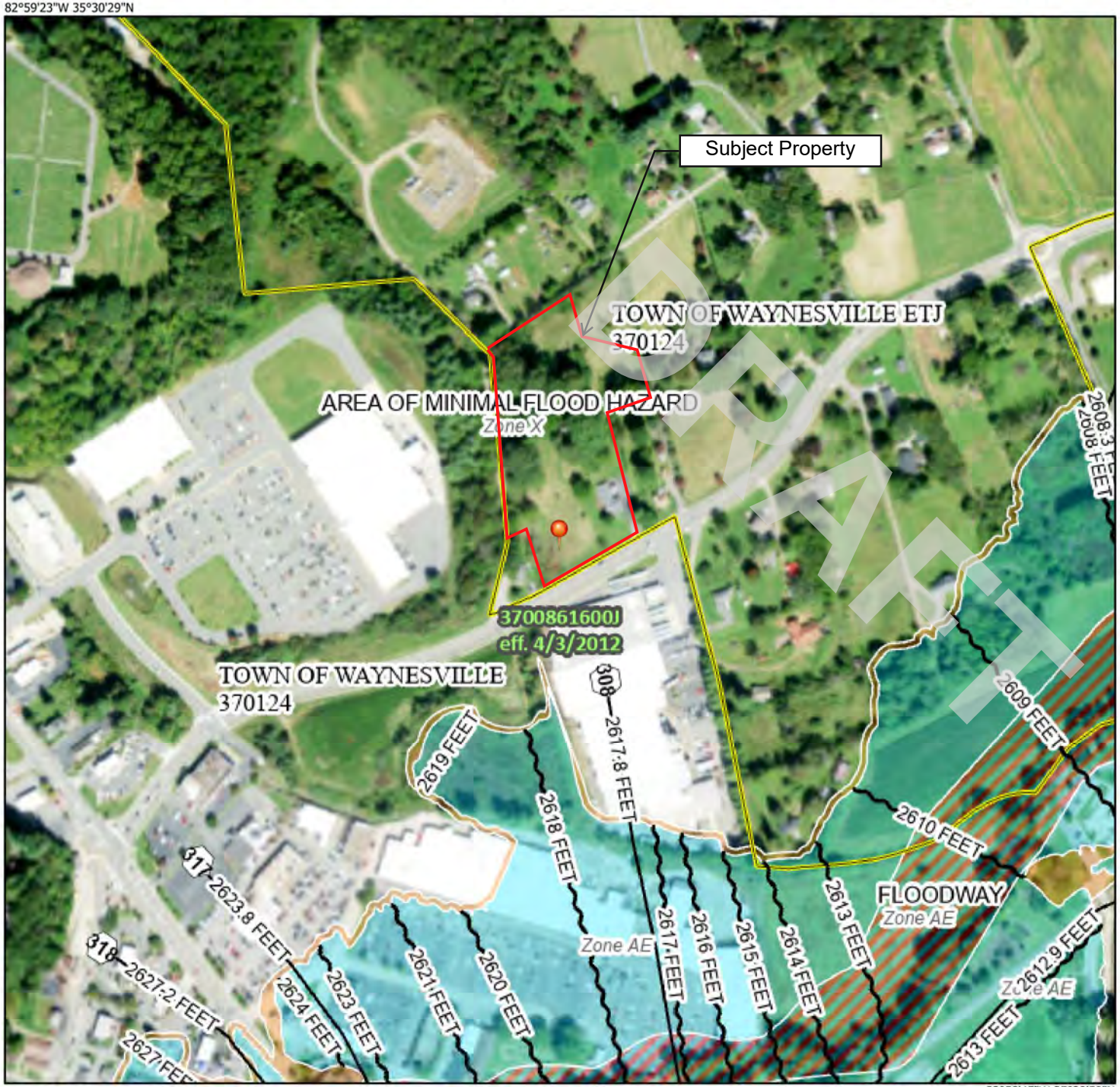
# Appendix C

# Flood Insurance

# National Flood Hazard Layer FIRMette

FEMA

82°59'23"W 35°30'29"N




82°58'45"W 35°29'59"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

*Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020*

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/8/2022 at 2:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# ATTACHMENT 5:

# North Carolina Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants

# North Carolina Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of November 30, 2024

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/$m^3$) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

**Change the State:**
NORTH CAROLINA GO

Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| **NORTH CAROLINA** | | | | | | | | |
| Cabarrus County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 04050607080910111213 | 01/02/2014 | Moderate | Whole | 178,011 | 37/025 |
| Cabarrus County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 176,928 | 37/025 |
| Catawba County | PM-2.5 (1997)-NAAQS revoked | Hickory-Morganton-Lenoir, NC | 050607080910 | 12/19/2011 * | Former Subpart 1 | Whole | 154,358 | 37/035 |
| Chatham County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Part | 32,372 | 37/037 |
| Davidson County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Whole | 162,878 | 37/057 |
| Davidson County | PM-2.5 (1997)-NAAQS revoked | Greensboro-Winston Salem-High Point, NC | 050607080910 | 12/19/2011 * | Former Subpart 1 | Whole | 162,878 | 37/057 |

| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Davie County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Part | 1 | 37/059 |
| Durham County | 1-Hour Ozone (1979)-NAAQS revoked | Raleigh-Durham, NC | 9293 | 06/17/1994 | Moderate | Whole | 267,587 | 37/063 |
| Durham County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 267,587 | 37/063 |
| Durham County | Carbon Monoxide (1971) | Raleigh-Durham, NC | 929394 | 09/18/1995 | Moderate <= 12.7ppm | Whole | 267,587 | 37/063 |
| Edgecombe County | 8-Hour Ozone (1997)-NAAQS revoked | Rocky Mount, NC | 040506 | 01/05/2007 | Former Subpart 1 | Whole | 56,552 | 37/065 |
| Forsyth County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Whole | 350,670 | 37/067 |
| Forsyth County | Carbon Monoxide (1971) | Winston-Salem, NC | 9293 | 11/07/1994 | Moderate <= 12.7ppm | Whole | 350,670 | 37/067 |
| Franklin County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 60,619 | 37/069 |
| Gaston County | 1-Hour Ozone (1979)-NAAQS revoked | Charlotte-Gastonia, NC | 929394 | 07/05/1995 | Moderate | Whole | 206,086 | 37/071 |
| Gaston County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Whole | 206,086 | 37/071 |
| Gaston County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 190,849 | 37/071 |

| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Granville County | 1-Hour Ozone (1979)-NAAQS revoked | Raleigh-Durham, NC | 9293 | 06/17/1994 | Moderate | Part | 17,725 | 37/077 |
| Granville County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 59,916 | 37/077 |
| Guilford County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Whole | 488,406 | 37/081 |
| Guilford County | PM-2.5 (1997)-NAAQS revoked | Greensboro-Winston Salem-High Point, NC | 050607080910 | 12/19/2011 * | Former Subpart 1 | Whole | 488,406 | 37/081 |
| Haywood County | 8-Hour Ozone (1997)-NAAQS revoked | Haywood and Swain Counties (Great Smoky NP), NC | 040506070809 | 01/06/2010 | Former Subpart 1 | Part | 985 | 37/087 |
| Iredell County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Part | 68,089 | 37/097 |
| Iredell County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 12 13 14 | 08/27/2015 | Marginal | Part | 65,899 | 37/097 |
| Johnston County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 168,878 | 37/101 |
| Lincoln County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Whole | 78,265 | 37/109 |
| Lincoln County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 12 13 14 | 08/27/2015 | Marginal | Part | 64,189 | 37/109 |
| Mecklenburg County | 1-Hour Ozone (1979)-NAAQS revoked | Charlotte-Gastonia, NC | 929394 | 07/05/1995 | Moderate | Whole | 919,628 | 37/119 |

| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Mecklenburg County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 04050607080910111213 | 01/02/2014 | Moderate | Whole | 919,628 | 37/119 |
| Mecklenburg County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Whole | 919,628 | 37/119 |
| Mecklenburg County | Carbon Monoxide (1971) | Charlotte, NC | 929394 | 09/18/1995 | Not Classified | Whole | 919,628 | 37/119 |
| Nash County | 8-Hour Ozone (1997)-NAAQS revoked | Rocky Mount, NC | 040506 | 01/05/2007 | Former Subpart 1 | Whole | 95,840 | 37/127 |
| Orange County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 133,801 | 37/135 |
| Person County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 39,464 | 37/145 |
| Rowan County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 04050607080910111213 | 01/02/2014 | Moderate | Whole | 138,428 | 37/159 |
| Rowan County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 130,057 | 37/159 |
| Swain County | 8-Hour Ozone (1997)-NAAQS revoked | Haywood and Swain Counties (Great Smoky NP), NC | 040506070809 | 01/06/2010 | Former Subpart 1 | Part | 3,288 | 37/173 |
| Union County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 04050607080910111213 | 01/02/2014 | Moderate | Whole | 201,292 | 37/179 |
| Union County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 176,055 | 37/179 |

| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Wake County | 1-Hour Ozone (1979)-NAAQS revoked | Raleigh-Durham, NC | 9293 | 06/17/1994 | Moderate | Whole | 900,993 | 37/183 |
| Wake County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 900,993 | 37/183 |
| Wake County | Carbon Monoxide (1971) | Raleigh-Durham, NC | 929394 | 09/18/1995 | Moderate <= 12.7ppm | Whole | 900,993 | 37/183 |

Important Notes

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**2024-11-30**

# 8-Hour Ozone (1997) Maintenance Area (Redesignated from Nonattainment) Area/State/County Report - NAAQS Revoked

Data is current as of November 30, 2024

**Haywood and Swain Counties (Great Smoky NP), NC** (Former Subpart 1 - Maintenance)

NORTH CAROLINA (Region IV)

Haywood County (P)

*Great Smoky Mountain National Park*

Swain County (P)

*Great Smoky Mountain National Park*

https://www3.epa.gov/airquality/greenbook/gmca.html

# Balsam Edge - Ozone 8-hr (1997 standard) Map

January 28, 2025

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Balsam Edge

Ozone 8-hr (1997 standard)

Maintenance (NAAQS revoked)

Counties

State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS, EPA OEI, U.S. EPA Office of Air and Radiation (OAR) - Office of Air Quality Planning and Standards (OAQPS)

# Appendix D

# Clean Air

# Air Quality Index Report

**Geographic Area:** Haywood County, NC
**Summary:** by County
**Year:** 2022 (Annual statistics for 2022 are not final until May 1, 2023)

| | | Number of Days when Air Quality was... | | | | | | AQI Statistics | | | Number of Days when AQI Pollutant was... | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| County | # Days with AQI | Good | Moderate | Unhealthy for Sensitive Groups | Unhealthy | Very Unhealthy | Hazardous | Maximum | 90th Percentile | Median | CO | NO2 | O3 | PM2.5 | PM10 |
| Haywood County, NC | 214 | 174 | 39 | 1 | . | . | . | 108 | 58 | 44 | . | . | 214 | . | . |

DRAFT

Get detailed information about this report, including column descriptions, at https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports#aqi

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated by state, local, and tribal organizations who own and submit the data.

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

Source: U.S. EPA AirData <https://www.epa.gov/air-data>
Generated: November 9, 2022

# Air Quality Statistics Report

**Geographic Area:** Haywood County, NC
**Summary:** by County
**Year:** 2021
**Exceptional Events:** Included (if any)
Statistics in red are above the level of the respective air quality standard

| County | CO 1-hr 2nd Max | CO 8-hr 2nd Max | NO2 98th %ile | NO2 Ann. Mean | O3 1-hr 2nd Max | O3 8-hr 4th Max | SO2 99th %ile | SO2 24-hr 2nd Max | SO2 Ann. Mean | PM2.5 98th %ile | PM2.5 Wtd. Mean | PM10 24-hr 2nd Max | PM10 Annual Mean | Lead Max 3-mo Avg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Haywood County, NC | . | . | . | . | 0.07 | 0.063 | 52 | 15 | 1 | . | . | . | . | . |

DRAFT

Get detailed information about this report, including column descriptions, at https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports#con

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated by state, local, and tribal organizations who own and submit the data.

Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <https://www.epa.gov/air-data>
Generated: November 9, 2022

# Air Quality Statistics Report

**Geographic Area:** Haywood County, NC
**Summary:** by County
**Year:** 2022 (Annual statistics for 2022 are not final until May 1, 2023)
**Exceptional Events:** Included (if any)
Statistics in red are above the level of the respective air quality standard

| County | CO 1-hr 2nd Max | CO 8-hr 2nd Max | NO2 98th %ile | NO2 Ann. Mean | O3 1-hr 2nd Max | O3 8-hr 4th Max | SO2 99th %ile | SO2 24-hr 2nd Max | SO2 Ann. Mean | PM2.5 98th %ile | PM2.5 Wtd. Mean | PM10 24-hr 2nd Max | PM10 Annual Mean | Lead Max 3-mo Avg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Haywood County, NC | . | . | . | . | 0.08 | 0.064 | . | . | . | . | . | . | . | . |

DRAFT

Get detailed information about this report, including column descriptions, at https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports#con

AirData reports are produced from a direct query of the AQS Data Mart. The data represent the best and most recent information available to EPA from state agencies. However, some values may be absent due to incomplete reporting, and some values may change due to quality assurance activities. The AQS database is updated by state, local, and tribal organizations who own and submit the data.

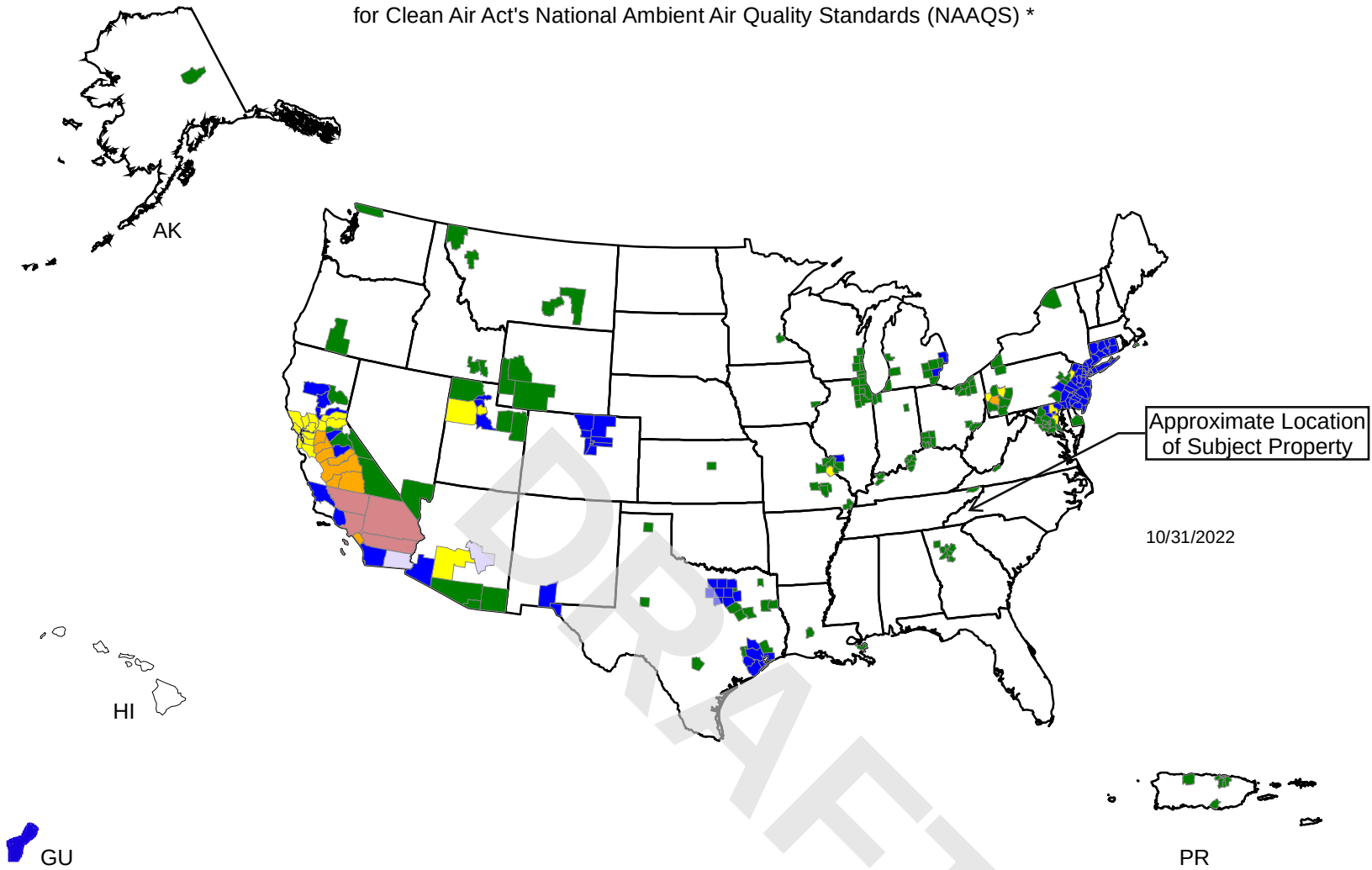
Readers are cautioned not to rank order geographic areas based on AirData reports. Air pollution levels measured at a particular monitoring site are not necessarily representative of the air quality for an entire county or urban area.

This report is based on monitor-level summary statistics. Air quality standards for some pollutants (PM2.5 and Pb) allow for combining data from multiple monitors into a site-level summary statistic that can be compared to the standard. In those cases, the site-level statistics may differ from the monitor-level statistics upon which this report is based.

Source: U.S. EPA AirData <https://www.epa.gov/air-data>
Generated: November 9, 2022

# Counties Designated "Nonattainment"

for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *




Legend **

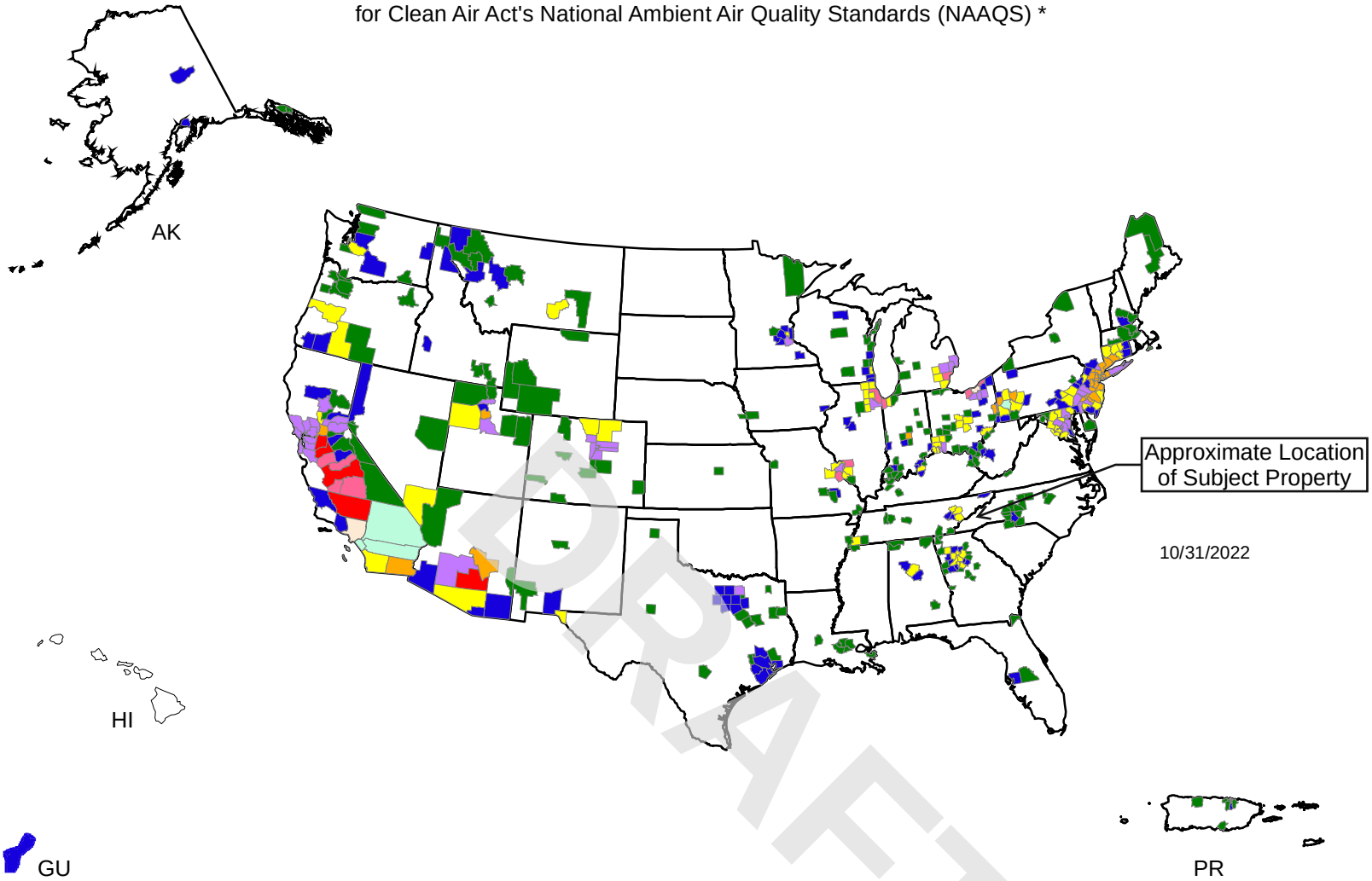
- County Designated Nonattainment for 6 NAAQS Pollutants
- County Designated Nonattainment for 5 NAAQS Pollutants
- County Designated Nonattainment for 4 NAAQS Pollutants
- County Designated Nonattainment for 3 NAAQS Pollutants
- County Designated Nonattainment for 2 NAAQS Pollutants
- County Designated Nonattainment for 1 NAAQS Pollutant

* The National Ambient Air Quality Standards (NAAQS) are health standards for Carbon Monoxide, Lead (1978 and 2008), Nitrogen Dioxide, 8-hour Ozone (2008), Particulate Matter (PM-10 and PM-2.5 (1997, 2006 and 2012), and Sulfur Dioxide.(1971 and 2010)

** Included in the counts are counties designated for NAAQS and revised NAAQS pollutants. Revoked 1-hour (1979) and 8-hour Ozone (1997) are excluded. Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

# Counties Designated "Nonattainment" or "Maintenance"

for Clean Air Act's National Ambient Air Quality Standards (NAAQS) *




Legend **

- County Designated Nonattainment or Maintenance for 9 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 8 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 7 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 6 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 5 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 4 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 3 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 2 NAAQS Pollutants
- County Designated Nonattainment or Maintenance for 1 NAAQS Pollutants

* The National Ambient Air Quality Standards (NAAQS) are health standards for Carbon Monoxide, Lead (1978 and 2008), Nitrogen Dioxide, 8-hour Ozone (2008), Particulate Matter (PM-10 and PM-2.5 (1997, 2006 and 2012), and Sulfur Dioxide.(1971 and 2010)

** Included in the counts are counties designated for NAAQS and revised NAAQS pollutants. Revoked 1-hour (1979) and 8-hour Ozone (1997) are excluded. Partial counties, those with part of the county designated nonattainment and part attainment, are shown as full counties on the map.

# North Carolina Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of October 31, 2022

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/$m^3$) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

**Change the State:**
NORTH CAROLINA GO

Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

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| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| **NORTH CAROLINA** | | | | | | | | |
| Cabarrus County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 04 05 06 07 08 09 10 11 12 13 | 01/02/2014 | Moderate | Whole | 178,011 | 37/025 |
| Cabarrus County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 12 13 14 | 08/27/2015 | Marginal | Part | 176,928 | 37/025 |
| Catawba County | PM-2.5 (1997)-NAAQS revoked | Hickory-Morganton-Lenoir, NC | 05 06 07 08 09 10 | 12/19/2011 * | Former Subpart 1 | Whole | 154,358 | 37/035 |
| Chatham County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 04 05 06 | 12/26/2007 | Former Subpart 1 | Part | 32,372 | 37/037 |
| Davidson County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Whole | 162,878 | 37/057 |
| Davidson County | PM-2.5 (1997)-NAAQS revoked | Greensboro-Winston Salem-High Point, NC | 05 06 07 08 09 10 | 12/19/2011 * | Former Subpart 1 | Whole | 162,878 | 37/057 |

| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Davie County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Part | 1 | 37/059 |
| Durham County | 1-Hour Ozone (1979)-NAAQS revoked | Raleigh-Durham, NC | 9293 | 06/17/1994 | Moderate | Whole | 267,587 | 37/063 |
| Durham County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 267,587 | 37/063 |
| Durham County | Carbon Monoxide (1971) | Raleigh-Durham, NC | 929394 | 09/18/1995 | Moderate <= 12.7ppm | Whole | 267,587 | 37/063 |
| Edgecombe County | 8-Hour Ozone (1997)-NAAQS revoked | Rocky Mount, NC | 040506 | 01/05/2007 | Former Subpart 1 | Whole | 56,552 | 37/065 |
| Forsyth County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Whole | 350,670 | 37/067 |
| Forsyth County | Carbon Monoxide (1971) | Winston-Salem, NC | 9293 | 11/07/1994 | Moderate <= 12.7ppm | Whole | 350,670 | 37/067 |
| Franklin County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 60,619 | 37/069 |
| Gaston County | 1-Hour Ozone (1979)-NAAQS revoked | Charlotte-Gastonia, NC | 929394 | 07/05/1995 | Moderate | Whole | 206,086 | 37/071 |
| Gaston County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Whole | 206,086 | 37/071 |
| Gaston County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 12 13 14 | 08/27/2015 | Marginal | Part | 190,849 | 37/071 |

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| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Granville County | 1-Hour Ozone (1979)-NAAQS revoked | Raleigh-Durham, NC | 9293 | 06/17/1994 | Moderate | Part | 17,725 | 37/077 |
| Granville County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 59,916 | 37/077 |
| Guilford County | 1-Hour Ozone (1979)-NAAQS revoked | Greensboro-Winston-Salem-High Point, NC | 92 | 11/08/1993 | Moderate | Whole | 488,406 | 37/081 |
| Guilford County | PM-2.5 (1997)-NAAQS revoked | Greensboro-Winston Salem-High Point, NC | 050607080910 | 12/19/2011 * | Former Subpart 1 | Whole | 488,406 | 37/081 |
| Haywood County | 8-Hour Ozone (1997)-NAAQS revoked | Haywood and Swain Counties (Great Smoky NP), NC | 040506070809 | 01/06/2010 | Former Subpart 1 | Part | 985 | 37/087 |
| Iredell County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Part | 68,089 | 37/097 |
| Iredell County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 65,899 | 37/097 |
| Johnston County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 168,878 | 37/101 |
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| Lincoln County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 64,189 | 37/109 |

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| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Mecklenburg County | 1-Hour Ozone (1979)-NAAQS revoked | Charlotte-Gastonia, NC | 929394 | 07/05/1995 | Moderate | Whole | 919,628 | 37/119 |
| Mecklenburg County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Whole | 919,628 | 37/119 |
| Mecklenburg County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Whole | 919,628 | 37/119 |
| Mecklenburg County | Carbon Monoxide (1971) | Charlotte, NC | 929394 | 09/18/1995 | Not Classified | Whole | 919,628 | 37/119 |
| Nash County | 8-Hour Ozone (1997)-NAAQS revoked | Rocky Mount, NC | 040506 | 01/05/2007 | Former Subpart 1 | Whole | 95,840 | 37/127 |
| Orange County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 133,801 | 37/135 |
| Person County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 39,464 | 37/145 |
| Rowan County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 040506070809101112 13 | 01/02/2014 | Moderate | Whole | 138,428 | 37/159 |
| Rowan County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 130,057 | 37/159 |
| Swain County | 8-Hour Ozone (1997)-NAAQS revoked | Haywood and Swain Counties (Great Smoky NP), NC | 040506070809 | 01/06/2010 | Former Subpart 1 | Part | 3,288 | 37/173 |

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| County | NAAQS | Area Name | Nonattainment in Year | Redesignation to Maintenance | Classification | Whole or/ Part County | Population (2010) | State/ County FIPS Codes |
|---|---|---|---|---|---|---|---|---|
| Union County | 8-Hour Ozone (1997)-NAAQS revoked | Charlotte-Gastonia-Rock Hill, NC-SC | 04050607080910111213 | 01/02/2014 | Moderate | Whole | 201,292 | 37/179 |
| Union County | 8-Hour Ozone (2008) | Charlotte-Rock Hill, NC-SC | 121314 | 08/27/2015 | Marginal | Part | 176,055 | 37/179 |
| Wake County | 1-Hour Ozone (1979)-NAAQS revoked | Raleigh-Durham, NC | 9293 | 06/17/1994 | Moderate | Whole | 900,993 | 37/183 |
| Wake County | 8-Hour Ozone (1997)-NAAQS revoked | Raleigh-Durham-Chapel Hill, NC | 040506 | 12/26/2007 | Former Subpart 1 | Whole | 900,993 | 37/183 |
| Wake County | Carbon Monoxide (1971) | Raleigh-Durham, NC | 929394 | 09/18/1995 | Moderate <= 12.7ppm | Whole | 900,993 | 37/183 |

Important Notes

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**2022-10-31**

# ATTACHMENT 6:

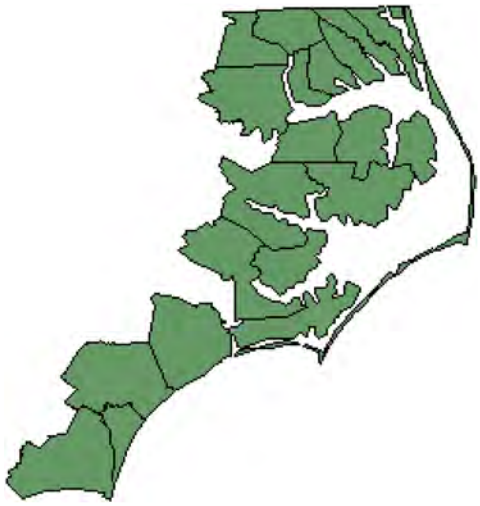
# Coastal Zone Management

# Division of Coastal Zone Management Counties List and Map

NORTH CAROLINA
Environmental Quality

# CAMA Counties

The following counties are subject to the rules and policies of the Coastal Resources Commission, which administers the Coastal Area Management Act. If you are planning to develop in one of these counties, check to see whether your project is also in an Area of Environmental Concern (https://deq.nc.gov/about/divisions/coastal-management/coastal-management-rules/coastal-development-rules). If it is, you may need a CAMA permit.

| CAMA Counties | | |
|---|---|---|
| • Beaufort<br>• Bertie<br>• Brunswick<br>• Camden<br>• Carteret<br>• Chowan<br>• Craven<br>• Currituck<br>• Dare<br>• Gates | • Hertford<br>• Hyde<br>• New Hanover<br>• Onslow<br>• Pamlico<br>• Pasquotank<br>• Pender<br>• Perquimans<br>• Tyrrell<br>• Washington |  |

Showing 1 to 1 of 1 entries

## About Coastal Management

# Appendix E

# Coastal Zone Management

# Coastal Zone Management Information

**COASTAL COUNTIES**

| | | | |
|---|---|---|---|
| Beaufort | Bertie | Brunswick | Camden |
| Carteret | Chowan | Craven | Currituck |
| Dare | Gates | Hertford | Hyde |
| New Hanover | Onslow | Pamlico | Pasquotank |
| Pender | Perquimans | Tyrrell | Washington |

Source Documentation: **https://deq.nc.gov/about/divisions/coastal-management/about-coastal-management/cama-counties**

**You may affect an Area of Environmental Concern (AEC) if you project is:**

- in, or on the shore of a navigable water within one of the 20 CAMA counties;
- on a marsh or wetland;
- within 75 feet of the normal high water along and estuarine shoreline;
- near the ocean beach;
- within an ocean high hazard flood area;
- near an inlet;
- within 30 feet of the normal high-water level of areas designated as inland fishing waters by the N.C. Marine Fisheries Commission and the N.C. Wildlife Resources Commission;
- near a public water supply;
- within 575 feet of Outstanding Resource Waters defined by the Environmental Management Commission.
- For an official list of AECs please consult N.C.G.S. 113A-113.

For assistance in identifying AECs you may contact the appropriate Regional Office (see below).
**WARNING: Due to the use of federal funds, a Consistency Determination will be required for projects with potential coastal effects, as defined at 15 CFR § 930.11[g], regardless of the absence of impacts to an Area of Environmental Concern or a finding by Regional Staff indicating that a CAMA permit is not required.**

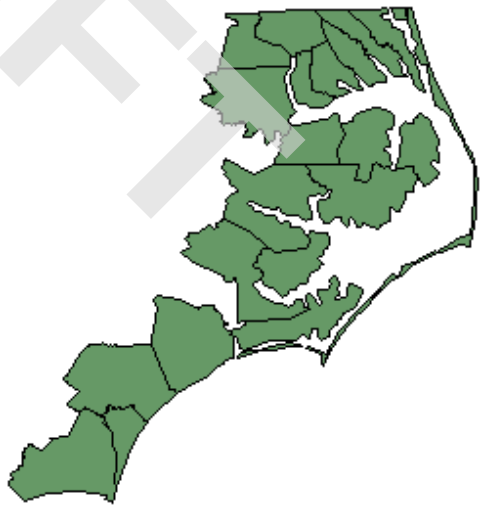
**Elizabeth City District: Bertie,** Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans County.
401 South Griffin Street
Elizabeth City, NC 27909
252-264-3901
Fax: 252-331-2951
Ron Renaldi, District Manager
E-mail: ronald.renaldi@ncdenr.gov

NORTH CAROLINA
*Environmental Quality*

# CAMA Counties

The following counties are subject to the rules and policies of the Coastal Resources Commission, which administers the Coastal Area Management Act. If you are planning to develop in one of these counties, check to see whether your project is also in an Area of Environmental Concern (https://deq.nc.gov/about/divisions/coastal-management/coastal-management-rules/coastal-development-rules). If it is, you may need a CAMA permit.

DRAFT

| CAMA Counties | | |
|---|---|---|
| • Beaufort<br>• Bertie<br>• Brunswick<br>• Camden<br>• Carteret<br>• Chowan<br>• Craven<br>• Currituck<br>• Dare<br>• Gates | • Hertford<br>• Hyde<br>• New Hanover<br>• Onslow<br>• Pamlico<br>• Pasquotank<br>• Pender<br>• Perquimans<br>• Tyrrell<br>• Washington |  |

Showing 1 to 1 of 1 entries

## About Coastal Management

DCM Offices & Program Areas (/about/divisions/coastal-management/about-coastal-management/dcm-offices-program-areas)

Staff Listing (/about/divisions/coastal-management/about-coastal-management/staff-listing)

**CAMA Counties (/about/divisions/coastal-management/about-coastal-management/cama-counties)**

CAMA accomplishments (/about/divisions/coastal-management/about-coastal-management/cama-accomplishments)

DRAFT

# ATTACHMENT 7:

## Contamination and Toxic Substances

NC DEQ UST Section Approval Letter; UST Closure and Initial Abatement Action Plan; NCORR Remediation Email; MOU; NEPAssist EPA Facilities Reports with 1-mile, 0.5-mile, and 3,000-foot Buffers; NC DEQ DWM Site Locator Reports with 1-mile, 0.5-mile and 3,000-foot Buffers; and Radon Mitigation System Design Plans

# NC DEQ UST Section Approval Letter, UST Closure and Initial Abatement Action Plan, and NCORR Remediation Email

ROY COOPER
*Governor*
ELIZABETH S. BISER
*Secretary*
MICHAEL SCOTT
*Director*

NORTH CAROLINA
***Environmental Quality***

March 14, 2024

Adeline Wolfe
Mountain Housing Opportunities
64 Clingman Ave., Suite 101
Asheville, NC 28801

Re: Notification of a Petroleum Release Incident and
Site Risk Reassessment
15A NCAC 2L .0407
Risk-based Assessment and Corrective Action
for Noncommercial Petroleum Underground
Storage Tanks

Howell Mill Road Heating Oil UST Release
333 Howell Mill Road, Waynesville
Haywood County
UST Incident Number: 49398
Risk Classification: Low Risk

Dear Ms. Wolfe:

The UST Section, Division of Waste Management, is in receipt of the UST Closure & Initial Abatement Action Plan report, dated February 27, 2024. The report has been reviewed and will be maintained in the Asheville Regional Office. The UST Section approves the scope of work for the heating oil UST closure activities at 333 Howell Mill Road.

Sincerely,

KBernal

Katie Bernal, PG
Hydrogeologist
Asheville Regional Office
UST Section, Division of Waste Management, NCDEQ

cc: James Bevers, PE, ECS Southeast, LLC, jbevers@ecslimited.com

# UST CLOSURE & INITIAL ABATEMENT ACTION PLAN

## PROPOSED BALSAM EDGE APARTMENTS PROPERTY
## 333 HOWELL MILL ROAD
## WAYNESVILLE, HAYWOOD COUNTY, NORTH CAROLINA

**ECS PROJECT NO. 49:18762-D**

**PREPARED FOR**

**MOUNTAIN HOUSING OPPORTUNITIES, INC**

**MARCH 5, 2024**

March 5, 2024

Ms. Adeline Wolfe
Mountain Housing Opportunities, Inc
64 Clingman Avenue, Suite 101
Asheville, North Carolina 28801

Reference: UST Closure and Initial Abatement Action Plan
Proposed Balsam Edge Apartments Property
333 Howells Mill Road
Waynesville, Haywood County, North Carolina
ECS Project No. 49:18762-D

Ms. Wolfe:

ECS Southeast, LLC (ECS) has prepared this UST Closure and Initial Abatement Action Plan (Plan) for the removal of a heating oil underground storage tank (UST) and associated petroleum-impacted soil at the above referenced property. This Plan has been developed at the request of Mountain Housing Opportunities, Inc. (MHO) to adhere to the requirements of the North Carolina Housing Finance Agency (NCHFA), who is providing funding for the proposed Balsam Edge Apartments project. This Plan was also prepared in accordance with ECS proposal No. 49:41912P, dated January 23, 2024 and authorized by Mountain Housing Opportunities, Inc. on January 3, 2024.

If you have any questions concerning this Plan, please feel free to contact us.

Sincerely,
**ECS SOUTHEAST, LLC**

James C. Bevers, P.E.
Environmental Project Manager
828-785-4179
jbevers@ecslimited.com

Roger A. Smith, P.G.
Senior Principal Geologist
704-525-5152
rsmith3@ecslimited.com

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**2.0 SCOPE OF WORK.....2**
**3.0 LABORATORY ANALYSIS.....3**
**4.0 REPORTING.....3**

**FIGURES**

Figure 1 Site Location Map
Figure 2 Site Aerial Map
Figure 3 Proposed Sample Location Map

## 1.0 PROJECT INFORMATION

The property is located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. According to the Haywood County Online GIS website, the subject property is identified as Parcel Identification Number (PIN) 8616-42-5414, consists of 5.31 acres, and is owned by Mountain Housing Opportunities, Inc. (MHO). Based on the available information, the subject property is developed with a residential building reportedly constructed in 1950. A Site Topographic Map indicating the location of the site is provided as **Figure 1**.

### Assessment History

ECS completed a Phase I Environmental Site Assessment (Phase I ESA) at the site, dated May 22, 2023 (ECS Project No. 49:18762-B). As part of the Phase I ESA, ECS conducted a site walk at the property and identified a heating oil underground storage tank (UST) associated with the residence. The UST is located beneath a brick paved patio area on the west side of the residence. A Site Aerial Map indicating the approximate UST area is provided as **Figure 2**.

Bunnell-Lammons Engineering, Inc (BLE) completed a Limited UST Closure Assessment Report for the heating oil UST associated with the residence (dated August 30, 2023, BLE Project No. J23-205650-02). The assessment included three (3) soil borings around the heating oil UST to screen the soils and collect soil samples for laboratory analysis, as well as the installation of a temporary groundwater monitoring well on the downgradient (west) side of the heating oil UST to collect a groundwater sample for analysis. Based on the BLE report, soil impacts were identified at concentrations above the North Carolina Department of Environmental Quality (NCDEQ) Residential Maximum Soil Contaminant Concentrations (MSCCs) in the samples collected from the south and west sides of the heating oil UST. Additionally, the BLE report identified groundwater impacts at concentrations above the North Carolina 2L Groundwater Quality Standards (NC2LGWQS).

Due to the identified presence of soil and groundwater impacts due to a release from the heating oil UST, the North Carolina Housing Finance Agency (NCHFA), who is providing funding to the proposed Balsam Edge Apartments project, has requested that the release be reported to the NCDEQ UST Section. ECS has prepared the UST-61 24-Hour Release and UST Leak Reporting Form and submitted the completed form to the NCDEQ UST Section on February 13, 2024. In addition, the NCHFA has requested that a State-approved remediation plan be prepared for the removal of the UST and associated petroleum-impacted soil to the extent practicable. The following is the remediation plan, which ECS has referred to further below as the UST Closure and Initial Abatement Action Plan or "Plan".

### Plan Introduction

The property is proposed to be redeveloped with the Balsam Edge Apartments. Prior to the development of the property, the heating oil UST and identified petroleum-impacted soil are to be removed. The purpose of this Plan is to document the scope of services for the heating oil UST removal, petroleum-impacted soil removal, and associated soil sampling.

## 2.0 SCOPE OF WORK

Prior to conducting the UST and petroleum-impacted soil removal activities, the following activities are to be conducted:

**UST Removal and Soil Sampling Activities**

- ECS will prepare a Health and Safety Plan (HASP) to be reviewed prior to the field activities.
- ECS will contact 811 to locate and mark public underground utilities at the site. This notification requires minimum 72-hour response time, exclusive of holidays and weekends. Please note that public utility location typically will only identify and mark utilities from utility easements to the associated meters. Public utility location services will not typically mark private underground utility lines.
- ECS will provide a project professional to perform field activities including: obtaining local observation and documentation of UST removal activities, and screening soils for relative levels of volatile organic vapors using a photoionization detector (PID) or similar device and collecting soil and water samples for laboratory analysis.
- ECS will contract with an experienced UST removal/closure contractor for the permanent removal of the UST, including obtaining local permitting for the UST closure, excavating and removing the UST, and piping in general accordance with NCDEQ, UST Closure Guidance. The contractor will provide ECS with a disposal manifest documenting disposal of the UST and the contents therein.
- Prior to removal of the UST, ECS will collect one (1) soil sample from the vicinity of the fill port. As brick pavers are at the surface over the UST, the contractor will remove these materials to access the soil below. The closure soil sample will be collected from an estimated depth of 0 to 6 inches below present grade. The boring will be conducted using a decontaminated hand auger. The soil sample will be collected in an effort to determine if the soil at the fill port is impacted by petroleum.
- Following the removal of the heating oil UST, two (2) closure soil samples will be collected from the base of the UST basin. The sample will be collected from the excavator bucket with care not to collect soils touching the walls of the excavator bucket. The soil samples will be collected to document the presence of petroleum-impacted soils.
- If a product line is present from the UST to the building, ECS will collect one (1) closure soil sample every approximate ten (10) linear feet of product line. ECS assumes one (1) closure soil sample will be collected.

**Over-Excavation and Soil Sampling Activities**

- Based on the identification of a release from the heating oil UST by BLE, it is assumed that petroleum-impacted soil will be identified beneath the UST. ECS will observe and document the contractor's removal of the petroleum-impacted soils.
- The contaminated soil will be stockpiled on plastic and loaded onto trucks to be transported for disposal at an approved facility. The contractor will provide ECS with disposal manifests documenting disposal of the soil.

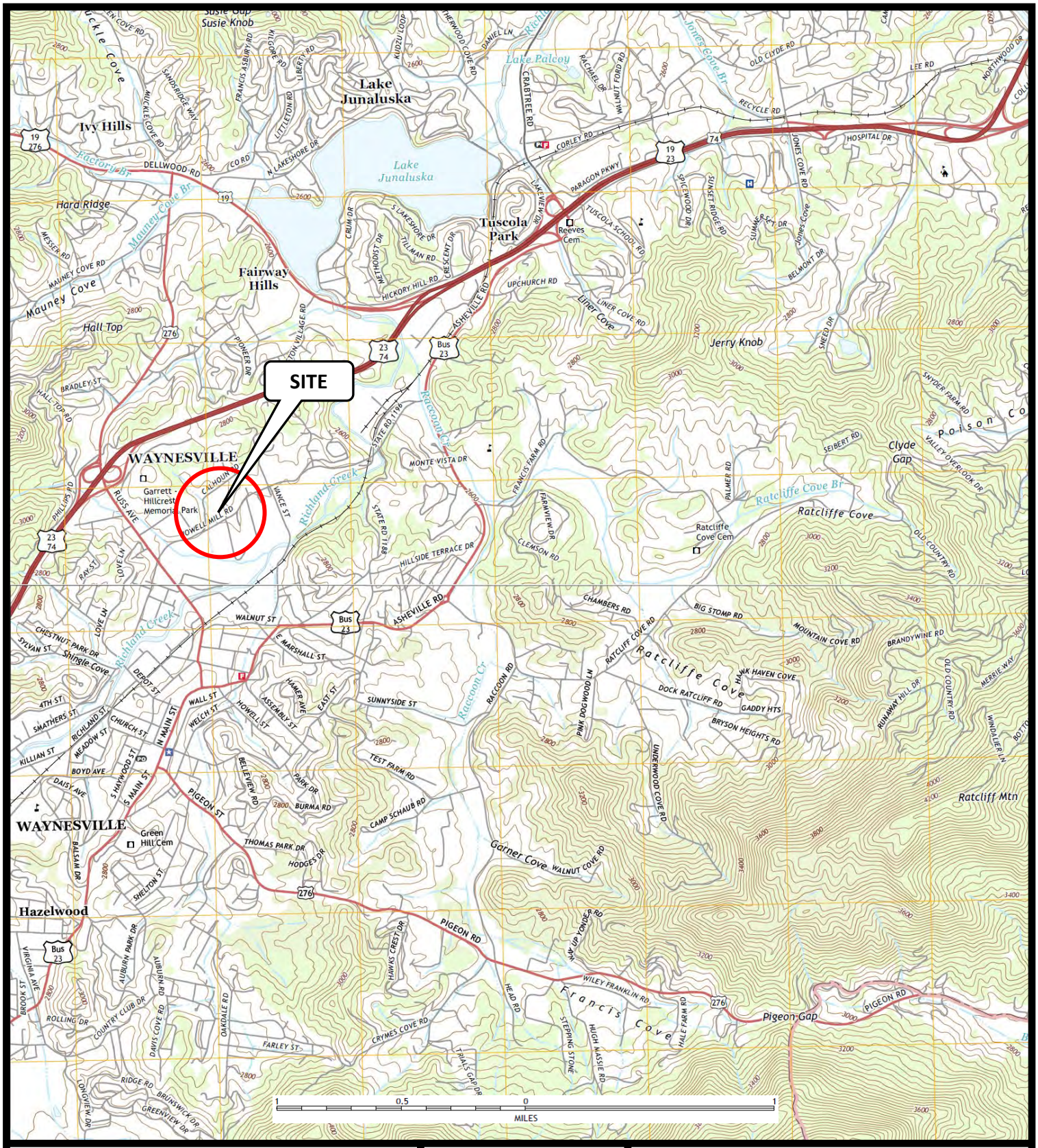
- The contractor will backfill the excavation to original grade with clean fill material. The fill material will be compacted with the bucket and will not be compacted to construction standards.
- Following excavation of apparent impacted soils to the extent practicable, ECS will collect up to five (5) over-excavation/confirmation soil samples from along the sidewalls and base of the excavated area. In addition, one (1) soil sample will be collected from the soil stockpile for disposal purposes.

## 3.0 LABORATORY ANALYSIS

- The soil samples will be placed in laboratory supplied/preserved containers, placed in a cooler to maintain a temperature of approximately 4°C and transported to a North Carolina certified laboratory.
- The closure soil samples collected from the vicinity if the fill port, the base of the UST basin, the product line, and the soil stockpile will be analyzed for total petroleum hydrocarbons (TPH) diesel range organics (DRO) and TPH gasoline range organics (GRO) analysis via EPA Method 8015.
- The over-excavation/confirmation soil samples will be analyzed for volatile organic compounds (VOCs) using EPA Methods 8260, semi-volatile organic compounds (SVOCs) using EPA Method 8270 and for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) using the Massachusetts Department of Environmental Protection (MADEP) method.

## 4.0 REPORTING

- Upon receipt of final laboratory analysis, ECS will prepare a UST Closure and Initial Abatement Action Report documenting the UST removal activities, the impacted soil removal activities, sampling activities, analytical results, conclusions, and/or recommendations, as applicable.
- Laboratory analytical results from the closure soil samples collected from the vicinity of the fill port, the base of the UST basin, the product line, and the soil stockpile will be compared to the NCDEQ State Action Levels. The over-excavation/confirmation soil sample results will be compared to the Maximum Soil Contaminant Concentrations (MSCCs).
- ECS will require the disposal manifests for the disposal of the UST, associated fluids, and petroleum-impacted soils for the purposes of inclusion in the report.




**SOURCE:**
USGS TOPOGRAPHIC MAP
7.5-MINUTE SERIES
LEICESTER, NC QUADRANGLE
DATED 2019

**SCALE:**
AS SHOWN

**FIGURE 1**
**SITE TOPOGRAPHIC MAP**
PROPOSED BALSAM EDGE APARTMENTS
333 HOWELL MILL ROAD
WAYNESVILLE, HAYWOOD COUNTY,
NORTH CAROLINA

ECS PROJECT NO. 49:18762-D

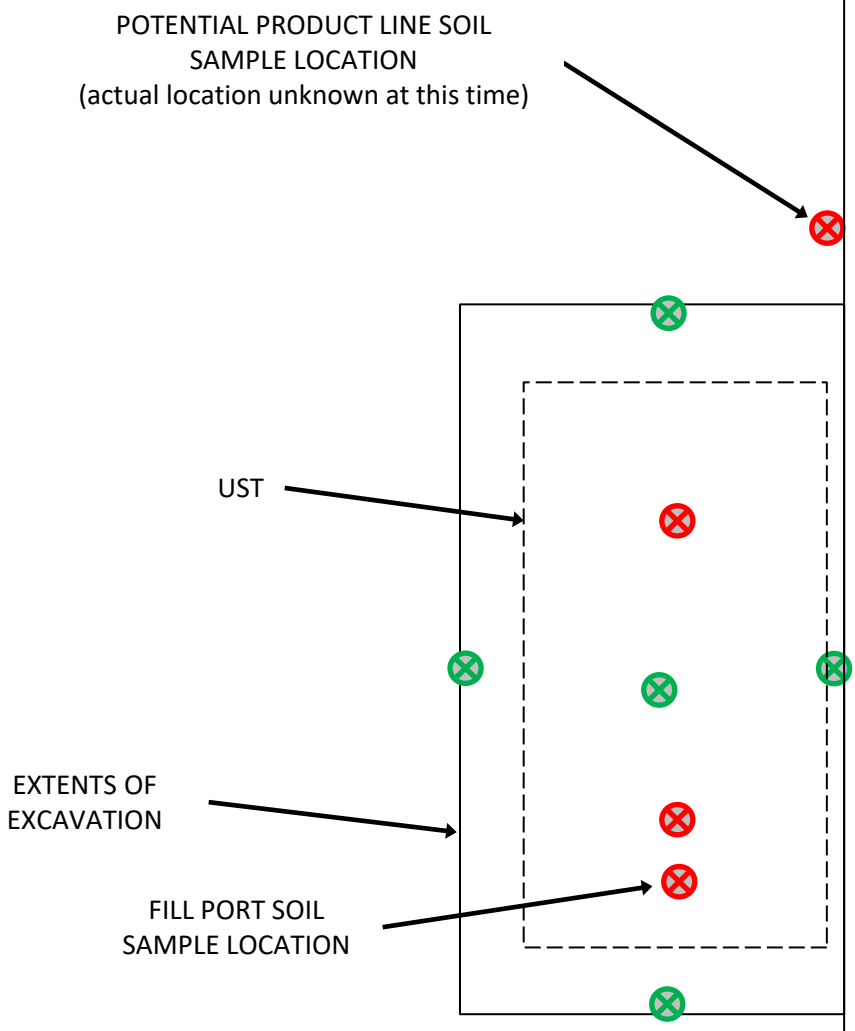
**SOURCE:**
**HAYWOOD COUNTY GIS**
**DATED 2023**

**SCALE:**

**= 100 FEET**

**FIGURE 2**
**SITE AERIAL MAP**
PROPOSED BALSAM EDGE APARTMENTS
333 HOWELL MILL ROAD
WAYNESVILLE, HAYWOOD COUNTY,
NORTH CAROLINA

ECS PROJECT NO. 49:18762-D




**LEGEND**

UST CLOSURE SOIL SAMPLE LOCATION

OVER-EXCAVATION SOIL SAMPLE LOCATION

**FIGURE 3**
**PROPOSED SAMPLE LOCATION MAP**
PROPOSED BALSAM EDGE APARTMENTS
333 HOWELL MILL ROAD
WAYNESVILLE, HAYWOOD COUNTY,
NORTH CAROLINA

ECS PROJECT NO. 49:18762-D

## Gievers, Andrea

**From:** Gievers, Andrea
**Sent:** Friday, January 3, 2025 4:19 PM
**To:** Adeline Wolfe
**Cc:** Colores, Tracey; Wiggins, Michele; Patricia Cantrell; Curry, Alisha; Hannah White; Justin
**Subject:** RE: [External] Re: Remediation at Balsam Edge

You're welcome. Feel free to reach out if you have any questions and please keep me updated. Thanks! Happy New Year!

Sincerely,

Andrea Gievers

---

**From:** Adeline Wolfe <adeline@mtnhousing.org>
**Sent:** Friday, January 3, 2025 4:13 PM
**To:** Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
**Cc:** Colores, Tracey <tracey.colores@ncdps.gov>; Wiggins, Michele <tammy.wiggins@ncdps.gov>; Patricia Cantrell <patricia.cantrell@haywoodcountync.gov>; Curry, Alisha <alisha.curry@ncdps.gov>; Hannah White <hannah.white@haywoodcountync.gov>; Justin <Justin@mtnhousing.org>
**Subject:** [External] Re: Remediation at Balsam Edge

**CAUTION:** External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Thanks Andrea!

This is very helpful.

As we formalize a plan to move forward with demo and remediation, we will check in again just to be sure but this is great news for keeping the project on timeline.

Happy new year to you all,
Adeine

On Mon, Dec 16, 2024 at 12:27 PM Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov> wrote:

> Hello Adeline:
>
> I spoke to Lenwood and he said that as long as you are **not** using NCORR funding (NCHFA or non-HUD only) it is **okay to proceed** with the remediation including demolition, if needed. I have included *below* the applicable HUD mitigation measures I drafted for the NCORR EA. Please be aware of the applicable federal, state, and local laws and regulations below. Thanks, and let me know if you have any questions.

-------**Mitigation Measures**--------

During the Phase I ESA's site visit, a hazard was identified as a fill port and vent pipe indicative of an underground storage tank (UST) near the southwestern corner of the residence. This potential for an undocumented release from the UST was deemed a REC with additional environmental assessment warranted. A Limited UST Closure Assessment was performed on August 18, 2023 to assess the potential impacts of the UST to the soil and groundwater. Petroleum constituents were identified in soils on the western and southern side of the UST in exceedance of NC Department of Environmental Quality (NCDEQ) Residential Maximum Soil Contaminant Concentrations (MSCCs) and groundwater impacts at concentrations above the NCDEQ 15A NCAC 02L .0202 Ground Water Quality Standards. The UST-61 24-Hour Release and UST Leak Reporting Form were submitted to the NCDEQ UST Section on February 13, 2024. Prior to funding, NCHFA requested that a State-approved remediation plan be prepared for the removal of the UST and associated petroleum-impacted soil to the extent practicable. The UST Closure and Initial Abatement Action Plan dated March 5, 2024 was approved by NCDEQ on March 14, 2024 with a Low Risk classification and documents the scope of services for the heating oil UST removal, petroleum-impacted soil removal, and associated soil sampling (**Attachment 7**) at the Subject Property. **The heating oil UST and identified petroleum-impacted soil shall be removed and remediated to acceptable NCDEQ residential MSCC and NC2L GWQS standards and obtain a No Further Action or equivalent letter prior to development. All documentation of the remediation must be provided to NCORR and appended to the environmental review record (ERR).**

If suspect asbestos-containing material (ACM) is found during demolition and redevelopment activities, it should be assumed to contain asbestos until laboratory analysis can confirm or deny their asbestos content. The NC Department of Health and Human Services (DHHS) and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos professionals in accordance with all applicable federal, state and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, NC Hazardous Waste Rules, and NC Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the Health Hazards Control Unit (HHCU) of the NC DHHS Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607.

Lead-based Paint (LBP) inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. All LBP

and ACM debris will be properly disposed of in a NC DWM approved landfill facility in accordance with applicable regulations. The Asbestos and Lead-based Paint Surveys/ Clearance Reports and applicable permits will be appended to this ERR.

While not considered a REC, if encountered during remediation or site development, all USTs, septic systems, and water supply wells should be *closed* in accordance with applicable laws. If any additional USTs are discovered, then NC DEQ DWM's UST Section Asheville Regional Office will be notified. If any abandoned wells are discovered, then NC DEQ will be notified and abandoned in accordance with Title 15A. Subchapter 2C.0100. "Any open burning associated with the subject proposal must be in compliance with 15 A NCAC 2D.1900" (*See* **Attachment 28**). In the event that unexpected contaminated or potentially hazardous materials, soils or debris are encountered during demolition or construction, work in the area shall cease immediately, and the work area shall be secured. The NC DEQ Asheville Regional Office will be contacted and the contamination assessed with an environmental consultant. Appropriate measures will be taken to address the hazard(s) (i.e., contaminated soils, hazardous debris, USTs, lead-based paint, etc.), and, if removed, will be properly disposed of in the appropriate NC DEQ DWM approved facility in accordance with federal, state and local laws and regulations (e.g., RCRA Subtitles C and D, NESHAP 40 CFR 61.150, and NC Solid Laws NCGS 130A, and NC Hazardous Waste Rules 15A NCAC 13A).

Based upon the site inspection, Phase I ESA, and review of available environmental and historical records and reports for the Subject Property and surrounding area, there is one REC and potential radon identified that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property without proper mitigation. With the proper mitigation measures and protocols discussed above, the Subject Property will be unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. The proposed project is in compliance with contamination and toxic substances requirements.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM

Environmental SME

Community Development

NC Office of Recovery and Resiliency

Andrea.L.Gievers@Rebuild.NC.Gov

(845) 682-1700

Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

--

**Adeline Wolfe**
**Mountain Housing Opportunities, Inc.**
Real Estate Developer, Community Investments

**64 Clingman Ave, Suite 101**
Asheville, NC 28801
828.254.4030 Ext.133

# Memorandum of Understanding (MOU) between NCHFA and Balsam Edge, LLC

# Appendix B

**Memorandum of Understanding**

This Agreement is entered into as of September 11, 2023 by and between the North Carolina Housing Finance Agency, a public agency and instrumentality of the State of North Carolina (the "Agency") and Balsam Edge, LLC a North Carolina limited liability company (the "Developer").

WHEREAS, the Agency administers the Rental Production Program (the "Program") to make loans to developers to construct or rehabilitate affordable apartments in North Carolina; and

WHEREAS, the Program is funded, in part, with federal funds (the "HOME Funds") under the HOME Investment Partnership Act (Title/Section II of the Cranston-Gonzalez National Affordable Housing Act of 1990, as amended) (the "Act"); and

WHEREAS, the Act requires the Agency to complete the environmental review process under 24 CFR Part 58 prior to committing any HOME funds to a project; and

WHEREAS, the Agency proposes to loan HOME Funds to the Developer under the Program for the construction of an 84-unit affordable housing apartment complex to be known as Balsam Edge located at approximately 291 Howell Mill Road, Waynesville, NC 28786 (the "Project"); and

WHEREAS, in its environmental review for the Project the Agency identified mitigation measures required to be taken by the Developer as a condition for making a loan to the Developer; and

WHEREAS, the Agency and the Developer desire to enter into this Agreement for the purposes of establishing the mitigation measures under which the Project must be developed.

NOW, THEREFORE, in consideration of the mutual covenants and promises and obligations contained herein, and as a condition of the Agency making a Program loan to the Developer, the parties agree as follows:

I. **Mitigation Measures.**

The Developer agrees to construct the Project and otherwise implement the mitigation measures listed below to reduce, avoid, or eliminate adverse environmental impacts. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The Developer is fully responsible for implementing and monitoring mitigation measures.

A. A riparian wetland is located on the southwest central portion the Site (see "Wetland Area" in attached Exhibit A).The Developer agrees that no ground disturbance (either temporary or permanent) other than activities permitted in 24 CFR 55.12(c)(7)(i) will occur in the wetland and no portion of the project will be constructed in the wetland. If HUD provides a waiver of 24 CFR §58.22 (a) or such other approval or action that HUD deems appropriate to allow the Developer to receive HOME funds to construct the Project, the Developer agrees to record a restrictive covenant (in substantially the form attached hereto as Exhibit B) on the Wetland Area prior the closing of any financing.

B. Due to the identified presence of limited soil and groundwater impacts, the Developer agrees to report the release incident identified in the Limited UST Closure Assessment Report dated August 30, 2023, and associated assessment data to the North Carolina Department of Environmental Quality (NCDEQ) UST Section. A complete State approved remediation plan will be required prior to receipt of the necessary Agency signatures to complete the environmental review and publishing or posting a combined NOI-RROF/FONSI. Removal of the UST and the abatement of grossly impacted soil and a Notice of Residual Petroleum (NRP) to address the groundwater contamination on the Site will likely be requested by the NCDEQ.

II. **Documentation; Repayment.**

The Developer must demonstrate and document to the Agency that it has complied with all of the mitigation measures listed above. In the event that any mitigation measure is not completed to the Agency's satisfaction, the Agency may rescind its obligation to loan any HOME funds to the Developer or the Developer may be required to repay to the Agency any HOME funds loaned to the Developer under the Program for the Project.

## III. Monitoring and Reporting.

The Developer agrees to provide detailed written reports to the Agency, at the Agency's request, to sufficiently document the work undertaken under this Agreement. The Agency shall have the ability to conduct unannounced site visits to monitor and review the construction process including these mitigation measures.

## IV. Miscellaneous.

A. This Agreement shall bind all successors and assigns of the Developer.

B. This Agreement shall be governed by and construed under North Carolina law. Any and all disputes between the parties that cannot be settled by mutual agreement shall be resolved solely and exclusively in the North Carolina State Courts.

C. Any modifications to this Agreement shall be in writing and signed by both parties.

D. This Agreement may be executed in one or more counterparts and shall become effective on the date first written above.

E. Any provision herein contained which by its nature and effect is required to be observed, kept or performed after the execution of this Agreement shall survive said execution and remain binding upon and for the benefit of the parties until fully observed, kept, or performed.

**Now, therefore, the parties have caused this Agreement to be duly approved and duly executed.**

North Carolina Housing Finance Agency

By: _____

Scott Farmer, Executive Director

Date: 9/25/23

Balsam Edge LLC

By: _____

Date: 9/21/2023

# Memorandum of Understanding

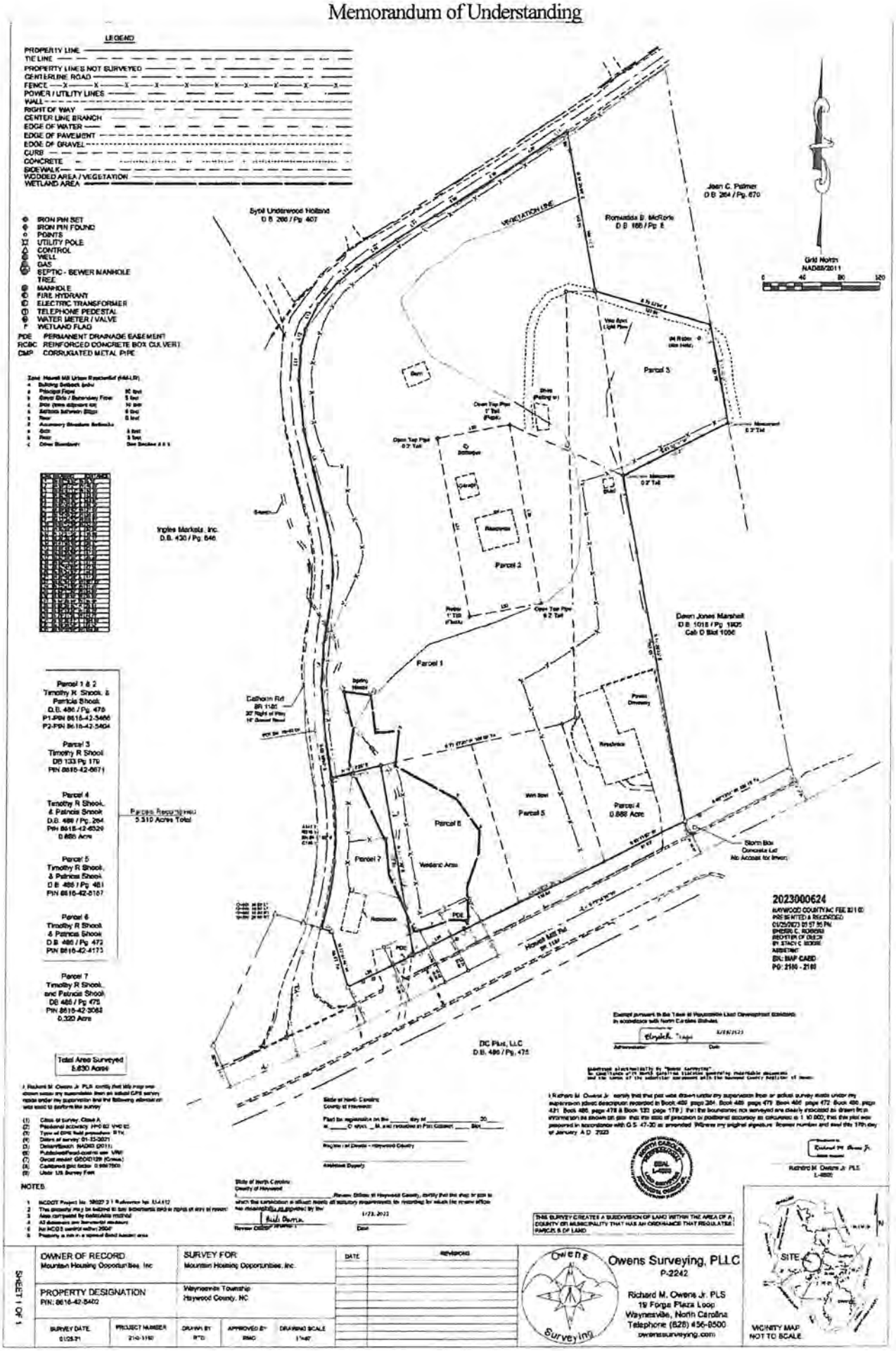


**EXHIBIT B**

**to**

**Memorandum of Understanding**

Prepared by and return to:

_____

_____

_____

_____

STATE OF NORTH CAROLINA

_____ COUNTY

**CONSERVATION DECLARATION**

This Conservation Declaration ("Conservation Declaration") is made on this 21st day of September, 2023, by Balsam Edge, LLC, a North Carolina LLC ("Declarant").

**RECITALS & CONSERVATION PURPOSES**

A. Declarant is the sole owner in fee simple of the certain real property as more particularly described on **Exhibit A** attached hereto and by this reference incorporated herein, upon which is located certain real property described as "Wetland Area" (the "Property") as shown on **Exhibit B** attached hereto; and

B. The purpose of this Conservation Declaration is to maintain wetland resources and other natural values of the Property, and prevent the use or development of the Property for any purpose or in any manner that would conflict with the maintenance of the Property in its natural condition. The preservation of the Property in its natural condition is required by Section 288 of the Cranston-Gonzales National Affordable Housing Act and (i) the North Carolina

Housing Finance Agency (acting as the responsible entity in accordance with Section 288 of the Cranston-Gonzales National Affordable Housing Act) to facilitate compliance with Executive Order 11990 (Protection of Wetlands) as implemented at 24 CFR Part 55, particularly 55.12(c)(6), and this Conservation Declaration may therefore be enforced by the United States of America.

NOW, THEREFORE the Declarant hereby unconditionally and irrevocable declares that the Property shall be held and subject to the following restrictions, covenants and conditions as set out herein, to run with the Property and be binding on all parties that have or shall have any right, title, or interest in said Property.

**ARTICLE I. PROHIBITED AND RESTRICTED ACTIVITIES**

Any activity on, or use of, the Property inconsistent with the purposes of this Conservation Declaration is prohibited. The Property shall be maintained in its natural scenic and open condition and restricted from any development or use that would impair or interfere with the conservation purposes of this Conservation Declaration set forth above.

Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited or restricted.

A. Disturbance of Natural Features. Any change disturbance, alteration or impairment of the natural features of the Property or any introduction of non-native plants and/or animal species is prohibited.
B. Construction. There shall be no constructing or placing of any building, mobile home, asphalt or concrete pavement, billboard or other advertising display, antenna, utility pole, tower, conduit, line, pier, landing, dock or any other temporary or permanent structure or facility on or above the Property.
C. Industrial, Commercial and Residential Use. Industrial, residential and/or commercial activities, including any right or passage for such purposes are prohibited on the Property
D. Agricultural, Grazing and Horticultural Use. Agricultural, grazing, animal husbandry and horticultural use of the Property are prohibited.
E. Vegetation. There shall be no removal, burning, destruction, harming, cutting or mowing of trees, shrubs, or vegetation on the Property, except that which is necessary to prevent injury to life or damage to property, or maintain the natural features of Property.
F. Roads and Trails. There shall be no construction of roads, trails or walkways on the Property.
G. Signage. No signs shall be permitted on or over the Property, except the posting of no trespassing signs, signs identifying the conservation values of the Property, signs giving directions or proscribing rules and regulations for the use of the Property and/or signs identifying the Declarant as owner of the property.

H. Dumping or Storage. Dumping or storage of soil, trash, ashes, garbage, waste, abandoned vehicles, appliances, machinery or hazardous substances, or toxic or hazardous waste, or any placement of underground or aboveground storage tanks or other material on the Property is prohibited.

I. Excavation, Dredging or Mineral Use. There shall be no grading filling, excavation, dredging, mining or drilling; no removal of topsoil, sand gravel, rock, peat, minerals or other materials, and no change in the topography of the land in any manner on the Property, except to restore natural topography or drainage patterns.

J. Water Quality and Drainage Pattern. There shall be no diking, draining, dredging, channeling, filling, leveling, pumping, impounding or related activities, or altering or tampering with water control structures or devices or disruption or alteration of existing drainage patterns on the Property. In addition, diverting or causing or permitting the diversion of surface or underground water into, within or out of the easement area by any means, removal of wetlands or floodplains, polluting or discharging into waters, springs, seeps or wetlands, or use of pesticide or biocides is prohibited on the Property.

K. Development Rights. No development rights that have been encumbered or extinguished by this Conservation Declaration shall be transferred pursuant to a transferable development rights scheme or cluster development arrangement or otherwise.

L. Vehicles. The operation of mechanized vehicles including, but not limited to, motorcycles, dirt bikes, all-terrain vehicles, cars and trucks prohibited on the Property.

M. Other Prohibitions. Any other use of, or activity on, the Property which is or may become inconsistent with the purposes of Executive Order 11990, the preservation of the Property substantially in its natural condition, or the protection of its environmental systems, is prohibited.

## ARTICLE II. ENFORCEMENT & REMEDIES

A. This Conservation Declaration is intended to ensure continued compliance with Executive Order 11990 (Protection of Wetlands) as implemented at 24 CFR Part 55, particularly 55.12(c)(6); therefore, this Conservation Declaration may be enforced by the United States of America and the North Carolina Housing Finance Agency. This covenant is to run with the land and shall be binding on all parties and all persons claiming under the Declarant.

B. The North Carolina Housing Finance Agency, their employees and agents and their successors and assigns, have the right, with reasonable notice, to enter the Property at reasonable times for the purpose of inspecting the Property to determine whether the Declarant, Declarant's representatives or assigns are complying with the terms, conditions and restrictions of this Conservation Declaration.

C. Nothing contained in this Conservation Declaration shall be construed to entitle the North Carolina Housing Finance Agency to bring any action against Declarant for any injury or change in the Property caused by third parties, resulting from causes beyond the Declarant's control, including, without limitation, fire, flood, storm, and earth movement or from any prudent action taken in good faith by the Declarant under emergency conditions to prevent, abate, or mitigate significant injury to life, damage to Property or harm to the Property resulting from such causes.

## ARTICLE III. PUBLIC ACCESS

A. This Conservation Declaration does not convey to the public the right to enter the Property for any purposes whatsoever.

## ARTICLE IV. DOCUMENTATION AND TITLE

A. Conservation Purpose. Declarant, for itself, its successors and assigns, agrees that the Property shall be held exclusively for conservation purposes.

B. Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Conservation Declaration and supersedes all prior discussions, negotiations, understandings or agreements relating to the Conservation Declaration. If any provision is found to be invalid, the remainder of the provisions of this Conservation Declaration, and the application of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

C. Recording. Declarant shall record this instrument and any amendment hereto in timely fashion in the official records of Haywood County, North Carolina, and may re-record it at any times as may be required to preserve its rights.

D. Environmental Condition of the Property. The Declarant warrants and represents that to the best of its knowledge after appropriate inquiry and investigation: (a) the Property described herein is and at all times hereafter will continue to be in full compliance with all federal, state and local environmental laws and regulations, and (b) as of the date hereof there are no hazardous materials, substances, wastes or environmentally regulated substances (including, without limitation, any materials containing asbestos) located on, in or under the Property or used in connection therewith, and that there is no environmental condition existing on the Property that may prohibit or impede use of the Property for the purposes set forth in the recitals.

**SEPARATE SIGNATURE PAGE FOLLOWS**

**SEPARATE SIGNATURE PAGE FOR**

**CONSERVATION DECLARATION**

**IN WITNESS WHEREOF,** Declarant has hereunto set its hand and seal effective the day and year first above written.

By: Geoffrey Barton

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STATE OF NORTH CAROLINA )
)
COUNTY OF Buncombe )

I, James D Dennis, a Notary Public of the County and State aforesaid, certify that Geoffry Barton as President of MHE, Inc., the Managing Member of Balsam Edge LLC, personally appeared before me this day and acknowledged the voluntary execution of the foregoing instrument in said capacity.

WITNESS my hand and notarial seal or stamp, this the 21st day of September ~~201~~ 2023

Notary Public

My Commission Expires: 12/8/2024

*[Notarial Seal/Stamp]*

JAMES D DENNIS
Notary Public
North Carolina
Buncombe County

**EXHIBIT A**
**LEGAL DESCRIPTION**

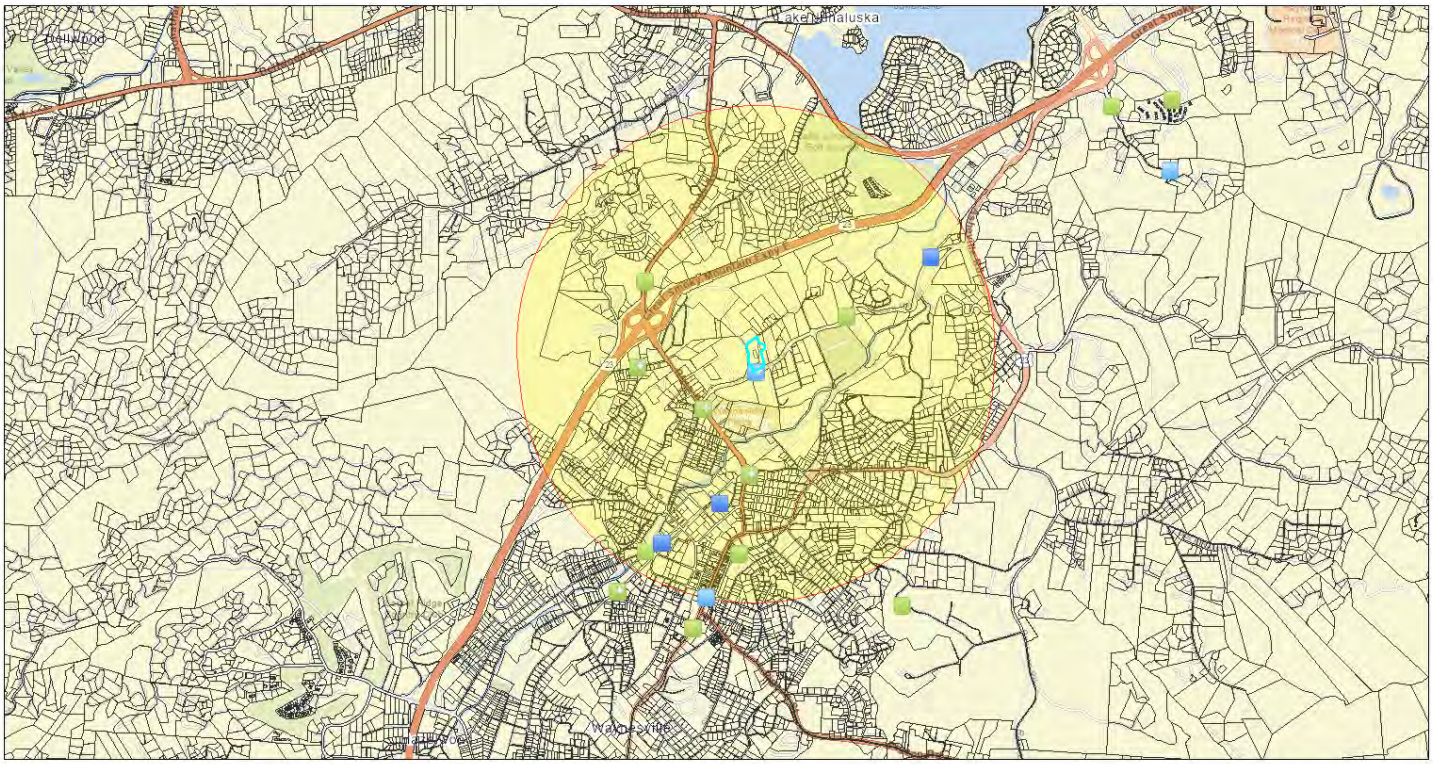
Beginning at a point in the northern boundary of Howell Mill Road (SR 1184), said point being the southwest corner of the property of Dawn Jones Marshall, now or formerly, as shown on the plat recorded in Map Cabinet D at Page 1056, Haywood County Registry; and from the Beginning Point thus established, with the northern boundary of Howell Mill Road (SR 1184) the following five (5) courses and distances: (1) South 63°11'07 West 91.63 feet to an iron pin found, (2) South 64°18'54" West 138.84 feet to a point, (3) South 63°17'32" West 34.00' to a point, (4) South 63°16'50" West 26.00' to a point, (5) South 63°20'40" West 16.49' to an iron pin set; thence leaving the northern boundary of Howell Mill Road (SR 1184) North 10° 07' 35" West 195.49 feet; thence South 76°07'25" West 52.01 feet to a point in the eastern boundary of Calhoun Road (SR 1185); thence with the eastern and southern boundaries of Calhoun Road (SR 1185) the following twenty-two (20) courses and distances: (1) North 08°37'21" West 40.26' to a point, (2) North 04°47'17" West 53.39' to a point, (3) North 02°43'23" East 43.56' to a point, (4) North 08°40'32" East 43.67' to a point, (5) North 05°43'16" East 28.32' to a point, (6) North 06°00'42" West 37.96' to a point, (7) North 14°45'23" West 50.48' to a point, (8) North 13°34'32" West 60.81' to a point, (9) North 06°12'58" West 52.50' to a point, (10) North 03°59'10" East 33.93' to a point, (11) North 13°51'58" East 16.90' to a point, (12) North 26°33'35" East 28.77' to a point, (13) North 41°45'40" East 30.17' to a point, (14) North 49°48'30" East 25.66' to a point, (15) North 56°23'04" East 47.68' to a point, (16) North 57°38'45" East 46.44' to a point, (17) North 58°13'16" East 47.15' to a point, (18) North 57°41'04" East 47.55' to a point, (19) North 56°34'03" East 46.28', and (20) North 56°48'56" East 17.20' to a point; thence leaving the boundary of Calhoun Road (SR 1185) and with the western boundary of the property of Romualda B. McRorie, now or formerly, by Deed recoded in Book 188 at Page 8, Haywood County Registry, South 10°28'04" East, passing an iron pin set at 20.00 feet, 165.13 feet to an iron pin set; thence with the southern line of the Romualda B. McRorie property South 73°53'04" East 123.60 feet to an iron pin set in the western boundary of the First Tract of the property of Jean C. Palmer, now or formerly, by Deed recorded in Book 264 at Page 670, Haywood County Registry; thence with the western boundary of the Jean C. Palmer property South 10°28'04" East 101.70 feet to a concrete monument in the northeast corner of the property of Dawn Jones Marshall, now or formerly, as shown on the plat recorded in Map Cabinet D at Page 1056, Haywood County Registry; thence with the northern boundary of the Dawn Jones Marshall property South 63°33'16" West 120.21 feet to a concrete monument; thence with the western boundary of the Dawn Jones Marshall property South 10°30'33" East 357.01 feet to the Beginning Point.

Being all of Parcels 1-6, containing 5.310 acres, more or less, shown on the Survey for Mountain Housing Opportunities, Inc. dated January 25, 2021, by Richard M. Owens Jr., PLS of Owens Surveying, PLLC, Project No. 21-2-1190.

# NEPAssist EPA Facilities Reports with 1-mile, 0.5-mile, and 3,000-foot Buffers and NC DEQ DWM Site Locator Reports with 1-mile, 0.5-mile and 3,000-foot Buffers

# NEPAssist Report

## Balsam Edge - EPA Facilities in 1-mile Radius




Input Coordinates: 35.505941,-82.984233,35.505536,-82.984111,35.505425,-82.983693,35.505179,-82.983628,35.505015,-82.983967,35.504106,-82.983686,35.503684,-82.984543,35.504159,-82.984694,35.504112,-82.984860,35.504264,-82.984896,35.504499,-82.984924,35.504698,-82.984903,35.504862,-82.984903,35.504950,-82.984946,35.505196,-82.985040,35.505343,-82.985068,35.505484,-82.984996,35.505941,-82.984233

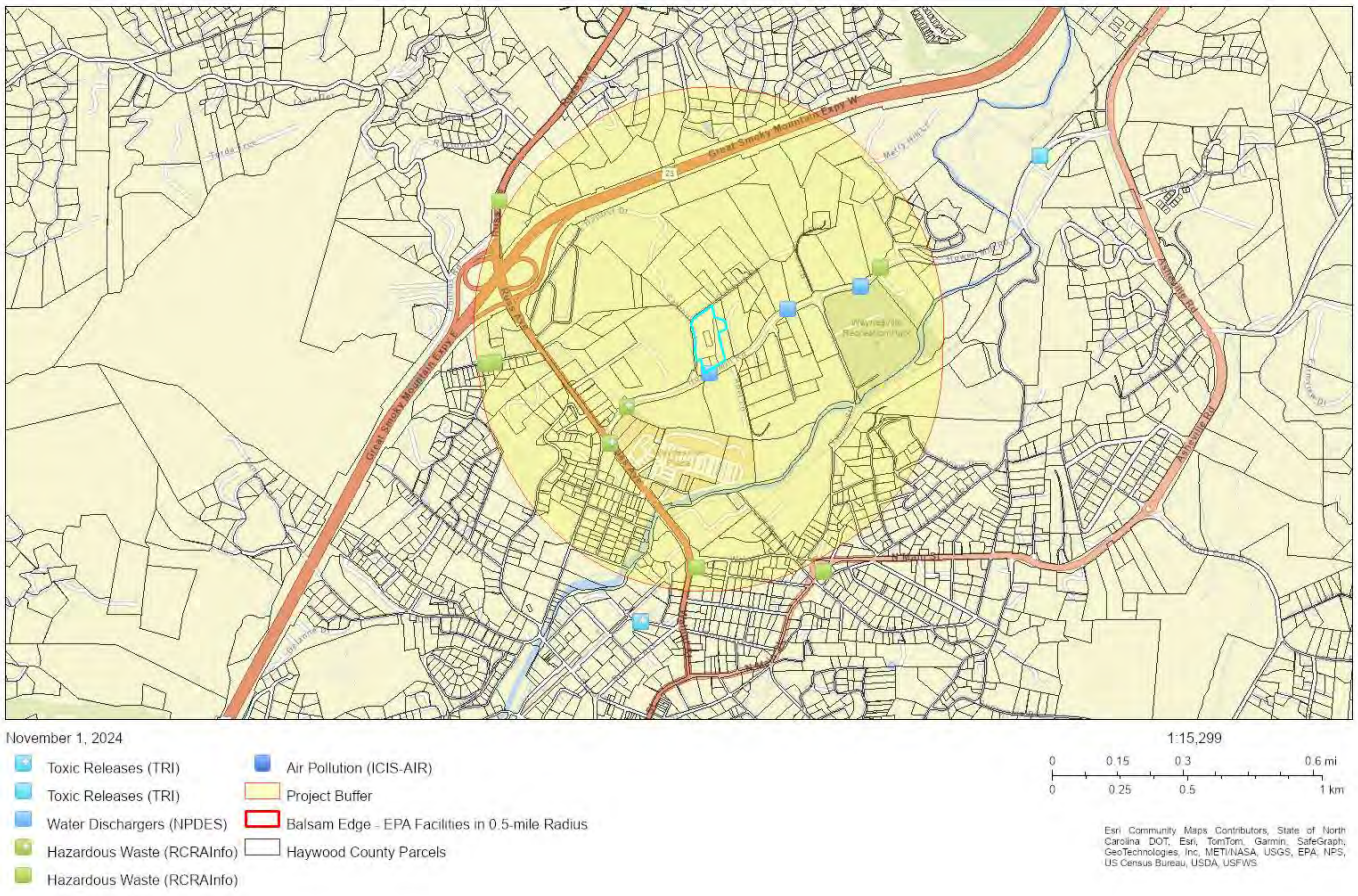
| Project Area | 0.01 sq mi |
|---|---|
| Within 1 mile of an Ozone 1-hr (1979 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of an Ozone 8-hr (2015 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a Lead (2008 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a PM10 (1987 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a CO Annual (1971 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a NO2 Annual (1971 standard) Non-Attainment/Maintenance Area? | no |
| Within 1 mile of a Federal Land? | no |
| Within 1 mile of an impaired stream? | yes |
| Within 1 mile of an impaired waterbody? | yes |
| Within 1 mile of a waterbody? | yes |
| Within 1 mile of a stream? | yes |

| Within 1 mile of an NWI wetland? | Available Online |
|---|---|
| Within 1 mile of a Brownfields site? | no |
| Within 1 mile of a Superfund site? | no |
| Within 1 mile of a Toxic Release Inventory (TRI) site? | yes |
| Within 1 mile of a water discharger (NPDES)? | yes |
| Within 1 mile of a hazardous waste (RCRA) facility? | yes |
| Within 1 mile of an air emission facility? | yes |
| Within 1 mile of a school? | yes |
| Within 1 mile of an airport? | no |
| Within 1 mile of a hospital? | no |
| Within 1 mile of a designated sole source aquifer? | no |
| Within 1 mile of a historic property on the National Register of Historic Places? | yes |
| Within 1 mile of a Chemical Data Reporting (CDR) site? | yes |
| Within 1 mile of a Land Cession Boundary? | yes |
| Within 1 mile of a tribal area (lower 48 states)? | no |
| Within 1 mile of the service area of a mitigation or conservation bank? | no |
| Within 1 mile of the service area of an In-Lieu-Fee Program? | yes |
| Within 1 mile of a Public Property Boundary of the Formerly Used Defense Sites? | no |
| Within 1 mile of a Munitions Response Site? | no |
| Within 1 mile of an Essential Fish Habitat (EFH)? | no |
| Within 1 mile of a Habitat Area of Particular Concern (HAPC)? | no |
| Within 1 mile of an EFH Area Protected from Fishing (EFHA)? | no |
| Within 1 mile of a Bureau of Land Management Area of Critical Environmental Concern? | no |
| Within 1 mile of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service? | no |
| Within 1 mile of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service? | no |

Created on: 11/1/2024 2:34:10 PM

# Balsam Edge - EPA Facilities in 0.5-mile Radius

## Map




**Geographic coordinates:**

POLYGON
(35.505941,-82.984233,35.505536,-82.984111,35.505425,-82.983693,35.505179,-82.983628,35.505015,-82.983967,35.504106,-82.983686,35.503684,-82.984543,35.504159,-82.984694,35.504112,-82.984860,35.504264,-82.984896,35.504499,-82.984924,35.504698,-82.984903,35.504862,-82.984903,35.504950,-82.984946,35.505196,-82.985040,35.505343,-82.985068,35.505484,-82.984996,35.505941,-82.984233)

with buffer .5 miles

Note: The information in the following reports is based on publicly available databases and web services. The National Report uses nationally available datasets and the State Reports use datasets available through the EPA Regions. Click on the hyperlinked question to view the data source and associated metadata.

## National Report

| Project Area | 0.01 sq mi |
|---|---|
| Within 0.5 miles of an Ozone 1-hr (1979 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of an Ozone 8-hr (2015 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a Lead (2008 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area? | no |

| | |
|---|---|
| Within 0.5 miles of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a PM10 (1987 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a CO Annual (1971 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a NO2 Annual (1971 standard) Non-Attainment/Maintenance Area? | no |
| Within 0.5 miles of a Federal Land? | no |
| Within 0.5 miles of an impaired stream? | yes |
| Within 0.5 miles of an impaired waterbody? | no |
| Within 0.5 miles of a waterbody? | no |
| Within 0.5 miles of a stream? | yes |
| Within 0.5 miles of an NWI wetland? | click here<br>***May take several minutes*** |
| Within 0.5 miles of a Brownfields site? | no |
| Within 0.5 miles of a Superfund site? | no |
| Within 0.5 miles of a Toxic Release Inventory (TRI) site? | no |
| Within 0.5 miles of a water discharger (NPDES)? | yes |
| Within 0.5 miles of a hazardous waste (RCRA) facility? | yes |
| Within 0.5 miles of an air emission facility? | no |
| Within 0.5 miles of a school? | no |
| Within 0.5 miles of an airport? | no |
| Within 0.5 miles of a hospital? | no |
| Within 0.5 miles of a designated sole source aquifer? | no |
| Within 0.5 miles of a historic property on the National Register of Historic Places? | yes |
| Within 0.5 miles of a Chemical Data Reporting (CDR) site? | no |
| Within 0.5 miles of a Land Cession Boundary? | yes |
| Within 0.5 miles of a tribal area (lower 48 states)? | no |
| Within 0.5 miles of the service area of a mitigation or conservation bank? | no |
| Within 0.5 miles of the service area of an In-Lieu-Fee Program? | yes |
| Within 0.5 miles of a Public Property Boundary of the Formerly Used Defense Sites? | no |
| Within 0.5 miles of a Munitions Response Site? | no |
| Within 0.5 miles of an Essential Fish Habitat (EFH)? | no |
| Within 0.5 miles of a Habitat Area of Particular Concern (HAPC)? | no |
| Within 0.5 miles of an EFH Area Protected from Fishing (EFHA)? | no |
| Within 0.5 miles of a Bureau of Land Management Area of Critical Environmental Concern? | no |
| Within 0.5 miles of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service? | no |
| Within 0.5 miles of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service? | no |

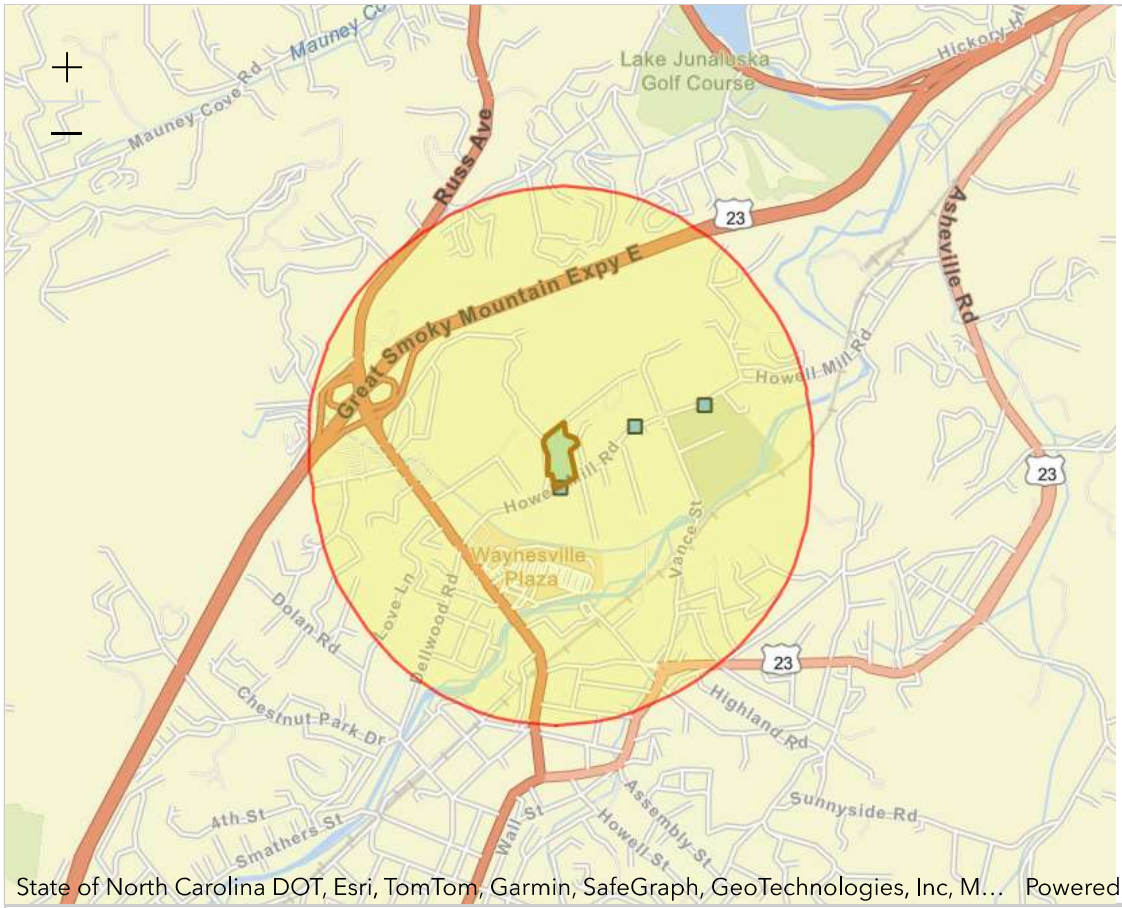
Save to Excel | Save as PDF

**North Carolina Report**
**Demographic Reports**
**USFWS IPaC Report**

# NEPAssist

Home (https://www.epa.gov/nepa/nepassist) | Help (help/NEPAssistHelp.pdf)

US Environmental Protection Agency (//www.epa.gov)




**Report question:** ***Within 3000 feet of a Water dischargers site?*** **yes**

Modify question by entering a new buffer distance and unit for the selected study area:

3000 | feet | Submit

| Name | Distance |
|---|---|
| SCHULHOFER S INC (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/icis-npdes/report?facilityId=NCG030340) | 772.33 feet |

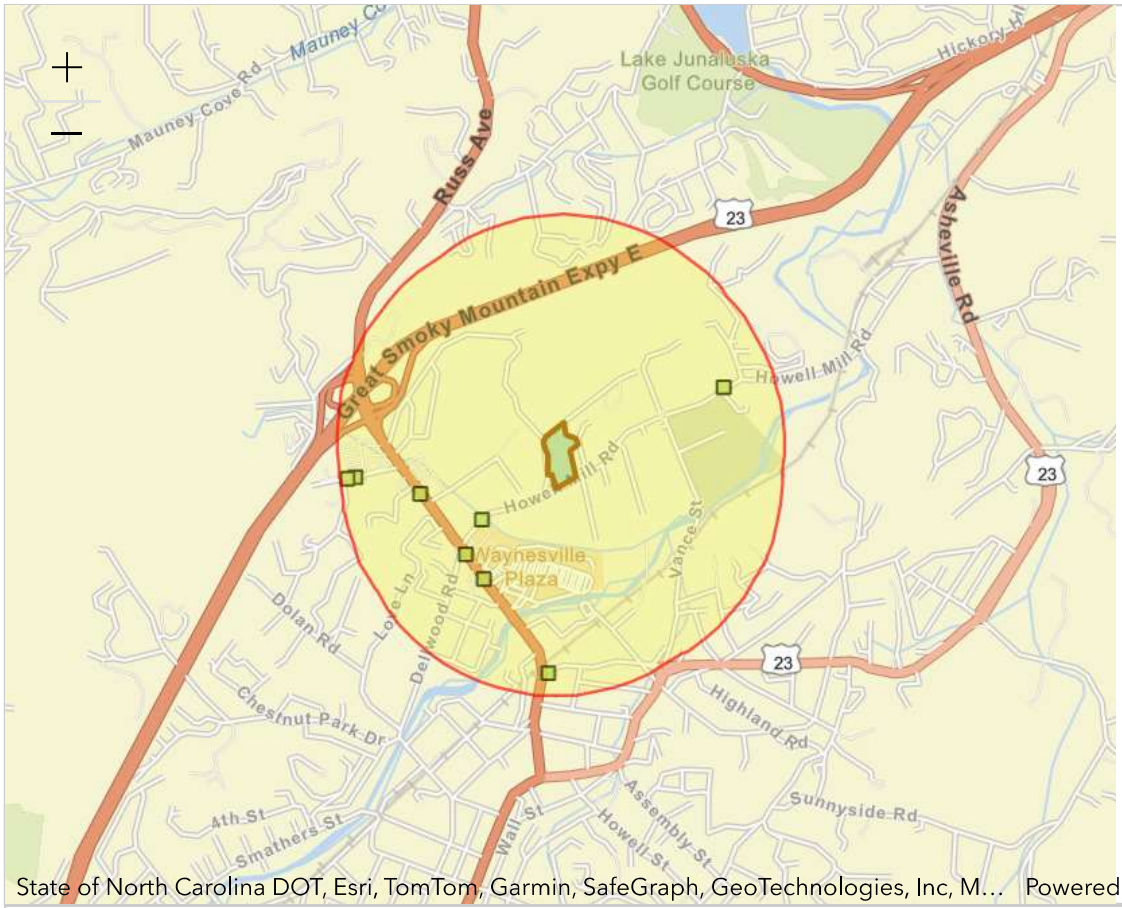
**Registry ID:** 110006722190
**Primary Name:** SCHULHOFER S INC
**Address:** 525 HOWELL MILL RD
**City:** WAYNESVILLE
**County:** HAYWOOD
**State:** NC
**EPA Region:** Region 04
**ZIP Code:** 28786
**Latitude:** 35.505821
**Longitude:** -82.981143
**Program_System Acronym:** NPDES
**Program System ID:** NCG030340
**FIPS Code:** NC087
**HUC Code:**
**Facility URL:** https://enviro.epa.gov/envirofacts/icis-npdes/report?facilityId=NCG030340

| Name | Distance |
| --- | --- |
| ☐ WAYNESVILLE PLANT (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/icis-npdes/report?facilityId=NCG500151)<br>**Registry ID:** 110009718136<br>**Primary Name:** WAYNESVILLE PLANT<br>**Address:** 1329 HOWELL MILL RD<br>**City:** WAYNESVILLE<br>**County:** HAYWOOD<br>**State:** NC<br>**EPA Region:** Region 04<br>**ZIP Code:** 28786<br>**Latitude:** 35.506567<br>**Longitude:** -82.978163<br>**Program_System Acronym:** NPDES<br>**Program System ID:** NCG500151<br>**FIPS Code:** NC087<br>**HUC Code:**<br>**Facility URL:** https://enviro.epa.gov/envirofacts/icis-npdes/report?facilityId=NCG500151 | 1697.67 feet |
| ☐ SONOCO PLASTICS FRMLY ASSOC PACKAGING TECHNOLOGIES (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/icis-npdes/report?facilityId=NCG050401)<br>**Registry ID:** 110046599276<br>**Primary Name:** SONOCO PLASTICS FRMLY ASSOC PACKAGING TECHNOLOGIES<br>**Address:** 288 HOWELL MILL RD<br>**City:** WAYNESVILLE<br>**County:** HAYWOOD<br>**State:** NC<br>**EPA Region:** Region 04<br>**ZIP Code:** 28786<br>**Latitude:** 35.50369<br>**Longitude:** -82.98435<br>**Program_System Acronym:** NPDES<br>**Program System ID:** NCG050401<br>**FIPS Code:** NC087<br>**HUC Code:**<br>**Facility URL:** https://enviro.epa.gov/envirofacts/icis-npdes/report?facilityId=NCG050401 | 27.76 feet |

# NEPAssist

Home (https://www.epa.gov/nepa/nepassist) | Help (help/NEPAssistHelp.pdf)

US Environmental Protection Agency (//www.epa.gov)




**Report question:** ***Within 0.5 miles of a Hazardous waste site?*** **yes**

Modify question by entering a new buffer distance and unit for the selected study area:

0.5 | miles | Submit

| Name | Distance |
|---|---|
| TAYLOR MOTOR CO (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCD024852907) | 0.28 miles |

**Registry ID:** 110004017867
**Primary Name:** TAYLOR MOTOR CO
**Address:** 524 RUSS AVE
**City:** WAYNESVILLE
**County:** HAYWOOD
**State:** NC
**EPA Region:** Region 04
**ZIP Code:** 28786
**Latitude:** 35.50051
**Longitude:** -82.98762
**Program_System Acronym:** RCRAINFO
**Program System ID:** NCD024852907
**FIPS Code:** 37087
**HUC Code:**
**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCD024852907

| Name | Distance |
| --- | --- |
| ☐ ADVANCED TRANSMISSIONS INC (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCD981471543) | 0.46 miles |

**Registry ID:** 110004023805
**Primary Name:** ADVANCED TRANSMISSIONS INC
**Address:** 106 FRAZIER ST
**City:** WAYNESVILLE
**County:** HAYWOOD
**State:** NC
**EPA Region:** Region 04
**ZIP Code:** 28786
**Latitude:** 35.504056
**Longitude:** -82.993118
**Program_System Acronym:** RCRAINFO
**Program System ID:** NCD981471543
**FIPS Code:** 37087
**HUC Code:**
**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCD981471543

| | |
| --- | --- |
| ☐ SCHULHOFER S INC (WYNSVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCS000001119) | 0.38 miles |

**Registry ID:** 110039213464
**Primary Name:** SCHULHOFER S INC
**Address:** 816 HOWELL MILL ROAD
**City:** WYNSVILLE
**County:** HAYWOOD
**State:** NC
**EPA Region:** Region 04
**ZIP Code:** 28786
**Latitude:** 35.50719
**Longitude:** -82.97735
**Program_System Acronym:** RCRAINFO
**Program System ID:** NCS000001119
**FIPS Code:** 37087
**HUC Code:**
**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCS000001119

| | |
| --- | --- |
| ☐ CVS PHARMACY 7521 (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000153841) | 0.31 miles |

**Registry ID:** 110045983012
**Primary Name:** CVS PHARMACY 7521
**Address:** 773 RUSS AVE
**City:** WAYNESVILLE
**County:** HAYWOOD
**State:** NC
**EPA Region:** Region 04
**ZIP Code:** 28786
**Latitude:** 35.50348
**Longitude:** -82.99034
**Program_System Acronym:** RCRAINFO
**Program System ID:** NCR000153841
**FIPS Code:** 37087
**HUC Code:**
**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000153841

| Name | Distance |
| --- | --- |
| ☐ WALGREENS 19219 (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000157222)<br>**Registry ID:** 110054848368<br>**Primary Name:** WALGREENS 19219<br>**Address:** 590 RUSS AVE<br>**City:** WAYNESVILLE<br>**County:** HAYWOOD<br>**State:** NC<br>**EPA Region:** Region 04<br>**ZIP Code:** 28786<br>**Latitude:** 35.50137<br>**Longitude:** -82.98839<br>**Program_System Acronym:** RCRAINFO<br>**Program System ID:** NCR000157222<br>**FIPS Code:** 37087<br>**HUC Code:**<br>**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000157222 | 0.27 miles |
| ☐ NORTH CAROLINA DEPT OF TRANSPORTATION (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCP090314036)<br>**Registry ID:** 110061054763<br>**Primary Name:** NORTH CAROLINA DEPT OF TRANSPORTATION<br>**Address:** 90 HOWELL MILL RD<br>**City:** WAYNESVILLE<br>**County:** HAYWOOD<br>**State:** NC<br>**EPA Region:** Region 04<br>**ZIP Code:** 28786<br>**Latitude:** 35.50258<br>**Longitude:** -82.9877<br>**Program_System Acronym:** RCRAINFO<br>**Program System ID:** NCP090314036<br>**FIPS Code:** 37087<br>**HUC Code:**<br>**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCP090314036 | 0.19 miles |
| ☐ O REILLY AUTO PARTS STORE 1272 (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000167312)<br>**Registry ID:** 110067676107<br>**Primary Name:** O REILLY AUTO PARTS STORE 1272<br>**Address:** 254 WALNUT ST<br>**City:** WAYNESVILLE<br>**County:** HAYWOOD<br>**State:** NC<br>**EPA Region:** Region 04<br>**ZIP Code:** 28786<br>**Latitude:** 35.49723<br>**Longitude:** -82.98486<br>**Program_System Acronym:** RCRAINFO<br>**Program System ID:** NCR000167312<br>**FIPS Code:** 37087<br>**HUC Code:**<br>**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000167312 | 0.45 miles |

| Name | Distance |
| --- | --- |
| ☐ PUBLIX SUPERMARKET 1640 WAYNESVILLE PAVILION (WAYNESVILLE,NC) (https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000177295) | 0.48 miles |

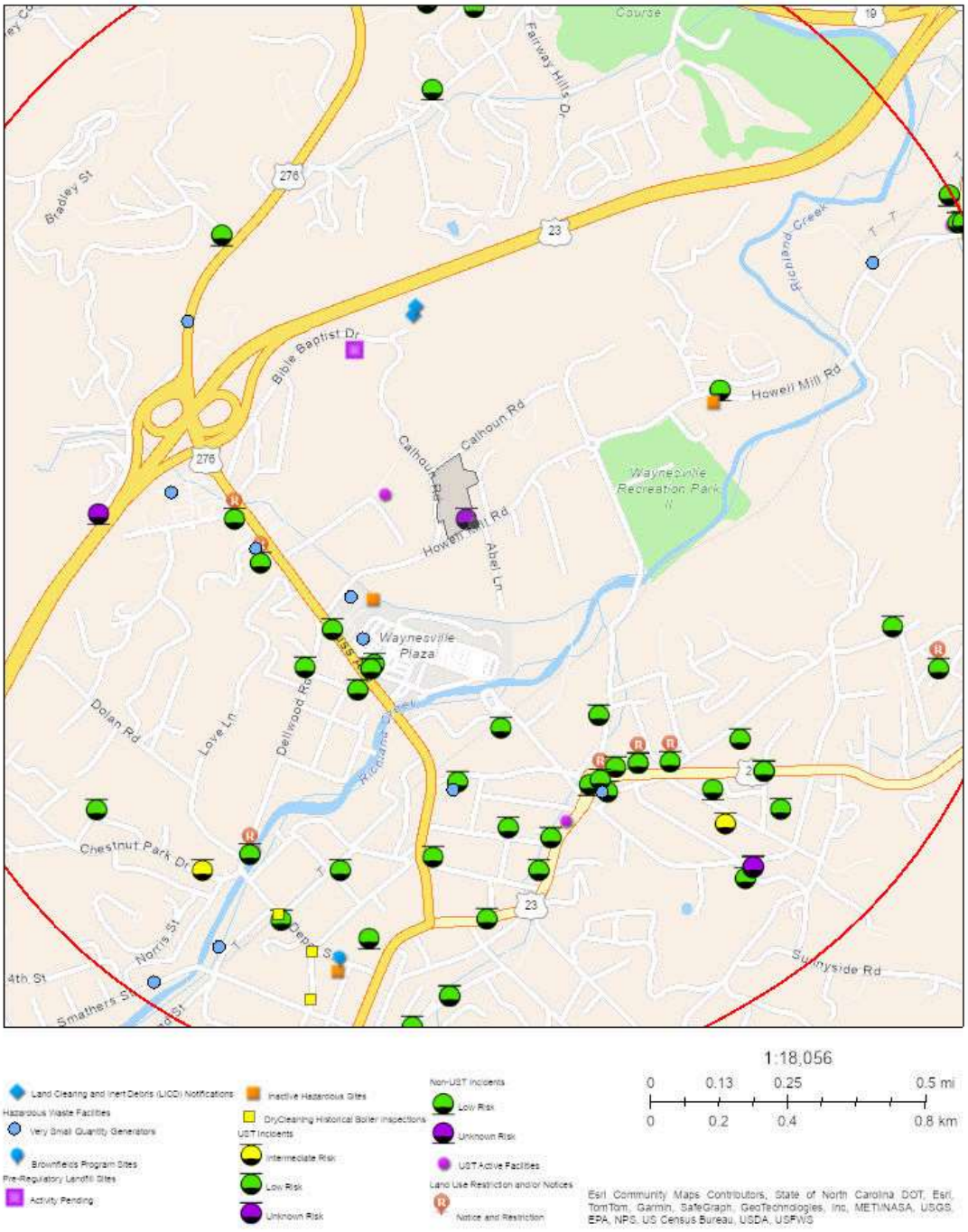
**Registry ID:** 110070912450
**Primary Name:** PUBLIX SUPERMARKET 1640 WAYNESVILLE PAVILION
**Address:** 124 FRAZIER ST
**City:** WAYNESVILLE
**County:** HAYWOOD
**State:** NC
**EPA Region:** Region 04
**ZIP Code:** 28786
**Latitude:** 35.504001
**Longitude:** -82.99346
**Program_System Acronym:** RCRAINFO
**Program System ID:** NCR000177295
**FIPS Code:** 37087
**HUC Code:**
**Facility URL:** https://enviro.epa.gov/envirofacts/rcrainfo/facility?handlerId=NCR000177295

# Balsam Edge - 1-mile Radius Screening Report

## Area of Interest (AOI) Information

Area : 98,394,454.58 ft²

Jan 20 2025 15:37:06 Central Standard Time



** Unable to analyze, maximum record count has been reached.*

## Land Clearing and Inert Debris (LICD) Notifications

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | N0593 | Town Of Waynesville Landfill | 1 |
| 2 | N0660 | Town Of Waynesville Landfill | 1 |

## Yard Waste Notification (YWN) Facilities

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | YWN-44-005 | Town of Waynesville | 1 |
| 2 | YWN-44-010 | Schulhofer's Inc. | 1 |

## Hazardous Waste Facilities

| # | FACILITY ID | HANDLER_NAME | Count |
|---|---|---|---|
| 1 | NCD024852907 | TAYLOR MOTOR CO | 1 |
| 2 | NCD981747629 | CENTRAL CLEANERS | 1 |
| 3 | NCD982145047 | WAYNESVILLE EXTRUSION COATING FACILITY | 1 |
| 4 | NCD986187664 | CARQUEST AUTO PARTS | 1 |
| 5 | NCR000010439 | ADVANCED TRANSMISSIONS INC | 1 |
| 6 | NCR000147629 | KMART #7626 | 1 |
| 7 | NCR000153841 | CVS PHARMACY #7521 | 1 |
| 8 | NCR000157222 | WALGREENS 19219 | 1 |
| 9 | NCR000167312 | O'REILLY AUTO PARTS STORE 1272 | 1 |
| 10 | NCR000177295 | PUBLIX SUPERMARKET 1640 WAYNESVILLE PAVILION | 1 |
| 11 | NCR000179390 | GILES CHEMICAL A DIVISION OF PREMIER MAGNESIA LLC | 1 |

## Brownfields Program Sites

| # | BF_ID | BF_Name | Count |
|---|---|---|---|
| 1 | 2603322044 | Depot Street (RN) | 1 |

## Inactive Hazardous Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NCD024852675 | SCHULHOFER JUNKYARD | 1 |
| 2 | NONCD0002469 | WR BOYD INVESTMENTS | 1 |
| 3 | NONCD0003314 | DEPOT ST PCE IN GROUNDWATER | 1 |

## Pre-Regulatory Landfill Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NONCD0000356 | Town of Waynesville Dump | 1 |

## DryCleaning Remediation Program

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | DC440001 | Central Cleaners | 1 |

## DryCleaning Historical Boiler Inspections

| # | Drycleaner | InspDate | Count |
|---|---|---|---|
| 1 | CENTRAL CLEANERS | 9/22/1989 | 1 |
| 2 | DOVER CLEANERS | 4/25/1971 | 1 |
| 3 | HARRELLS CLEANERS | 11/13/1977 | 1 |
| 4 | NORGE VILLAGE CLEANERS | 11/6/1978 | 1 |

## UST Incidents

| # | IncidentNumber | IncidentName | Count |
|---|---|---|---|
| 1 | 6403 | TOWN OF WAYNESVILLE PUB. WKS. | 1 |
| 2 | 6811 | MAIN STREET TEXACO | 1 |
| 3 | 7356 | TOWN OF WAYNESVILLE-MAINT.GAR. | 1 |
| 4 | 7358 | HAYWOOD BUILDERS SUPPLY CO. | 1 |
| 5 | 7365 | WAYNESVILLE WWTP | 1 |
| 6 | 7511 | HAZELWOOD TRUCK SERVICE | 1 |
| 7 | 9637 | SPEEDWAY (EMRO) #8134 | 1 |
| 8 | 15745 | AMOCO FOOD SHOP #209 | 1 |
| 9 | 17411 | SPEEDWAY/STARVIN MARVIN | 1 |
| 10 | 18816 | SHORT STOP | 1 |
| 11 | 18839 | WAYNESVILLE GAS SERVICE | 1 |
| 12 | 20417 | PLAZA BP | 1 |
| 13 | 22477 | RUSS AVE SHELL (FORMER) | 1 |
| 14 | 23966 | QUEEN HOUSING GROUP | 1 |
| 15 | 28071 | DODD ESTATE (NANCY) | 1 |
| 16 | 28141 | MESSERS EXXON | 1 |
| 17 | 28145 | WEBB'S SHELL (FORMER)- CLYDE SAVINGS | 1 |
| 18 | 28272 | HANDY MART (HANDY PANTRY #115) | 1 |
| 19 | 28426 | TRUSILO RESIDENCE | 1 |
| 20 | 28553 | FRANCIS PROPERTY | 1 |
| 21 | 28554 | HAYWOOD CENTRAL ELEMENTARY | 1 |
| 22 | 28648 | CONARD RESIDENCE | 1 |
| 23 | 28694 | AZTEX #209 | 1 |
| 24 | 28797 | CHARLIE'S CORNER CONVENIENCE STORE | 1 |
| 25 | 28844 | BAGGETT PROPERTY (ROBERT) | 1 |
| 26 | 28940 | NCDOT - GAS & GROCERIES | 1 |
| 27 | 28975 | TIME OUT MARKET #1 | 1 |
| 28 | 41031 | CABIN COMPANY | 1 |
| 29 | 41067 | ROLFS PROPERTY (GARY) | 1 |
| 30 | 41120 | HALL / AYERS PROPERTY | 1 |
| 31 | 41184 | TOWN OF WAYNESVILLE PROPERTY | 1 |
| 32 | 41269 | BARNHARDT PROPERTY (ANTHONY) | 1 |
| 33 | 41293 | THOMAS RESIDENCE (DOROTHY) | 1 |
| 34 | 41294 | CATHEY PROPERTY (CHARLES) | 1 |
| 35 | 41345 | M&D COLLISION | 1 |
| 36 | 41466 | MAIN STREET AUTOMOTIVE | 1 |
| 37 | 41491 | MOUNTAIN ENERGY STORE #108 | 1 |
| 38 | 41553 | M&D COLLISION WASTE OIL | 1 |
| 39 | 41661 | PARTRIDGE PROPERTY | 1 |
| 40 | 47185 | McDowell Property | 1 |
| 41 | 47487 | Mcdonald residence | 1 |

| | | | |
|---|---|---|---|
| 42 | 48507 | WC Mini Storage | 1 |
| 43 | 49398 | Howell Mill Road heating Oil UST Release | 1 |
| 44 | 49722 | DAVID SATTERFIELD III PROPERTY | 1 |
| 45 | *No Data* | GRASTY'S SERVICE CENTER | 1 |
| 46 | *No Data* | H.C. GRASTY | 1 |
| 47 | *No Data* | TAYLOR MOTOR CO. | 1 |

## Non-UST Incidents

| # | IncidentNumber | IncidentName | Count |
|---|---|---|---|
| 1 | 15001 | SHIRLEY ROBERTS PROPERTY | 1 |
| 2 | 86337 | HAYWOOD COUNTY BRANNER AVE. SITE | 1 |
| 3 | 87938 | Town of Waynesville - N. Main Fire Dept. AST | 1 |
| 4 | 89030 | Gathering Rock Development (Future) | 1 |
| 5 | 89134 | BROWN NCDOT PARCEL 32 | 1 |
| 6 | 89136 | PEAK ENERGY WAYNESVILLE | 1 |
| 7 | 89287 | Noland Property (Betty) | 1 |
| 8 | 97077 | North Main Steet Roundabout | 1 |

## UST Active Facilities

| # | FACILID | FACILNAME | Count |
|---|---|---|---|
| 1 | 00-0-0000010999 | QUICK PANTRY 101 | 1 |
| 2 | 00-0-0000017830 | SHORT STOP | 1 |
| 3 | 00-0-0000031741 | QUICK PANTRY 104 | 1 |
| 4 | 00-0-0000034176 | FCE#1405 | 1 |
| 5 | 00-0-0000035631 | FCE#1408 | 1 |
| 6 | 00-0-0000037004 | INGLES GAS EXPRESS 723 | 1 |

## Land Use Restriction and/or Notices

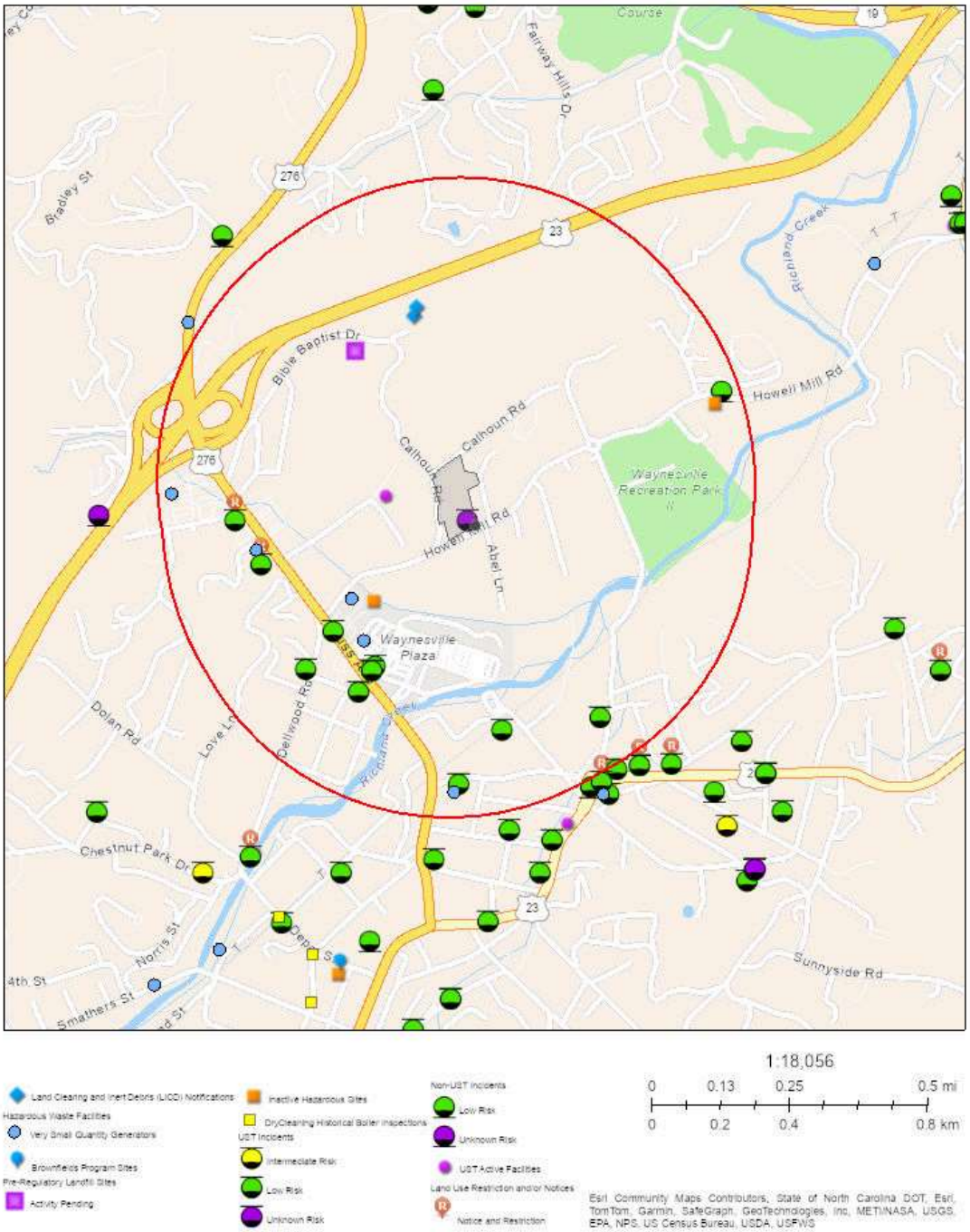
| # | Prj_Number | Prj_Name | Count |
|---|---|---|---|
| 1 | AS-1572 | SPEEDWAY/STARVIN MARVIN | 1 |
| 2 | AS-3063 | Handy Mart (Handy Pantry #115) | 1 |
| 3 | AS-3662 | Charlie's Corner Convenience Store | 1 |
| 4 | AS-4013 | Hall / Ayers Property | 1 |
| 5 | AS-4208 | Thomas residence (dorothy) | 1 |
| 6 | AS-4262 | M&D Collision | 1 |
| 7 | AS-4402 | Main Street Automotive | 1 |
| 8 | AS-4435 | Mountain Energy Store #108 | 1 |
| 9 | AS-810 | SPEEDWAY (EMRO) #8134 | 1 |

# Balsam Edge - 0.5-mile Radius Screening Report

## Area of Interest (AOI) Information

Area : 27,432,214.12 ft²

Jan 20 2025 15:34:50 Central Standard Time



## Land Clearing and Inert Debris (LICD) Notifications

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | N0593 | Town Of Waynesville Landfill | 1 |
| 2 | N0660 | Town Of Waynesville Landfill | 1 |

## Yard Waste Notification (YWN) Facilities

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | YWN-44-005 | Town of Waynesville | 1 |
| 2 | YWN-44-010 | Schulhofer's Inc. | 1 |

## Hazardous Waste Facilities

| # | FACILITY ID | HANDLER_NAME | Count |
|---|---|---|---|
| 1 | NCD024852907 | TAYLOR MOTOR CO | 1 |
| 2 | NCR000153841 | CVS PHARMACY #7521 | 1 |
| 3 | NCR000157222 | WALGREENS 19219 | 1 |
| 4 | NCR000167312 | O'REILLY AUTO PARTS STORE 1272 | 1 |
| 5 | NCR000177295 | PUBLIX SUPERMARKET 1640 WAYNESVILLE PAVILION | 1 |

## Inactive Hazardous Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NCD024852675 | SCHULHOFER JUNKYARD | 1 |
| 2 | NONCD0002469 | WR BOYD INVESTMENTS | 1 |

## Pre-Regulatory Landfill Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NONCD0000356 | Town of Waynesville Dump | 1 |

## UST Incidents

| # | IncidentNumber | IncidentName | Count |
|---|---|---|---|
| 1 | 7365 | WAYNESVILLE WWTP | 1 |
| 2 | 15745 | AMOCO FOOD SHOP #209 | 1 |
| 3 | 20417 | PLAZA BP | 1 |
| 4 | 22477 | RUSS AVE SHELL (FORMER) | 1 |
| 5 | 28141 | MESSERS EXXON | 1 |
| 6 | 28272 | HANDY MART (HANDY PANTRY #115) | 1 |
| 7 | 28694 | AZTEX #209 | 1 |
| 8 | 41184 | TOWN OF WAYNESVILLE PROPERTY | 1 |
| 9 | 41491 | MOUNTAIN ENERGY STORE #108 | 1 |
| 10 | 48507 | WC Mini Storage | 1 |
| 11 | 49398 | Howell Mill Road heating Oil UST Release | 1 |
| 12 | *No Data* | TAYLOR MOTOR CO. | 1 |

## Non-UST Incidents

| # | IncidentNumber | IncidentName | Count |
|---|---|---|---|
| 1 | 89134 | BROWN NCDOT PARCEL 32 | 1 |

## UST Active Facilities

| # | FACILID | FACILNAME | Count |
|---|---|---|---|
| 1 | 00-0-0000035631 | FCE#1408 | 1 |
| 2 | 00-0-0000037004 | INGLES GAS EXPRESS 723 | 1 |

## Land Use Restriction and/or Notices

| # | Prj_Number | Prj_Name | Count |
|---|---|---|---|
| 1 | AS-3063 | Handy Mart (Handy Pantry #115) | 1 |
| 2 | AS-4435 | Mountain Energy Store #108 | 1 |

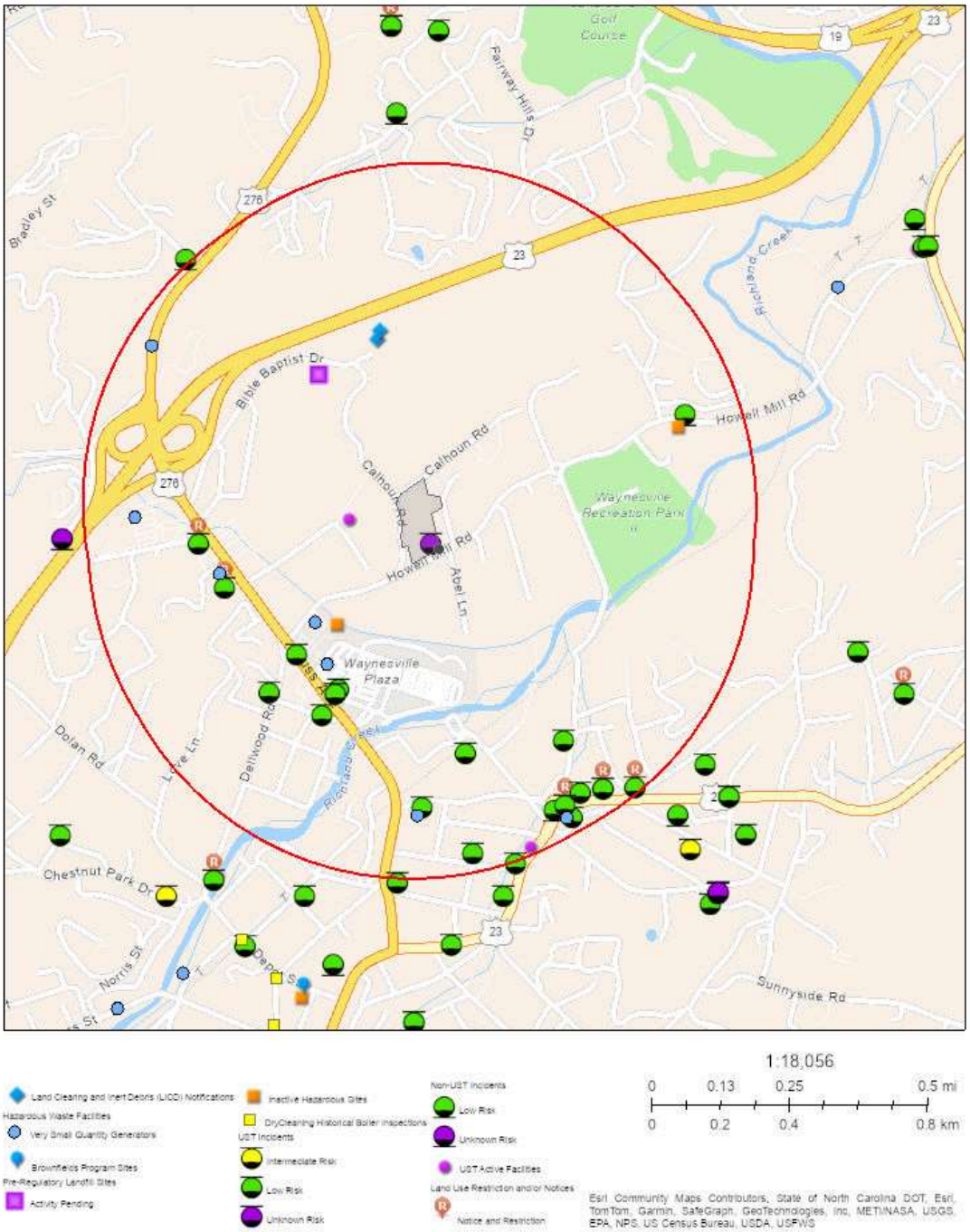
## North Carolina Parcels (Polygons) - Parcels

# Balsam Edge - 3,000-foot Radius Screening Report

## Area of Interest (AOI) Information

Area : 34,534,699.66 ft²

Jan 20 2025 15:39:18 Central Standard Time



## Land Clearing and Inert Debris (LICD) Notifications

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | N0593 | Town Of Waynesville Landfill | 1 |
| 2 | N0660 | Town Of Waynesville Landfill | 1 |

## Yard Waste Notification (YWN) Facilities

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | YWN-44-005 | Town of Waynesville | 1 |
| 2 | YWN-44-010 | Schulhofer's Inc. | 1 |

## Hazardous Waste Facilities

| # | FACILITY ID | HANDLER_NAME | Count |
|---|---|---|---|
| 1 | NCD024852907 | TAYLOR MOTOR CO | 1 |
| 2 | NCD986187664 | CARQUEST AUTO PARTS | 1 |
| 3 | NCR000147629 | KMART #7626 | 1 |
| 4 | NCR000153841 | CVS PHARMACY #7521 | 1 |
| 5 | NCR000157222 | WALGREENS 19219 | 1 |
| 6 | NCR000167312 | O'REILLY AUTO PARTS STORE 1272 | 1 |
| 7 | NCR000177295 | PUBLIX SUPERMARKET 1640 WAYNESVILLE PAVILION | 1 |

## Inactive Hazardous Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NCD024852675 | SCHULHOFER JUNKYARD | 1 |
| 2 | NONCD0002469 | WR BOYD INVESTMENTS | 1 |

## Pre-Regulatory Landfill Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NONCD0000356 | Town of Waynesville Dump | 1 |

## UST Incidents

| # | IncidentNumber | IncidentName | Count |
|---|---|---|---|
| 1 | 7365 | WAYNESVILLE WWTP | 1 |
| 2 | 15745 | AMOCO FOOD SHOP #209 | 1 |
| 3 | 18816 | SHORT STOP | 1 |
| 4 | 20417 | PLAZA BP | 1 |
| 5 | 22477 | RUSS AVE SHELL (FORMER) | 1 |
| 6 | 28141 | MESSERS EXXON | 1 |
| 7 | 28272 | HANDY MART (HANDY PANTRY #115) | 1 |
| 8 | 28694 | AZTEX #209 | 1 |
| 9 | 41031 | CABIN COMPANY | 1 |
| 10 | 41120 | HALL / AYERS PROPERTY | 1 |
| 11 | 41184 | TOWN OF WAYNESVILLE PROPERTY | 1 |
| 12 | 41294 | CATHEY PROPERTY (CHARLES) | 1 |
| 13 | 41345 | M&D COLLISION | 1 |
| 14 | 41466 | MAIN STREET AUTOMOTIVE | 1 |
| 15 | 41491 | MOUNTAIN ENERGY STORE #108 | 1 |
| 16 | 41553 | M&D COLLISION WASTE OIL | 1 |
| 17 | 48507 | WC Mini Storage | 1 |
| 18 | 49398 | Howell Mill Road heating Oil UST Release | 1 |
| 19 | *No Data* | TAYLOR MOTOR CO. | 1 |

## Non-UST Incidents

| # | IncidentNumber | IncidentName | Count |
|---|---|---|---|
| 1 | 89134 | BROWN NCDOT PARCEL 32 | 1 |
| 2 | 97077 | North Main Steet Roundabout | 1 |

## UST Active Facilities

| # | FACILID | FACILNAME | Count |
|---|---|---|---|
| 1 | 00-0-0000017830 | SHORT STOP | 1 |
| 2 | 00-0-0000034176 | FCE#1405 | 1 |
| 3 | 00-0-0000035631 | FCE#1408 | 1 |
| 4 | 00-0-0000037004 | INGLES GAS EXPRESS 723 | 1 |

## Land Use Restriction and/or Notices

| # | Prj_Number | Prj_Name | Count |
|---|---|---|---|
| 1 | AS-3063 | Handy Mart (Handy Pantry #115) | 1 |
| 2 | AS-4013 | Hall / Ayers Property | 1 |
| 3 | AS-4262 | M&D Collision | 1 |
| 4 | AS-4402 | Main Street Automotive | 1 |
| 5 | AS-4435 | Mountain Energy Store #108 | 1 |

## North Carolina Parcels (Polygons) - Parcels

**Via E- Mail**

May 22, 2019

Mr. Al Chapman
North Carolina Department of Environmental Quality
Division of Waste Management, Superfund Section
Dry Cleaning Solvent Cleanup Program
1646 Mail Service Center
Raleigh, NC 27699

**Re: Soil Gas Sampling Activities**
**Central Cleaners**
**Waynesville, Haywood County**
**DSCA ID # DC440001**
**H&H Job No. DS0-101C**

Dear Mike:

## 1.0 Introduction

Hart & Hickman, PC (H&H) is submitting this letter report to document soil gas sampling activities associated with the former Central Cleaners site located at 44 Church Street in Waynesville, Haywood County, North Carolina. A site location map is included as Figure 1. Previous assessment activities confirmed a release of the dry-cleaning solvent tetrachloroethylene (PCE) at the site and identified PCE groundwater impacts extending over 1,200 feet downgradient to the north. Based on PCE groundwater concentrations, the Dry-cleaning Solvent Cleanup Act (DSCA) Program requested collection of soil gas samples on four downgradient properties to evaluate potential vapor intrusion risks. A brief description of the assessment activities and results is provided below.

## 2.0 Sampling Activities

On February 28, 2018, H&H oversaw installation of six temporary subsurface soil gas monitoring points (HHSG-1 through HHSG-6) on four downgradient properties. The sampling points were installed by Mid South Environmental, Inc. to a depth of 10 feet below ground surface (bgs) using a stainless-steel hand auger and a direct-push technology (DPT) drill rig. Dedicated 5/8-inch diameter, 6-inch long stainless-steel sample points joined to ¼ -inch diameter Teflon® tubing were installed in the bottom of each borehole. Filter sand was then placed from the base of each boring to 6 inches above the screened interval. Each sampling point was completed by placing hydrated bentonite from the top of the filter sand to the ground surface. The sample locations are shown on Figure 2, and photographs are provided in Appendix A.

Following installation, H&H collected samples from each of the soil gas points. Prior to sampling, the points were purged using a syringe to evacuate a minimum of three volumes of air from the full sampling system. Leak checks were performed by placing a shroud over the point and saturating the air within the shroud with helium gas. A helium gas detector was used to determine the concentration of helium in the shroud. The sampling point was then purged into a Tedlar® bag, and the collected gas was analyzed by the helium gas detector to confirm that the Tedlar® bag did not contain a helium concentration greater than 5% of that detected in the shroud.

Following purging and a successful leak check, a laboratory-supplied 1-Liter Summa canister with a flow regulator was connected to the tubing at each sampling point using a ferrule to form an air-tight seal. Subsequently, the canister's intake valve was opened to collect the subsurface soil gas samples. The flow regulators were set by the laboratory to collect the samples over a period of approximately 5 minutes. Following sample collection, the soil gas monitoring points were abandoned.

The canisters were submitted to Pace Analytical Services, LLC (Pace) for analysis of the primary constituents of concern at the site, including the dry-cleaning solvent PCE and its degradation

products, trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), trans-1,2,-dichloroethylene (trans-1,2-DCE), and vinyl chloride (VC), by EPA Method TO-15. The laboratory analytical report and chain-of-custody record are provided in Appendix B.

## 3.0 Sampling Results

The dry-cleaning solvent PCE was detected in each of the six soil gas samples at concentrations ranging from 14.7 µg/m$^3$ (HHSG-3) to 1,540 µg/m$^3$ (HHSG-2). No other dry-cleaning constituents were detected in the soil gas samples. The soil gas results are summarized in Table 4 and shown on Figure 2.

To evaluate the potential vapor intrusion risk associated with the detected soil gas concentrations, H&H completed the DSCA Program's soil gas risk calculator using the concentrations detected in each sample. Based on current use of adjacent properties, H&H completed the residential and non-residential risk calculators to evaluate current and future exposure risk and the possible need for land use controls. The completed risk calculators are provided in Appendix C, and the results are summarized below.

| Sample ID | Residential | | Non-Residential | |
|---|---|---|---|---|
| | Carcinogenic Risk | Hazard Index | Carcinogenic Risk | Hazard Index |
| HHSG-1 | 1.7E-06 | 0.43 | 1.3E-07 | 0.034 |
| HHSG-2 | 4.3E-06 | 1.1 | 3.3E-07 | 0.088 |
| HHSG-3 | 4.1E-08 | 0.011 | 3.1E-09 | 0.00084 |
| HHSG-4 | 5.6E-08 | 0.015 | 4.3E-09 | 0.0012 |
| HHSG-5 | 2.0E-06 | 0.51 | 1.5E-07 | 0.040 |
| HHSG-6 | 1.6E-07 | 0.041 | 1.2E-08 | 0.0033 |

The risk thresholds for site closure under the DSCA Program are a cumulative carcinogenic risk of 1.0E-04 and a hazard index (HI) of 1. As shown in the table above, the risk calculations indicate that the carcinogenic risks and non-carcinogenic HI levels are acceptable under the current non-residential land use scenario. Thus, there are no current vapor intrusion concerns. Only one sample (HHSG-2) indicated an exceedance under a potential future residential use scenario with a non-carcinogenic HI above 1.0. This exceedance is a potential obstacle to future site closure.

## 4.0 Summary and Conclusions

H&H collected six subsurface soil gas samples on four properties located downgradient of the former Central Cleaners source property to evaluate potential vapor intrusion risks associated with the dry-cleaning solvent release. PCE was detected in each of the six subsurface soil gas samples at concentrations ranging from 14.7 $\mu g/m^3$ to 1,540 $\mu g/m^3$. The calculated risks associated with the detected soil gas concentrations were acceptable for the current non-residential use of the properties. However, the calculated risks were above acceptable risk thresholds (non-carcinogenic HI > 1) for one soil gas samples (HHSG-2) under a potential future residential use scenario. Based on the current non-residential use of the properties. No additional sampling is planned at this time. If site conditions change, the need for additional sampling should be reevaluated.

H&H appreciates the opportunity to work with you on this project. If you have any questions or require additional information, please do not hesitate to contact us at 704-586-0007.

Very truly yours,
***Hart & Hickman, PC***

Brett Lawrence, PG
Project Geologist

Christie Zawtocki, PE
Principal Engineer

NORTH CAROLINA PROFESSIONAL SEAL 027221 ENGINEER CHRISTIE E. ZAWTOCKI 5/22/19

Attachments

**TABLE**

**Table 4: Analytical Data for Soil Gas** **ADT 4**

**DSCA ID No.: DC440001**

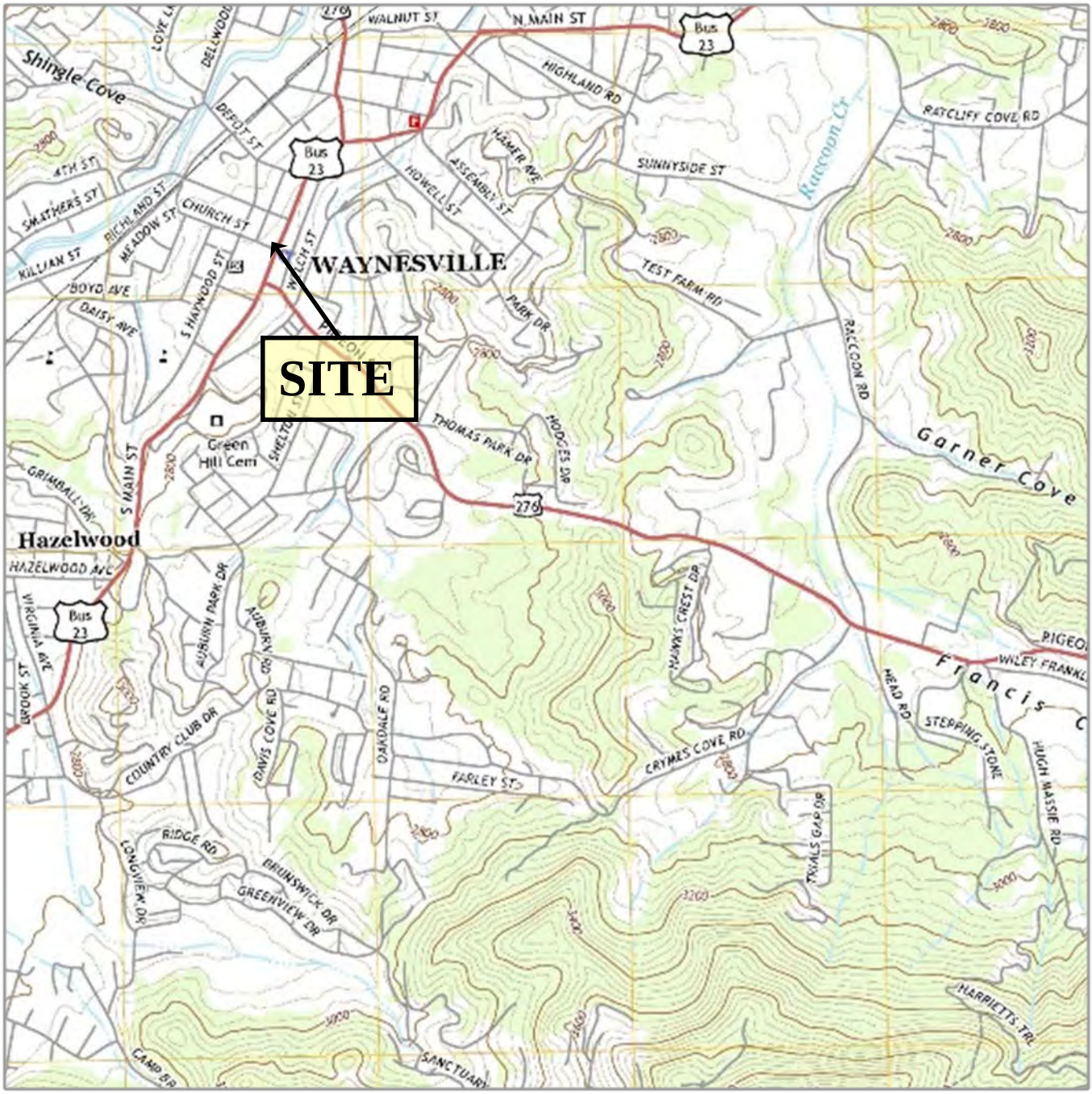
| Sample ID | Depth [feet bgs] | Sample Duration[1] | Sampling Date (mm/dd/yy) | Benzene | cis-1,2-Dichloroethylene | Ethylbenzene | Methyl tert-butyl ether (MTBE) | Naphthalene | Tetrachloroethylene | Toluene | trans-1,2-Dichloroethylene | Trichloroethylene | Vinyl chloride | Xylenes (total) | Acetone | 1,3-Butadiene | Carbon Disulfide | Cyclohexane | Ethanol | Hexane | Heptane | 2-Propanol | Tetrahydrofuran |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | [µg/m$^3$] | | | | | | | | | | | | | | | | | | | |
| NS-1 | 5 | 35 min | 11/27/12 | <4.2 | <5.2 | <5.7 | <4.8 | NA | <9.0 | 5.8 | <5.2 | <7.1 | <3.4 | <11.4 | 69 | 4.6 | 20 | <4.5 | 12 | 27 | <5.4 | <13 | 10 |
| NS-2 | 5 | 38 min | 11/27/12 | 130 | <4.9 | <5.4 | <4.4 | NA | 1,200 | 83 | <4.9 | 77 | <3.2 | 11 | 45 | 59 | 22 | 76 | 10 | 110 | 27 | 17 | <3.6 |
| HHSG-1 | 10 | 5 min | 02/28/19 | NA | <1.7 | NA | NA | NA | 600 | NA | <1.7 | <1.1 | <0.55 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| HHSG-2 | 10 | 6 min | 02/28/19 | NA | <1.7 | NA | NA | NA | 1,540 | NA | <1.7 | <1.1 | <0.55 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| HHSG-3 | 10 | 5 min | 02/28/19 | NA | <1.7 | NA | NA | NA | 14.7 | NA | <1.7 | <1.1 | <0.54 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| HHSG-4 | 10 | 6 min | 02/28/19 | NA | <1.7 | NA | NA | NA | 20.2 | NA | <1.7 | <1.1 | <0.55 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| HHSG-5 | 10 | 5 min | 02/28/19 | NA | <1.6 | NA | NA | NA | 709 | NA | <1.6 | <1.1 | <0.53 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| HHSG-6 | 10 | 5 min | 02/28/19 | NA | <1.8 | NA | NA | NA | 57.3 | NA | <1.8 | <1.2 | <0.57 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| DWM Residential Soil Gas Screening Level | | | | 120 | NE | 370 | 3,600 | 21 | 280 | 35,000 | NE | 14 | 56 | 700 | 220,000 | 14 | 4,900 | 7,000 | NE | 4,900 | 2,800 | NE | 14,000 |
| DWM Non-Residential Soil Gas Screening Level | | | | 1,600 | NE | 4,900 | 47,000 | 260 | 3,500 | 440,000 | NE | 180 | 2,800 | 8,800 | 2,700,000 | 180 | 61,000 | 530,000 | NE | 61,000 | 35,000 | NE | 180,000 |

Notes:

1. The Division of Waste Management (DWM) Residential and Non-Residential Vapor Intrusion Screening Levels (February 2018) are provided for reference.
2. NE = Not Established; NA denotes not analyzed

[1] Indicate "G" for grab sample or for longer samples indicate the number of hours followed by "h".

**FIGURES**




N

APPROXIMATE

0 2000 4000

SCALE IN FEET

U.S.G.S. QUADRANGLE MAP

**WAYNESVILLE, NC 2016**

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

| | |
|---|---|
| TITLE | **SITE LOCATION MAP** |
| PROJECT | CENTRAL CLEANERS<br>44 CHURCH STREET<br>WAYNESVILLE, NORTH CAROLINA |

hart hickman

2923 S. Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007(p) 704.586.0373(f)

| | | | |
|---|---|---|---|
| DATE: | 5/22/2019 | REVISION NO: | 0 |
| JOB NO: | DS0-101 | FIGURE: | 1 |

LEGEND

SOURCE PROPERTY BOUNDARY

TEMPORARY SOIL GAS SAMPLE (H&H 2019)

SAMPLE ID

CONSTITUENT

| HHSG-1 | |
|---|---|
| PCE | 600 |
| NON-RES CR | 1.3E-07 |
| NON-RES HI | 0.034 |
| RES CR | 1.7E-06 |
| RES HI | 0.43 |

CONCENTRATION (µg/m³)

RISK LEVELS

NOTES:

1. TEMPORARY SOIL GAS POINT WERE INSTALLED, SAMPLED, AND ABANDONED IN FEBRUARY 2019.
2. ONLY DETECTED CONSTITUENTS ARE SHOWN.
3. **BOLD** RISK VALUES EXCEED DSCA PROGRAM'S ACCEPTABLE RISK THRESHOLDS OF 1.0E-04 FOR CARCINOGENIC RISK OR 1.0 FOR HAZARD INDEX
4. PCE = TETRACHLOROETHYLENE
   NON-RES = NON-RESIDENTIAL
   RES = RESIDENTIAL
   CR = CARCINOGENIC RISK
   HI = HAZARD INDEX

N

APPROXIMATE

0 150 300

SCALE IN FEET

TITLE

# SOIL GAS CONTAMINANT CONCENTRATION MAP

PROJECT

**CENTRAL CLEANERS**
**DSCA ID: DC440001**
44 CHURCH STREET
WAYNESVILLE, HAYWOOD COUNTY

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

| | |
|---|---|
| DATE: 5-22-19 | REVISION NO. 0 |
| JOB NO. DS0-101 | FIGURE NO. 2 |

S:\AAA-Master Projects\DSCA - DS0\DS0-101 Central Cleaners\Reports\Feb 2019 SG, GW, Soil\Soil Gas Letter\DC440001_20190522_Figure.dwg
5/22/2019 10:19:11 AM, DWG To PDF.pc3

# APPENDIX A

# PHOTOGRAPHS

Photograph 1: Soil gas sample HHSG-1 as viewed from the northeast

Photograph 2: Typical soil gas sampling set-up



hart hickman
2923 S. Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007(p) 704.586.0373(f)

**CENTRAL CLEANERS**
**DSCA ID: DC440001**
**44 CHURCH STREET**
**WAYNESVILLE, NORTH CAROLINA**

Photograph 3: Soil gas sample HHSG-2 as viewed from the southeast

Photograph 4: Soil gas sample HHSG-2 as viewed from the northwest



hart hickman
2923 S. Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007(p) 704.586.0373(f)

**CENTRAL CLEANERS**
**DSCA ID: DC440001**
**44 CHURCH STREET**
**WAYNESVILLE, NORTH CAROLINA**

Photograph 5: Soil gas sample HHSG-3 as viewed from the south

Photograph 6: Soil gas sample HHSG-4, as viewed from the north



hart hickman
2923 S. Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007(p) 704.586.0373(f)

**CENTRAL CLEANERS**
**DSCA ID: DC440001**
**44 CHURCH STREET**
**WAYNESVILLE, NORTH CAROLINA**

Photograph 7: Soil gas sample HHSG-5, as viewed from the north

Photograph 8: Soil gas sample HHSG-6, as viewed from the north



hart hickman
2923 S. Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007(p) 704.586.0373(f)

**CENTRAL CLEANERS**
**DSCA ID: DC440001**
**44 CHURCH STREET**
**WAYNESVILLE, NORTH CAROLINA**

# APPENDIX B

# LABORATORY ANALYTICAL REPORT

**Pace Analytical Services, LLC**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

March 15, 2019

Brett Lawrence
Hart & Hickman
2923 South Tryon St.
Suite 100
Charlotte, NC 28203

RE: Project: CENTRAL CLEANERS
Pace Project No.: 92419628

Dear Brett Lawrence:
Enclosed are the analytical results for sample(s) received by the laboratory on March 01, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Per client request, report revised 3/15/19 to only report specific compounds.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
1(704)875-9092
Project Manager

Enclosures



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# CERTIFICATIONS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Minnesota Certification IDs**

1700 Elm Street SE, Minneapolis, MN 55414-2485
A2LA Certification #: 2926.01
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Certifcation #: via MN 027-053-137
Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01



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Huntersville, NC 28078
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## SAMPLE ANALYTE COUNT

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92419628001** | **HHSG-1 #3531** | TO-15 | CH1 | 5 | PASI-M |
| **92419628002** | **HHSG-2 #1461** | TO-15 | CH1 | 5 | PASI-M |
| **92419628003** | **HHSG-3 #1455** | TO-15 | CH1 | 5 | PASI-M |
| **92419628004** | **HHSG-4 #991** | TO-15 | CH1 | 5 | PASI-M |
| **92419628005** | **HHSG-5 #3530** | TO-15 | CH1 | 5 | PASI-M |
| **92419628006** | **HHSG-6 #2846** | TO-15 | CH1 | 5 | PASI-M |



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## ANALYTICAL RESULTS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Sample: HHSG-1 #3531** **Lab ID: 92419628001** Collected: 02/28/19 17:10 Received: 03/01/19 14:03 Matrix: Air

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **TO15 MSV AIR** | Analytical Method: TO-15 | | | | | | | |
| cis-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.1 | | 03/06/19 22:48 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.1 | | 03/06/19 22:48 | 156-60-5 | |
| Tetrachloroethene | **600** | ug/m3 | 22.7 | 33 | | 03/07/19 14:14 | 127-18-4 | |
| Trichloroethene | ND | ug/m3 | 1.1 | 2.1 | | 03/06/19 22:48 | 79-01-6 | |
| Vinyl chloride | ND | ug/m3 | 0.55 | 2.1 | | 03/06/19 22:48 | 75-01-4 | |

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## ANALYTICAL RESULTS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Sample: HHSG-2 #1461** **Lab ID: 92419628002** Collected: 02/28/19 17:20 Received: 03/01/19 14:03 Matrix: Air

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **TO15 MSV AIR** | Analytical Method: TO-15 | | | | | | | |
| cis-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.1 | | 03/06/19 23:16 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.1 | | 03/06/19 23:16 | 156-60-5 | |
| Tetrachloroethene | **1540** | ug/m3 | 66.0 | 95.8 | | 03/08/19 12:07 | 127-18-4 | |
| Trichloroethene | ND | ug/m3 | 1.1 | 2.1 | | 03/06/19 23:16 | 79-01-6 | |
| Vinyl chloride | ND | ug/m3 | 0.55 | 2.1 | | 03/06/19 23:16 | 75-01-4 | |

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## ANALYTICAL RESULTS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Sample: HHSG-3 #1455** **Lab ID: 92419628003** Collected: 02/28/19 17:52 Received: 03/01/19 14:03 Matrix: Air

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **TO15 MSV AIR** | Analytical Method: TO-15 | | | | | | | |
| cis-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.06 | | 03/06/19 23:45 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.06 | | 03/06/19 23:45 | 156-60-5 | |
| Tetrachloroethene | **14.7** | ug/m3 | 2.3 | 3.36 | | 03/07/19 13:17 | 127-18-4 | |
| Trichloroethene | ND | ug/m3 | 1.1 | 2.06 | | 03/06/19 23:45 | 79-01-6 | |
| Vinyl chloride | ND | ug/m3 | 0.54 | 2.06 | | 03/06/19 23:45 | 75-01-4 | |

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## ANALYTICAL RESULTS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Sample: HHSG-4 #991** **Lab ID: 92419628004** Collected: 02/28/19 17:33 Received: 03/01/19 14:03 Matrix: Air

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **TO15 MSV AIR** | Analytical Method: TO-15 | | | | | | | |
| cis-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.1 | | 03/07/19 00:14 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/m3 | 1.7 | 2.1 | | 03/07/19 00:14 | 156-60-5 | |
| Tetrachloroethene | **20.2** | ug/m3 | 1.4 | 2.1 | | 03/07/19 00:14 | 127-18-4 | |
| Trichloroethene | ND | ug/m3 | 1.1 | 2.1 | | 03/07/19 00:14 | 79-01-6 | |
| Vinyl chloride | ND | ug/m3 | 0.55 | 2.1 | | 03/07/19 00:14 | 75-01-4 | |

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## ANALYTICAL RESULTS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Sample: HHSG-5 #3530** **Lab ID: 92419628005** Collected: 02/28/19 17:59 Received: 03/01/19 14:03 Matrix: Air

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **TO15 MSV AIR** | Analytical Method: TO-15 | | | | | | | |
| cis-1,2-Dichloroethene | ND | ug/m3 | 1.6 | 2.02 | | 03/07/19 00:42 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/m3 | 1.6 | 2.02 | | 03/07/19 00:42 | 156-60-5 | |
| Tetrachloroethene | **709** | ug/m3 | 13.9 | 20.2 | | 03/07/19 14:41 | 127-18-4 | |
| Trichloroethene | ND | ug/m3 | 1.1 | 2.02 | | 03/07/19 00:42 | 79-01-6 | |
| Vinyl chloride | ND | ug/m3 | 0.53 | 2.02 | | 03/07/19 00:42 | 75-01-4 | |

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## ANALYTICAL RESULTS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**Sample: HHSG-6 #2846** **Lab ID: 92419628006** Collected: 02/28/19 17:44 Received: 03/01/19 14:03 Matrix: Air

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **TO15 MSV AIR** | Analytical Method: TO-15 | | | | | | | |
| cis-1,2-Dichloroethene | ND | ug/m3 | 1.8 | 2.19 | | 03/07/19 01:11 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/m3 | 1.8 | 2.19 | | 03/07/19 01:11 | 156-60-5 | |
| Tetrachloroethene | **57.3** | ug/m3 | 1.5 | 2.19 | | 03/07/19 01:11 | 127-18-4 | |
| Trichloroethene | ND | ug/m3 | 1.2 | 2.19 | | 03/07/19 01:11 | 79-01-6 | |
| Vinyl chloride | ND | ug/m3 | 0.57 | 2.19 | | 03/07/19 01:11 | 75-01-4 | |

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## QUALITY CONTROL DATA

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

QC Batch: 592651 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 92419628001, 92419628002, 92419628003, 92419628004, 92419628005, 92419628006

METHOD BLANK: 3204570 Matrix: Air
Associated Lab Samples: 92419628001, 92419628002, 92419628003, 92419628004, 92419628005, 92419628006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/m3 | ND | 0.40 | 03/06/19 13:36 | |
| Tetrachloroethene | ug/m3 | ND | 0.34 | 03/06/19 13:36 | |
| trans-1,2-Dichloroethene | ug/m3 | ND | 0.40 | 03/06/19 13:36 | |
| Trichloroethene | ug/m3 | ND | 0.27 | 03/06/19 13:36 | |
| Vinyl chloride | ug/m3 | ND | 0.13 | 03/06/19 13:36 | |

LABORATORY CONTROL SAMPLE: 3204571

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/m3 | 41.9 | 37.3 | 89 | 70-130 | |
| Tetrachloroethene | ug/m3 | 70.3 | 62.2 | 89 | 70-130 | |
| trans-1,2-Dichloroethene | ug/m3 | 41.5 | 35.6 | 86 | 70-130 | |
| Trichloroethene | ug/m3 | 56.3 | 48.0 | 85 | 70-130 | |
| Vinyl chloride | ug/m3 | 28.1 | 23.9 | 85 | 70-130 | |

SAMPLE DUPLICATE: 3205356

| Parameter | Units | 10465689001 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/m3 | ND | ND | | |
| Tetrachloroethene | ug/m3 | ND | ND | | |
| trans-1,2-Dichloroethene | ug/m3 | ND | ND | | |
| Trichloroethene | ug/m3 | ND | ND | | |
| Vinyl chloride | ug/m3 | ND | ND | | |

SAMPLE DUPLICATE: 3205361

| Parameter | Units | 10465689004 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ug/m3 | ND | ND | | |
| Tetrachloroethene | ug/m3 | ND | ND | | |
| trans-1,2-Dichloroethene | ug/m3 | ND | ND | | |
| Trichloroethene | ug/m3 | ND | ND | | |
| Vinyl chloride | ug/m3 | ND | ND | | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

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Huntersville, NC 28078
(704)875-9092

# QUALIFIERS

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

**DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

**LABORATORIES**

PASI-M Pace Analytical Services - Minneapolis



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**Pace Analytical Services, LLC**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CENTRAL CLEANERS
Pace Project No.: 92419628

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92419628001** | **HHSG-1 #3531** | TO-15 | 592651 | | |
| **92419628002** | **HHSG-2 #1461** | TO-15 | 592651 | | |
| **92419628003** | **HHSG-3 #1455** | TO-15 | 592651 | | |
| **92419628004** | **HHSG-4 #991** | TO-15 | 592651 | | |
| **92419628005** | **HHSG-5 #3530** | TO-15 | 592651 | | |
| **92419628006** | **HHSG-6 #2846** | TO-15 | 592651 | | |



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# WO# : 92419628

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92419628

# AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

37972 Page: 1 of 1

**Section A** Required Client Information:

Company: [redacted] P.C.

Address: 3235 Fry Blvd. Ste 100

Email To: BLawrence@HarthillmanPC.com

Phone: 304-5[redacted]007 Fax:

Requested Due Date/TAT: HH ST [redacted]

**Section B** Required Project Information:

Report To: Brett Lawrence

Copy To: RSorgel@HarthillmanPC.com

Purchase Order No.: [redacted]

Project Name: Central Cleaners

Project Number: 250-101

**Section C** Invoice Information:

Attention: Accounts Payable

Company Name: Hart & Hillman, P.C.

Address:

Pace Quote Reference:

Pace Project Manager/Sales Rep.: Kevin Godwin

Pace Profile #:

Program: ☐ UST ☐ Superfund ☐ Emissions ☐ Clean Air Act ☐ Voluntary Clean Up ☒ Dry Clean ☐ RCRA ☐ Other

Location of Sampling by State: WV

Reporting Units: ug/m³ ☒ mg/m³ ☐ PPBV ☒ PPMV ☐ Other

Report Level II. ☐ III. ☐ IV. ☐ Other

**'Section D Required Client Information**

**AIR SAMPLE ID**

Sample IDs MUST BE UNIQUE

Valid Media Codes

| MEDIA | CODE |
|---|---|
| Tedlar Bag | TB |
| 1 Liter Summa Can | 1LC |
| 6 Liter Summa Can | 6LC |
| Low Volume Puff | LVP |
| High Volume Puff | HVP |
| Other | PM10 |

| ITEM # | AIR SAMPLE ID | MEDIA CODE | PID Reading (Client only) | COLLECTED COMPOSITE START DATE | COLLECTED COMPOSITE START TIME | COLLECTED COMPOSITE - END/GRAB DATE | COLLECTED COMPOSITE - END/GRAB TIME | Canister Pressure (Initial Field - in Hg) | Canister Pressure (Final Field - in Hg) | Summa Can Number | Flow Control Number | Method: PM10 | 3C - Fixed Gas (%) | TO-3 BTEX | TO-3M (Methane) | TO-14 | TO-15 Full List VOCs | TO-15 Short List BTEX | TO-15 Short List Chlorinated | TO-15 Short List (other) | Pace Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | HHSG-1 | 1LC | | 2/28/19 | 1705 | 2/28/19 | 1710 | -28 | -4 | 3531 | 1859 | | | | | X | | | | | 001 |
| 2 | HHSG-2 | | | | 1714 | | 1720 | -28 | -4 | 1461 | 1819 | | | | | X | | | | | 002 |
| 3 | HHSG-3 | | | | 1747 | | 1752 | -27 | -4 | 1455 | 0711 | | | | | X | | | | | 003 |
| 4 | HHSG-4 | | | | 1727 | | 1733 | -28 | -4 | 991 | 1247 | | | | | X | | | | | 004 |
| 5 | HHSG-5 | | | | 1754 | | 1759 | -28 | -4 | 3530 | 1820 | | | | | X | | | | | 005 |
| 6 | HHSG-6 | | | | 1739 | | 1744 | -27 | -4 | 2846 | 1815 | | | | | X | | | | | 006 |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | |

92419628 Pace Lab ID

**Comments :**

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| Robert Sorgel / HHM | 3/1/19 | 1403 | [signature] | 3/1/19 | 1403 |
| | | | | | |
| | | | | | |
| | | | | | |

**SAMPLE CONDITIONS**

| | | | |
|---|---|---|---|
| | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |
| Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact |

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Robert Sorgel

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 03/01/19

ORIGINAL

# APPENDIX C

# DSCA RISK CALCULATORS

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Resident**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 313 Branner Ave, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-1

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 600 | 18 | 1.1E+01 | 8.3E+00 | 1.7E-06 | 4.3E-01 |
| | | | | | Cumulative: | 1.7E-06 | 4.3E-01 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Non-Residential Worker**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 313 Branner Ave, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-1

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 600 | 6 | 4.7E+01 | 3.5E+01 | 1.3E-07 | 3.4E-02 |
| | | | | | Cumulative: | 1.3E-07 | 3.4E-02 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Resident**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 205 Branner Ave, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-2

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 1540 | 46.2 | 1.1E+01 | 8.3E+00 | 4.3E-06 | 1.1E+00 |
| | | | | | Cumulative: | 4.3E-06 | 1.1E+00 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Non-Residential Worker**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 205 Branner Ave, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-2

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 1540 | 15.4 | 4.7E+01 | 3.5E+01 | 3.3E-07 | 8.8E-02 |
| | | | | | Cumulative: | 3.3E-07 | 8.8E-02 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Resident**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 205 Branner Ave, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-3

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 14.7 | 0.441 | 1.1E+01 | 8.3E+00 | 4.1E-08 | 1.1E-02 |
| | | | | | Cumulative: | 4.1E-08 | 1.1E-02 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Non-Residential Worker**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 205 Branner Ave, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-3

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 14.7 | 0.147 | 4.7E+01 | 3.5E+01 | 3.1E-09 | 8.4E-04 |
| | | | | | Cumulative: | 3.1E-09 | 8.4E-04 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Resident**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 94 Depot Street, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-4

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 20.2 | 0.606 | 1.1E+01 | 8.3E+00 | 5.6E-08 | 1.5E-02 |
| | | | | | Cumulative: | 5.6E-08 | 1.5E-02 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Non-Residential Worker**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 94 Depot Street, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-4

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 20.2 | 0.202 | 4.7E+01 | 3.5E+01 | 4.3E-09 | 1.2E-03 |
| | | | | | Cumulative: | 4.3E-09 | 1.2E-03 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Resident**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 72 Depot Street, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-5

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 709 | 21.27 | 1.1E+01 | 8.3E+00 | 2.0E-06 | 5.1E-01 |
| | | | | | Cumulative: | 2.0E-06 | 5.1E-01 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Non-Residential Worker**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 72 Depot Street, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-5

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 709 | 7.09 | 4.7E+01 | 3.5E+01 | 1.5E-07 | 4.0E-02 |
| | | | | | Cumulative: | 1.5E-07 | 4.0E-02 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Resident**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 72 Depot Street, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-6

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 57.3 | 1.719 | 1.1E+01 | 8.3E+00 | 1.6E-07 | 4.1E-02 |
| | | | | | Cumulative: | 1.6E-07 | 4.1E-02 |

**DSCA Soil Gas Risk Calculator - Cumulative Risk for Non-Residential Worker**

Version 6, November 2017

**DSCA ID No:** DC440001
**Name/Address of DSCA Site:** Former Central Cleaners, 44 Church Street, Waynesville, Haywood County
**Name/Address of Sampling Location:** 72 Depot Street, Waynesville, Haywood County

**Sampling Date:** 2/28/2019
**Sample ID:** HHSG-6

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m$^3$

| CAS # | Chemical Name: | Soil Gas Concentration (ug/m$^3$) | Calculated Indoor Air Concentration (ug/m$^3$) | Indoor Air Screening Level for Carcinogens @ TCR = 1E-06 | Indoor Air Screening Level for Non-Carcinogens @ THQ = 0.2 | Calculated Carcinogenic Risk | Calculated Non-Carcinogenic Hazard Quotient |
|---|---|---|---|---|---|---|---|
| 127-18-4 | Tetrachloroethylene | 57.3 | 0.573 | 4.7E+01 | 3.5E+01 | 1.2E-08 | 3.3E-03 |
| | | | | | Cumulative: | 1.2E-08 | 3.3E-03 |

# Radon Mitigation System Design Plans

# 1. APPLICABILITY

## 1.1. GENERAL

1.1.1. All wall and building systems shown in the Radon Mitigation System (RMS) plans are for clarification purposes only. These plans are only for layout and construction of the RMS. Building layouts, structural details, and other information pertaining to the design was referenced from the available plans supplied to ECS Mid-Atlantic, LLC by Housing Studio. The design may be modified by ECS, as necessary, to accommodate construction restraints.

1.1.2. The RMS has been designed in general accordance with ANSI/AARST CC-1000 2018, Soil Gas Control Systems in New Construction of Buildings.

## 1.2. SYSTEM COMPONENTS

1.2.1. The construction of the RMS shall consist of, but not be limited to, the following:

1.2.1.1. A radon collection product (perforated polyvinyl chloride (PVC), Land Science TerraVent™, or EPRO Vapor-Vent™) in the sub-grade beneath the slab;

1.2.1.2. Thickened layers of sub-slab gravel under thickened slabs to connect each air collection plenum;

1.2.1.3. A vapor intrusion barrier (VIB) rated by the manufacturer against radon above the radon collection product and below the slab, at least 6-mil thick;

1.2.1.4. Solid PVC vent risers from the sub-slab radon collection product to the roof level; and

1.2.1.5. Roof-mounted wind turbine fan.

## 1.3. SUBMITTALS

1.3.1. Information about the following products shall be submitted to ECS for approval before they are installed:

1.3.1.1. The sub-slab radon collection product (Section 2.2 below);

1.3.1.2. The roof-mounted wind turbine fan (Section 2.4 below); and

1.3.1.3. The VIB (Section 3.2 below).

## 1.4. INSPECTIONS AND TESTING

### 1.4.1. Construction Phase

1.4.2.1. Inspections shall be conducted to verify compliance with this design and to determine if a continuous sealed barrier has been constructed between soil gas and airspaces within the building. A minimum of four inspections shall be completed:

1.4.2.1.1. Prior to slab pour to verify gas permeable layer construction, ducting size, etc.;

1.4.2.1.2. During vapor intrusion barrier (VIB) installation to verify the VIB is installed following manufacturer's installation instructions and recommendations;

1.4.2.1.3. Prior to completion of indoor finishing to verify slab penetrations are sealed; and,

1.4.2.1.4. Prior to indoor finishing above grade to verify duct sizing/location, pipe materials, labeling, etc.

### 1.4.3. Post Construction

1.4.3.1. One round of indoor ambient air testing shall be performed prior to building occupancy. The sampling event shall be conducted following the completion of RMS installation and operation for a minimum of 72 hours before testing. The sample shall be submitted to a laboratory for analysis of radon. Testing shall be performed (by Owner or Owner's representative engineer) in accordance with applicable state or local requirements.

1.4.3.2. If post-construction verification testing indicates radon levels at or above the EPA action level of 4 picoCuries per liter (pCi/L), the RMS system shall be made active by installing a fans in accordance with ANSI/AARST CC-1000 2018. Upon completion of activation, additional post-construction testing shall be conducted to verify indoor radon concentrations in the buildings.

1.4.3.3. Every three months, the RMS shall be inspected by the building owner, building engineer, or their representatives. The inspection shall include checking all sealed slab joints, slab penetrations, vent risers, and the roof-mounted vent fans. If necessary, repairs should be made after the inspections are completed.

# 2. RADON MITIGATION SYSTEM (RMS)

## 2.1. GENERAL

2.1.1. The RMS shall be installed only beneath the slab/foundation of the occupied spaces of this building depicted on page RMS-1.

## 2.2. SUB-SLAB COLLECTION PIPING

2.2.1. The radon collection product shall be either perforated or slotted 4-inch SCH-40 PVC or an engineered vapor collection product (Land Science TerraVent™ or EPRO Vapor-Vent™) (Details 1 and 2, RMS-2).

2.2.1.1. If perforated or slotted 4-inch PVC is chosen, the PVC at each riser shall not total less than 10 feet in length. The pipe shall be placed in a trench backfilled with aggregate such that the pipe is completely surrounded, within 12-inches, by no less than 4 inches of aggregate.

2.2.1.2. If an engineered vapor collection product is chosen, the Land Science TerraVent™ or EPRO Vapor-Vent™ at each riser shall not total less than 10 feet in length. The radon collection product shall be placed on top of the sub-slab aggregate or in a trench and covered with at least 1 inch of aggregate.

2.2.2. The sub-slab vapor collection product of the RMS shall be installed in at least 4-inches of gravel or crushed stone. The aggregate layer shall be a fine to medium aggregate meeting ASTM C33 requirements for stone size numbers 5, 56, 57, or 6. The aggregate shall contain no more than 5% fines.

2.2.3. The joints and ends of the sub-slab vapor collection product shall be joined together following manufacturers best practices and shall be capped with manufacturer specific end outlets.

2.2.4. The sub-slab radon collection product shall be applied on top of at least 1-inch of sub-slab aggregate and shall be covered with at least 1-inch of sub-slab aggregate.

2.2.5. Where necessary, the sub-slab radon collection product shall be sloped beneath thickened slabs, firewalls, or other areas where the slab elevation changes.

2.2.6. At the location where the sub-slab radon collection product connects to the vertical vent risers, the sub-slab radon collection product shall transition to the 4-inch PVC using sweep fittings or flexible couplings. All PVC pipe joints shall be solvent welded in accordance with the pipe manufacturer's instructions with solvent cement conforming to ASTM D2564.

2.A.5. In order to connect each individual plenum created under the slab by the thickened slab foundational elements, the contractor shall install a gravel channel beneath the thickened slabs shown on pages RMS-3 and RMS-5 that connects the sub-slab gravel layers on each side of the thickened slab (Detail 2, RMS-2).

2.A.5.1. The gravel channel shall be at least 12-inches wide and 4-inches deep and be a fine to medium aggregate meeting ASTM C33 requirements for stone size numbers 5, 56, 57, or 6.

## 2.3. RISER PIPING AND INTERIOR FINISHES

2.3.1. All riser piping shall be 4-inch solid SCH 40 PVC pipe that complies with ASTM D2665, F891, or F1488 (Detail 3, RMS-2).

2.3.2. Riser piping shall not run outside of exterior building walls or traverse other locations where piping is exposed to temperatures that can be colder than indoor air.

2.3.3. Risers shall run against a column, through a vertical chase, or through wall in the locations shown on pages RMS-3 to RMS-8.

2.3.4. Riser piping shall be braced to a wall and protected from physical damage. All pipe supports shall inhibit both lateral and vertical movement of piping. Vertical risers shall be supported in accordance with minimum standards established by local building codes, or not less than every 10 feet, whichever is smaller. Horizontal pipe runs shall be supported in accordance with minimum standards established by local building codes, or not less than every 4 feet, whichever is smaller.

2.3.5. Any necessary fittings for the PVC pipe shall be sweep fittings. All PVC pipe joints shall be solvent welded in accordance with the pipe manufacturer's instructions with solvent cement conforming to ASTM D2564.

2.3.6. The riser piping shall be labeled or marked "Radon Mitigation System" on each floor level of the building and within each room or accessible service area where the riser traverses (Detail 4, R0-02). The labels shall be at intervals not greater than 5 feet along the length of the riser. The lowest label shall be placed at eye level.

2.3.7. A System Notification Flyer shall be placed on the walls in all utility and mechanical rooms at eye level (Detail 5, RMS-2).

2.3.8. Joints, cracks, and penetrations in the interior concrete floors shall be sealed with caulk. The penetrations to be sealed include openings around plumbing, RMS vent risers, mechanical piping, structural components, electrical conduits, and any other gaps that are open to the soil or gas permeable layer. Sealing of penetrations shall be achieved with caulk that complies with ASTM C920 Class 25 or higher (or equivalent) or closed cell gasket materials. If caulk is used to seal a crack, joint, or opening greater than 1/2 inch in width, foam backer rod shall be inserted into the joint or support the caulk as it cures.

2.3.9. Floor or condensate drains shall not allow soil gas entry into the building.

2.3.10. Sump pits or other pit openings in interior floors that connect to soil air and require access for maintenance shall have a rigid lid that is sealed with a gasket material or silicone caulk and mechanically fastened in a manner to facilitate removal. The sump lid shall be made of sturdy and durable plastic such as polycarbonate plastic and designed to support any anticipated load on the lid. Pipe and wiring penetrations through the lid (if any) shall be sealed. Sump lids shall be labeled “Component Radon Mitigation System” (or similar) and “Return to a Closed Condition if Opened, Accessed, or Damaged”. Labels shall be placed on conspicuous places.

## 2.4. EXHAUST

2.4.1. Each vent riser shall be capped with a roof-mounted wind turbine fan with a 4-inch throat diameter (Detail 6, RMS-2).

2.4.2. Fans and fan housings must be rated for outdoor use or installed in a weatherproof protective housing that results in code compliant configuration with protection against electrical shock. Fans chosen shall be designed to allow rainwater or condensation from within risers to pass through or around the wind driven turbine fan.

2.4.3. Rain caps, goose neck fittings, and other fittings are prohibited on the exhaust vent riser.

2.4.4. Conduit from a dedicated breaker shall be provided within 4 feet of each roof-mounted exhaust fan to supply a weatherproof electrical outlet (Detail 7, RMS-2). The dedicated breaker shall be labeled “Radon Fans,” shall provide continuous service when activated, and shall not be joined to mechanical systems that could deactivate the breaker.

2.4.4.1. If determined necessary, the roof-mounted wind turbine fans shall be replaced with active radon fans. The active radon fans shall be electrified at the weatherproof electrical outlets. The active radon fans shall be capable of flowing at least 80 cubic feet per minute (CFM) with 0.6 inches of water column change.

2.4.5. The point of exhaust from the fan shall be not less than 12 inches above a pitched roof or 18 inches above a flat roof at the point penetrated. Refer to mechanical or architectural drawings for typical roof penetration details.

2.4.6. The exhaust of the roof-mounted fans shall be located:

2.4.6.1. Not less than 4 feet vertically above and 10 feet horizontally from operable openings in structures, air vents, air handling or ventilation systems, air intakes, and sparking sources;

2.4.6.2. Not less than 10 feet vertically above or horizontally from exterior flooring surfaces; and,

2.4.6.3. Not less than 10 feet from the breathing space where individuals congregate or traverse.

2.4.7. The roof-mounted fans shall be mounted to piping using flexible couplings that comply with ASTM D5926 or ASTM C1173 or using an alternative method specified by the manufacturer, in order to facilitate maintenance.

# 3. VAPOR INTRUSION BARRIER (VIB)

## 3.1. GENERAL

3.1.1. The Vapor Intrusion Barrier (VIB) shall be installed beneath the entire slab/foundation in the building, on top of the aggregate sub-grade beneath the slab, as designated on pages RMS-1 and RMS-2.

3.1.2. The VIB shall be rated by the manufacturer for use as a barrier to radon and be at least 6-mil thick.

3.1.3. Drawings, details, and data and specification sheets are available from the VIB manufacturer. The VIB installer shall follow the drawings, details, and data and specification sheets during the installation of the VIB.

3.1.4. Reinforcing steel, piping, forms, etc. Shall not bear directly on the membrane or protective covering and equipment shall not be driven over the membrane or its protective covering.

## 3.2. QUALITY ASSURANCE

3.2.1. The VIB shall be installed by an installer that holds training or certification from the VIB manufacturer. The VIB shall be installed in accordance with the manufacturer's specifications unless otherwise specified and approved by ECS.

3.2.2. The installation of the VIB shall be inspected by a manufacturer trained inspector.

3.2.3. The VIB installation contractor shall provide ECS with a letter from the manufacturer confirming that the VIB installation contractor retained by the owner for the performance of this scope of work is certified by the manufacturer for installation of the product and warranting its product to be free of defects when that product is installed by the manufacturer certified VIB installation contractor.

3.2.4. A pre-installation conference shall be held prior to the application of the VIB to assure proper substrate and installation conditions and procedures. The VIB installation contractor, site superintendent, the foundation subcontractor, and ECS shall be present at this meeting.

## 3.3. JOB CONDITIONS

3.3.1. Work is to be performed only when existing and forecasted weather conditions are within the manufacturer recommendations for the material and product used.

## 3.4. WARRANTY

3.4.1. The manufacturer shall warrant its products to be free of defects. This warranty only applies when the products are applied by manufacturer approved contractors and that the required respective products are used. The warranty shall state that the manufacturer will replace at no charge any product not meeting these specifications within 10 years of manufacture, provided it has been applied in accordance with the manufacturer written directions for use recommended as suitable for this product. Additional terms and conditions of the warranty will be stated in the warranty.

## 3.5. MATERIALS

3.5.1. The VIB shall be rated by the manufacturer for use as a barrier to radon and be at least 6-mil thick.

3.5.2. All materials are to be delivered to the project site in their original unbroken packages bearing the manufacturer's label. Materials are to be stored at the project site in strict compliance with the manufacturer's instructions.

## 3.6. INSTALLATION

3.6.1. If the VIB is to be placed on a concrete surface, concrete surfaces shall be light broom finished or smoothed, free of any dirt, debris, loose material, release agents or curing compounds. Masonry joints shall be struck smooth with a metal trowel.

3.6.2. All penetrations through the VIB shall be prepared in accordance with the manufacturer's specifications. Any form stakes that penetrate the VIB shall be re-bar which shall be bent over and left in the slab.

3.6.3. The subgrade shall be conditioned and compacted by the grading contractor as specified in the project plans and specifications. The 4-inch aggregate layer shall be compacted smooth, uniform, and free of debris and standing water.

3.6.4. Trenches and foundations shall be cut oversize as necessary to accommodate installation of the VIB. The walls of footing or utility trenches shall be smooth and free of roots or protruding rocks.

3.6.5. If organic materials with potential for growth (e.g. seeds or grasses) are present within the subgrade, the general contractor shall apply a soil sterilant at the manufacturer's recommended rate prior to the installation of the VIB.

3.6.6. The VIB shall be installed in accordance with the manufacturer's specifications unless otherwise specified and approved by ECS.

3.6.7. Appropriate care shall be exercised to protect the VIB and prevent damage after installation. If necessary, the VIB can be protected from pedestrian traffic with a protective geotextile layer, plywood, or foam board. The protective layer shall be kept free of dirt and debris, to the extent possible, until the floor slab is poured.

## 3.7. PENETRATIONS

3.7.1. All plumbing, electrical, mechanical and structural items to be under or passing through the VIB system shall be installed, positively secured in their proper positions and appropriately protected prior to membrane application. All pipe penetrations should be installed and secure in place prior to the installation of the VIB. Any loose penetrations should be secured prior to the application of the VIB, as loose penetrations could potentially exert pressure on the membrane and damage the membrane after installation.

3.7.1.1. If the VIB system is punctured after it has been installed, the necessary repairs need to be made by a manufacturer certified applicator.

3.7.2. Smoke testing and coupon testing shall be performed for the completed vapor barrier, if required by the VIB manufacturer. Smoke testing is conducted by pumping non-toxic smoke underneath the VIB and then repairing the areas where smoke appears. Coupon testing is conducted by cutting the vapor barrier after installation to confirm thickness of the barrier. Refer to the smoke and coupon testing protocol provided by the VIB manufacturer.

**Radon Mitigation System Design Sheet List**


| Sheet Number | Sheet Name |
|---|---|
| RMS-1 | RMS - Design Notes |
| RMS-2 | RMS - Design Details |
| RMS-3 | RMS - Building 1 - Foundation and Basement Plans |
| RMS-4 | RMS - Building 1 - First, Second, and Third Floor Plans |
| RMS-5 | RMS - Building 1 - Foundation and Basement Plans |
| RMS-6 | RMS - Building 1 - First, Second, and Third Floor Plans |


12-6-24
FOR
CONSTRUCTION

CELEBRATING OVER 30 YEARS OF EXCELLENCE

ECS SOUTHEAST, LLC

"SETTING THE STANDARD FOR SERVICE"

**DESIGN NOTES**

**WAYNESVILLE, NC**

**RADON MITIGATION SYSTEM DESIGN**

**BALSAM EDGE APARTMENTS**

| ECS REVISIONS |
|---|
| 12-6-24 FOR CONSTRUCTION |
| |
| |
| |
| |

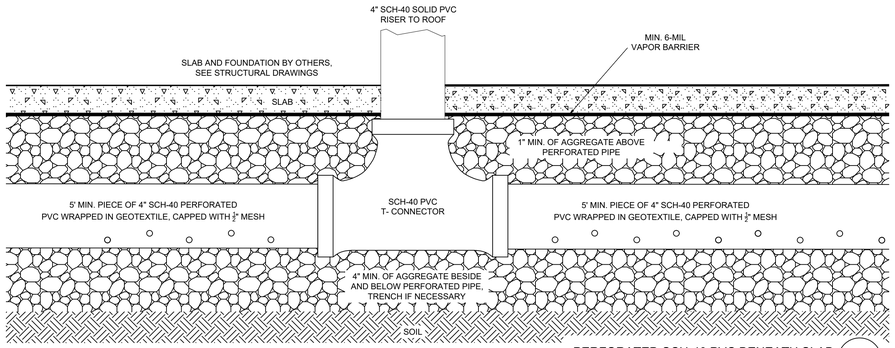
| ENGINEER | DRAFTING |
|---|---|
| SRG | AECM |

SCALE: NTS

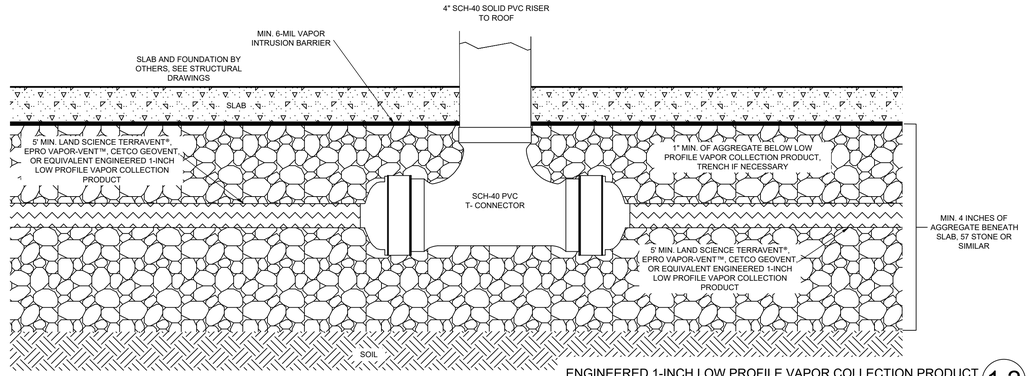
PROJECT NO.: 49:18762-A

SHEET: RMS-1

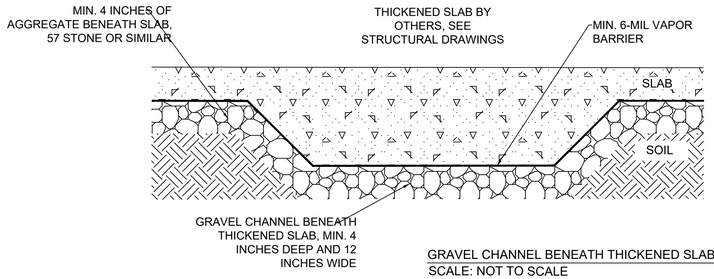
DATE: 5/12/2023



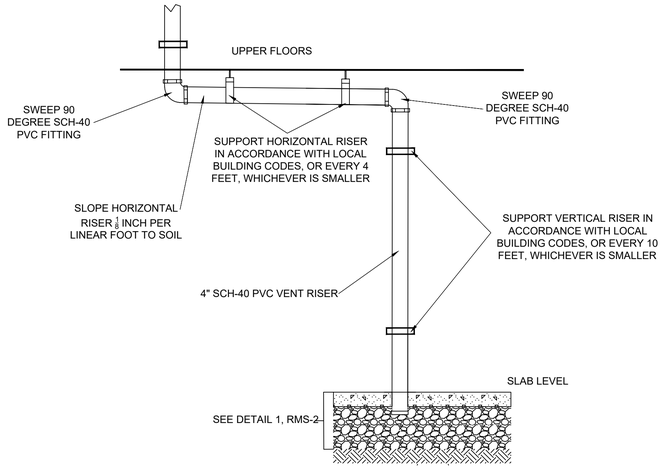

PERFORATED SCH-40 PVC BENEATH SLAB 1.1
SCALE: NOT TO SCALE



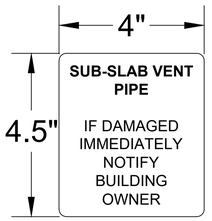

ENGINEERED 1-INCH LOW PROFILE VAPOR COLLECTION PRODUCT 1.2
SCALE: NOT TO SCALE




GRAVEL CHANNEL BENEATH THICKENED SLAB 2
SCALE: NOT TO SCALE




RMS HORIZONTAL AND VERTICAL RISERS
SCALE: NOT TO SCALE 3



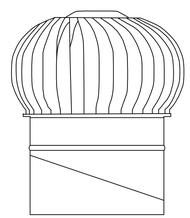

- Plastic sticker with adhesive backing.
- Large letters, min. ½" high.
- This sign shall be posted on each riser approximately every 5 feet and on all exposed riser piping.

RISER PIPE LABEL
SCALE: NOT TO SCALE 4

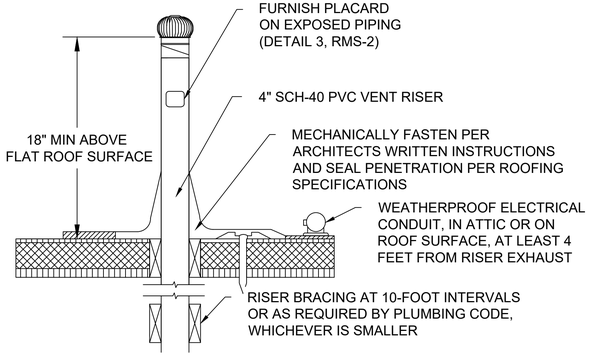
- This notification shall be installed in all Utility and Mechanical Rooms and shall be placed on the walls at eye level and shall not be covered over.
- Location of System Notification Label to be determined by Project Contractor, Owner, or Building Official.

SYSTEM LABEL
SCALE: NOT TO SCALE 5

- The point of exhaust from the fan shall be not less than 12 inches above a pitched roof and 18 inches above a flat roof at the point penetrated. Refer to mechanical or architectural drawings for typical roof penetration details.
- The exhaust of the roof-mounted wind turbine fan shall be located:
  - Not less than 4 feet vertically above and 10 feet horizontally from operable openings in structures, air vents, air handling or ventilation systems, air intakes, and sparking sources;
  - Not less than 10 feet vertically above or horizontally from exterior flooring surfaces; and,
  - Not less than 10 feet from the breathing space where individuals congregate or traverse.
- The roof-mounted wind turbine fan/active radon shall be mounted to piping using flexible couplings that comply with ASTM D5926 or ASTM C1173 or using an alternative method specified by the manufacturer.



ROOF-MOUNTED WIND TURBINE FAN
SCALE: NOT TO SCALE 6




RISER EXHAUST AT ROOF
SCALE: NOT TO SCALE 7

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# DESIGN DETAILS

WAYNESVILLE, NC

## RADON MITIGATION SYSTEM DESIGN

BALSAM EDGE APARTMENTS

| ECS REVISIONS |
|---|
| 12-6-24 FOR CONSTRUCTION |

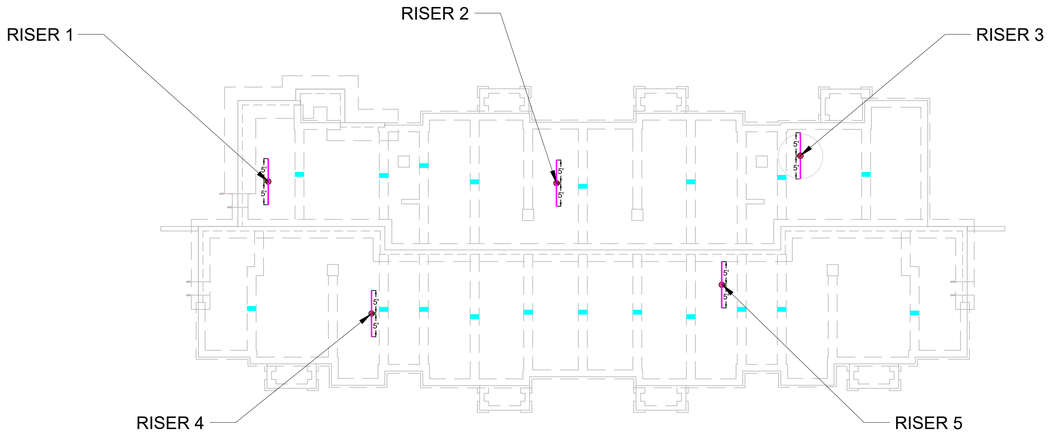
| ENGINEER | DRAFTING |
|---|---|
| SRG | AECM |

SCALE: NTS

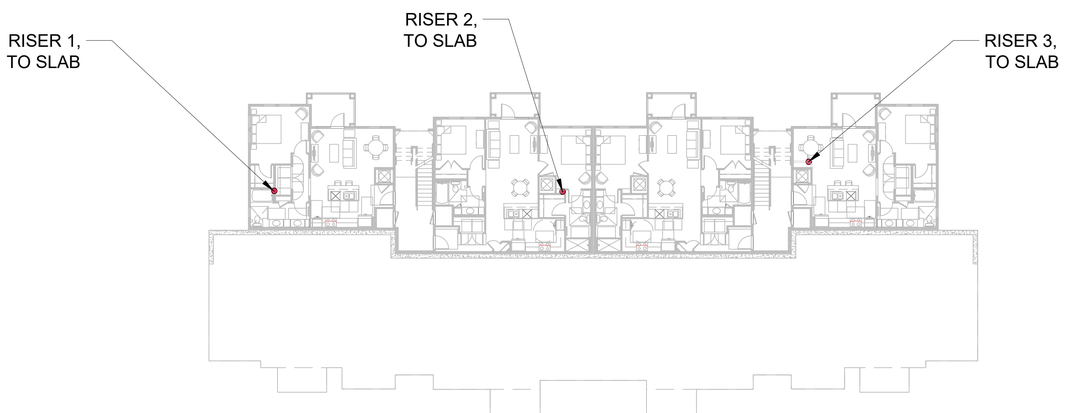
PROJECT NO.: 49:18762-A

SHEET: RMS-2

DATE: 5/12/2023




**BUILDING 1 - FOUNDATION**
SCALE: 1/16" = 1'-0"




**BUILDING 1 - BASEMENT**
SCALE: 1/16" = 1'-0"

SCALE (IN FEET)
1/32" 1/16"
1/16" 0

## GENERAL RMS NOTES

1. The RMS shall be constructed following the Design Notes and Design Details on pages RMS-1 and RMS-2, respectively.
2. All PVC fittings shall be sweep 90 degree fittings.
3. The location of the sub-slab sub-slab vapor collection product, vertical risers, and horizontal risers shown on the plans is approximate. If necessary, the locations can be moved during construction after consulting the RMS Designer.
4. All wall and building systems shown are for clarification purposes only. These plans are only for layout and construction of the RMS.

## RMS LEGEND

- Sub-slab Vapor Collection Piping (4-inch perforated SCH-40 PVC, Land Science TerraVent™, or EPRO Vapor-Vent™ )
- Additional Gravel Layer Beneath Thickened Slabs (4-inches deep, 12-inches wide)
- Vertical Risers (4-inch solid SCH-40 PVC)
- Horizontal Pipe Runs (4-inch solid SCH-40 PVC)

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**BUILDING 1**
**FOUNDATION AND BASEMENT**
**WAYNESVILLE, NC**

**RADON MITIGATION SYSTEM DESIGN**
**BALSAM EDGE APARTMENTS**

| ECS REVISIONS |
|---|
| 12-6-24 FOR CONSTRUCTION |
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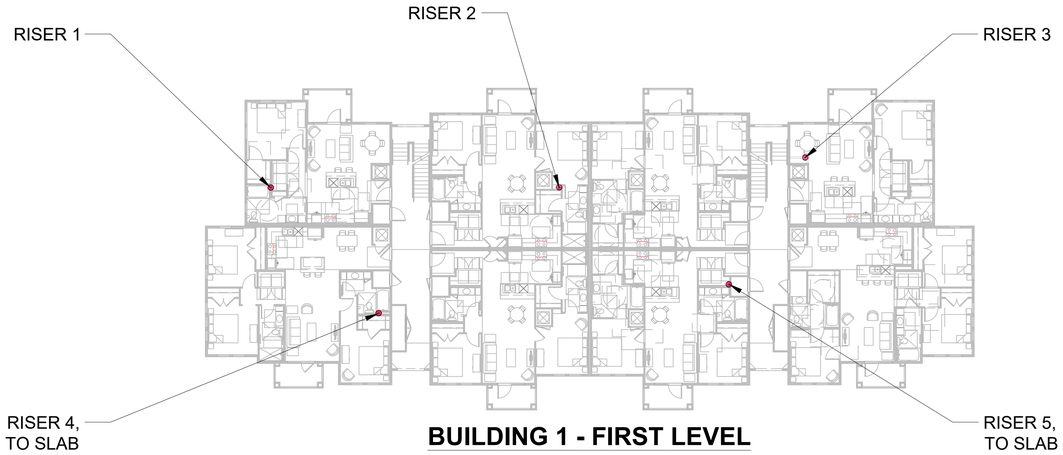
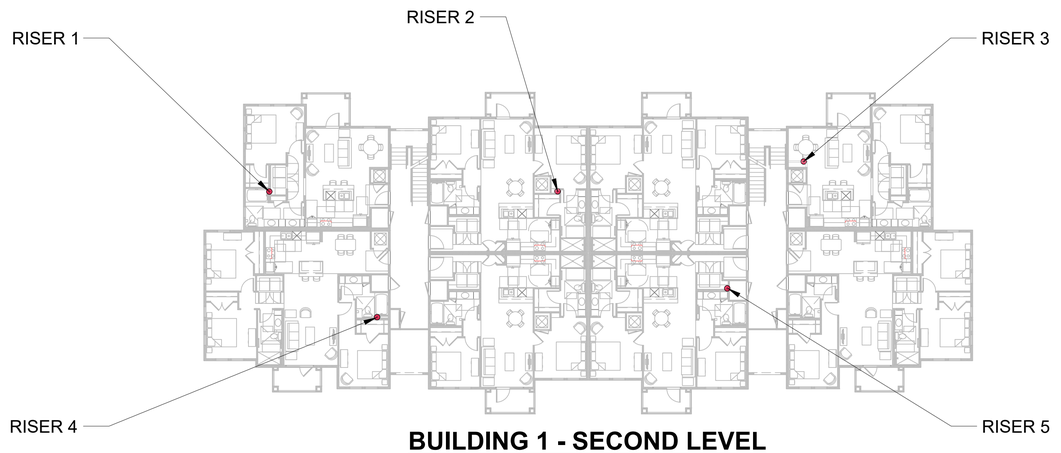
| |
| |

| ENGINEER | DRAFTING |
|---|---|
| SRG | AECM |

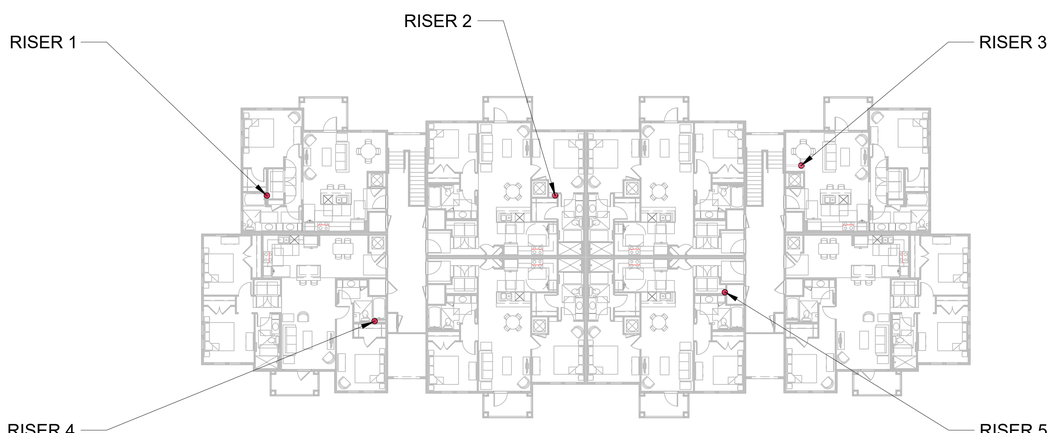
| | |
|---|---|
| SCALE | 1/16" = 1'-0" |
| PROJECT NO. | 49:18762-A |
| SHEET | RMS-3 |
| DATE | 5/12/2023 |




**BUILDING 1 - FIRST LEVEL**
SCALE: 1/16" = 1'-0"




**BUILDING 1 - SECOND LEVEL**
SCALE: 1/16" = 1'-0"




**BUILDING 1 - THIRD LEVEL**
SCALE: 1/16" = 1'-0"

SCALE (IN FEET)
1/32" 1/16"
1/16" 0

## GENERAL RMS NOTES

1. The RMS shall be constructed following the Design Notes and Design Details on pages RMS-1 and RMS-2, respectively.
2. All PVC fittings shall be sweep 90 degree fittings.
3. The location of the sub-slab sub-slab vapor collection product, vertical risers, and horizontal risers shown on the plans is approximate. If necessary, the locations can be moved during construction after consulting the RMS Designer.
4. All wall and building systems shown are for clarification purposes only. These plans are only for layout and construction of the RMS.

## RMS LEGEND

- Sub-slab Vapor Collection Piping (4-inch perforated SCH-40 PVC, Land Science TerraVent™, or EPRO Vapor-Vent™ )
- Vertical Risers (4-inch solid SCH-40 PVC)
- Horizontal Pipe Runs (4-inch solid SCH-40 PVC)

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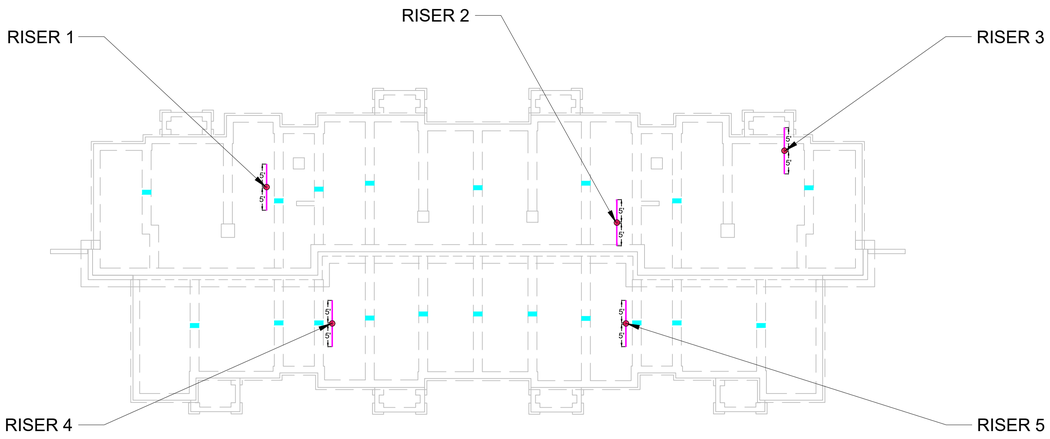
**BUILDING 1**
**FIRST, SECOND, THIRD LEVELS**
**WAYNESVILLE, NC**

**RADON MITIGATION SYSTEM DESIGN**
**BALSAM EDGE APARTMENTS**

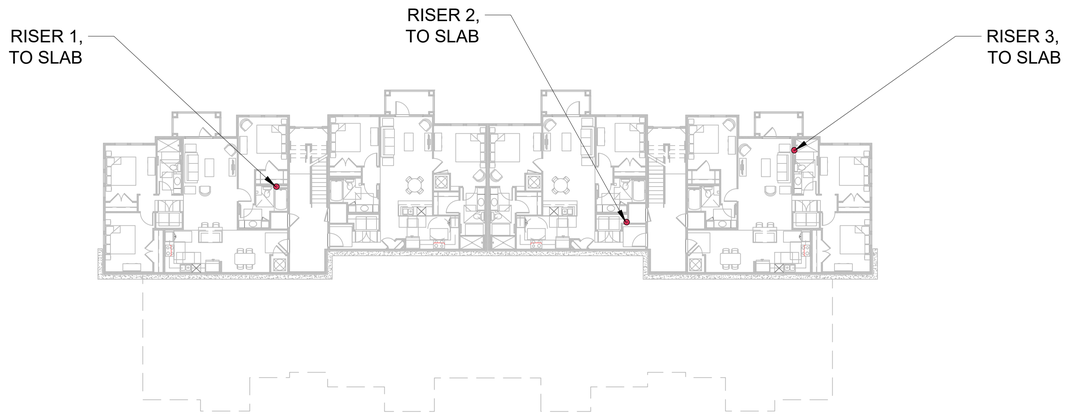
| ECS REVISIONS |
|---|
| 12-6-24 FOR CONSTRUCTION |
| |
| |
| |
| |

| ENGINEER | DRAFTING |
|---|---|
| SRG | AECM |

SCALE 1/16" = 1'-0"
PROJECT NO. 49:18762-A
SHEET RMS-4
DATE 5/12/2023




**BUILDING 2 - FOUNDATION**
SCALE: 1/16" = 1'-0"




**BUILDING 2 - BASEMENT**
SCALE: 1/16" = 1'-0"

SCALE (IN FEET)
1/32" 1/16"
1/16" 0

## GENERAL RMS NOTES

1. The RMS shall be constructed following the Design Notes and Design Details on pages RMS-1 and RMS-2, respectively.
2. All PVC fittings shall be sweep 90 degree fittings.
3. The location of the sub-slab sub-slab vapor collection product, vertical risers, and horizontal risers shown on the plans is approximate. If necessary, the locations can be moved during construction after consulting the RMS Designer.
4. All wall and building systems shown are for clarification purposes only. These plans are only for layout and construction of the RMS.

## RMS LEGEND

- Sub-slab Vapor Collection Piping (4-inch perforated SCH-40 PVC, Land Science TerraVent™, or EPRO Vapor-Vent™ )
- Additional Gravel Layer Beneath Thickened Slabs (4-inches deep, 12-inches wide)
- Vertical Risers (4-inch solid SCH-40 PVC)

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ECS

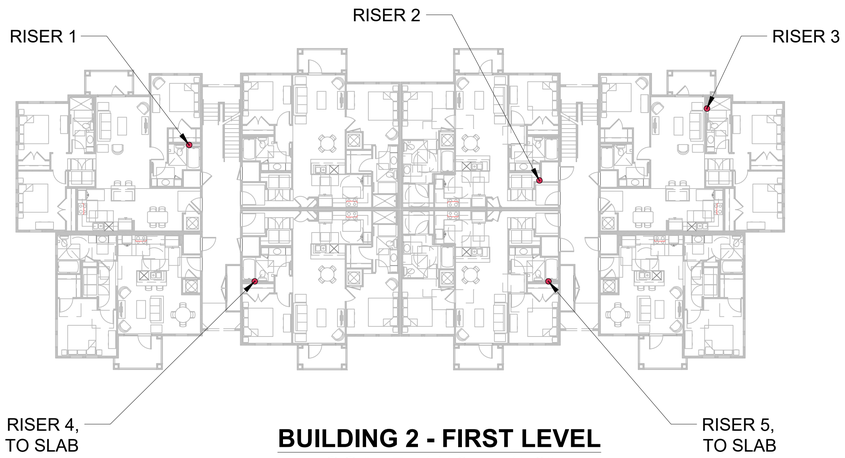
**BUILDING 2**
**FOUNDATION AND BASEMENT**
**WAYNESVILLE, NC**

**RADON MITIGATION SYSTEM DESIGN**
**BALSAM EDGE APARTMENTS**

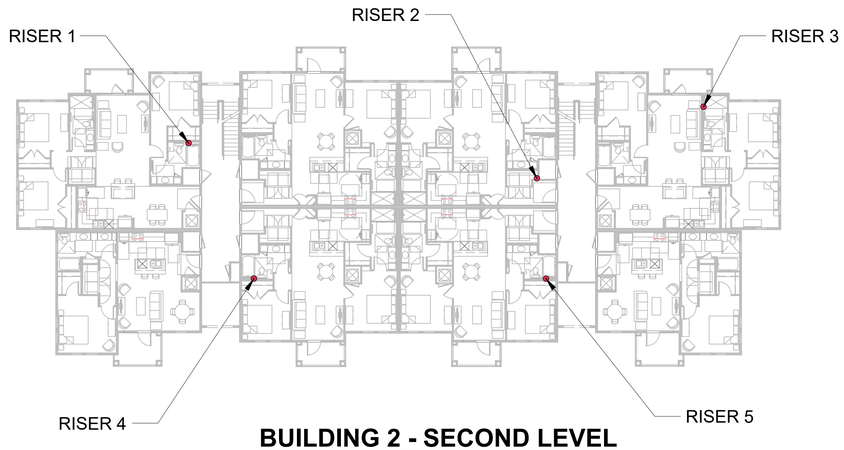
| ECS REVISIONS |
|---|
| 12-6-24 FOR CONSTRUCTION |
| |
| |
| |
| |

| ENGINEER | DRAFTING |
|---|---|
| SRG | AECM |

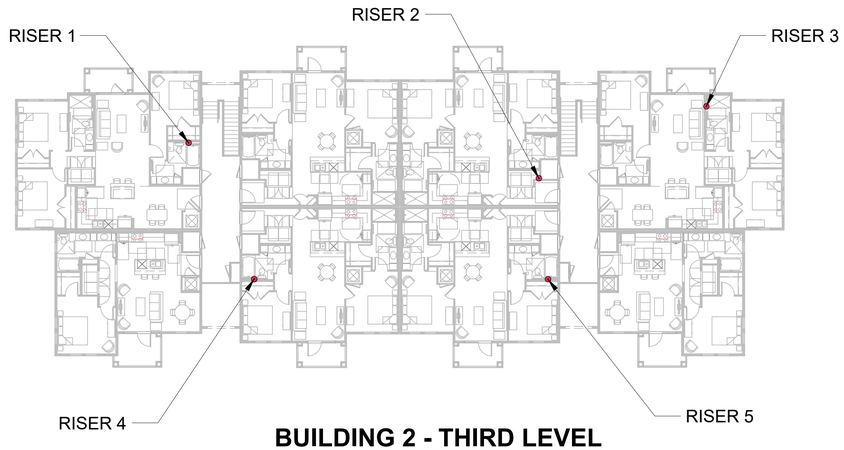
SCALE 1/16" = 1'-0"
PROJECT NO. 49:18762-A
SHEET RMS-5
DATE 5/12/2023




**BUILDING 2 - FIRST LEVEL**
SCALE: 1/16" = 1'-0"




**BUILDING 2 - SECOND LEVEL**
SCALE: 1/16" = 1'-0"




**BUILDING 2 - THIRD LEVEL**
SCALE: 1/16" = 1'-0"

SCALE (IN FEET)
1/32" 1/16"
1/16" 0

## GENERAL RMS NOTES

1. The RMS shall be constructed following the Design Notes and Design Details on pages RMS-1 and RMS-2, respectively.
2. All PVC fittings shall be sweep 90 degree fittings.
3. The location of the sub-slab sub-slab vapor collection product, vertical risers, and horizontal risers shown on the plans is approximate. If necessary, the locations can be moved during construction after consulting the RMS Designer.
4. All wall and building systems shown are for clarification purposes only. These plans are only for layout and construction of the RMS.

## RMS LEGEND

- Sub-slab Vapor Collection Piping (4-inch perforated SCH-40 PVC, Land Science TerraVent™, or EPRO Vapor-Vent™ )
- Vertical Risers (4-inch solid SCH-40 PVC)
- Horizontal Pipe Runs (4-inch solid SCH-40 PVC)

CELEBRATING OVER 30 YEARS OF EXCELLENCE

ECS SOUTHEAST, LLC

"SETTING THE STANDARD FOR SERVICE"

**BUILDING 2**
**FIRST, SECOND, THIRD LEVELS**
**WAYNESVILLE, NC**

**RADON MITIGATION SYSTEM DESIGN**
**BALSAM EDGE APARTMENTS**

| ECS REVISIONS |
|---|
| 12-6-24 FOR CONSTRUCTION |

| ENGINEER | DRAFTING |
|---|---|
| SRG | AECM |

SCALE: 1/16" = 1'-0"
PROJECT NO.: 49:18762-A
SHEET: RMS-6
DATE: 5/12/2023

# Appendix F

# Contamination and Toxic Substances

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROPOSED BALSAM EDGE APARTMENTS

333 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA 28786

ECS PROJECT NO. 49:18762-B

FOR: MOUNTAIN HOUSING OPPORTUNITIES, INC

MAY 22, 2023

May 22, 2023

Ms. Adeline Wolfe
Mountain Housing Opportunities, Inc
64 Clingman Avenue
Suite 101
Asheville, North Carolina 28801

ECS Project No. 49: 18762-B

Reference: Phase I Environmental Site Assessment Report, Proposed Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, North Carolina 28786

Dear Ms. Wolfe:

ECS Southeast, LLP (ECS) is pleased to provide you with the results of our Phase I Environmental Site Assessment (ESA) for the referenced site. ECS's services were provided in general accordance with ECS Proposal No. 49:37709P authorized on May 11, 2023 and generally meet the requirements of ASTM E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and in accordance with EPA Standards and Practices for All Appropriate Inquiries contained in 40 CFR Part 312.

If there are questions regarding this report, or a need for further information, please contact the undersigned.

Sincerely,

ECS Southeast, LLP

Olivia Richard
Assistant Staff Project Manager
orichard@ecslimited.com
336-553-8184

Lori Parker, CEM, CPESC
Environmental Principal
lparker@ecslimited.com
615-885-4983

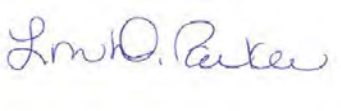
**Project Summary**

Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, North Carolina 28786

| Report Section | | No Further Action | REC | CREC | HREC | BER | Comment |
|---|---|---|---|---|---|---|---|
| 4.0 | User Provided Information | ✔ | | | | | |
| 5.1 | Federal ASTM Databases | ✔ | | | | | |
| 5.2 | State ASTM Databases | ✔ | | | | | |
| 5.3 | Additional Environmental Record Sources | ✔ | | | | | |
| 6.0 | Historical Use Information | ✔ | | | | | |
| 7.0 | Site and Area Reconnaissance | | ✔ | | | | A fill port and vent pipe, indicative of a UST, were observed at the southwestern corner of the residence. ECS considers the potential for an undocumented release from the UST to represent a REC. |
| 8.0 | Additional Services | ✔ | | | | | |
| 9.0 | Interviews | ✔ | | | | | |

**ENVIRONMENTAL PROFESSIONAL STATEMENT**

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Lori Parker, CEM, CPESC
Environmental Principal
May 22, 2023

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## 1.0 EXECUTIVE SUMMARY

ECS Southeast, LLP (ECS) was contracted by Mountain Housing Opportunities, Inc to perform an American Society for Testing and Materials (ASTM) E1527-21, Phase I Environmental Site Assessment (ESA) of the Proposed Balsam Edge Apartments property located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina (i.e. subject property). This Executive Summary is an integral part of the Phase I ESA report. ECS recommends that the report be read in its entirety.

The subject property is identified by the Haywood County Geographic Information System (GIS) website as Parcel Identification Number (PIN) 8616-42-5414 and is owned by Mountain Housing Opportunities, Inc. The approximately 5.1-acre subject property consists of grass-covered and wooded land. The southeastern portion of the property is developed with a paved driveway and a vacant, approximate 1,880 square foot single-family residence that was reportedly constructed in 1950. A vent pipe and fill port indicative of an underground storage tank (UST) are located at the southwestern corner of the residence. A dilapidated modular movable shed is located in the eastern portion of the property. Logged trees are located in the central portion of the property. Water services are available to the subject property through the Town of Waynesville. The residence is reportedly serviced by a private septic tank. The residence appears to currently be heated with electricity and to have previously been heated with heating oil.

The subject property is located in a residential and commercial area of Waynesville, North Carolina. Based on our review of site topography and conditions observed during the site reconnaissance, it is our opinion that properties to the east-northeast and west are presumed to be hydrogeologically up-gradient of the subject property. The adjoining properties to the north of the subject property consist of Calhoun Road followed by residences; residences with several outbuildings to the east; Howell Mill Road followed by Sonoco Plastics to the south; and a residence and Calhoun Road followed by wooded land to the west. ECS did not identify environmental issues associated with current occupants or activities at adjoining or nearby properties that are believed to present a recognized environmental condition (REC) at the subject property.

Based on the records search, site reconnaissance and interviews, it appears that the subject property consisted of undeveloped land as early as 1893. Between 1905 and 1935, the property was developed with a residence in the central portion of the property. The current southeastern residence was constructed in 1950. Outbuildings were constructed in the central portion of the property by 1956. The property consisted of cleared and wooded land with the current southeastern residence and a residence and outbuildings in the central portion of the property between at least 1956 and 2022. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the property has consisted of grass-covered and wooded land with the southeastern residence. Historical records prior to 1893 were not reasonably ascertainable for the subject property.

Historical aerial photographs depict an apparent residence and outbuilding structures on the subject property that were not located on the subject property during our site reconnaissance. ECS does not have technical evidence how these structures were heated, or if the structures utilized septic tanks or water supply wells. Based on the age, it is possible that the structures were heated with oil stored

in USTs. ECS did not observe evidence of USTs, septic tanks, or water supply wells during our site reconnaissance. While not considered a REC, if encountered during site development, USTs, septic systems, and water supply wells should be closed in accordance with applicable laws.

Our review of historical information for adjoining or nearby properties identified the area as originally agricultural and residential land that transitioned to a residential and commercial area beginning in the 1970s. The northern and eastern adjoining residences were constructed prior to the 1950s. The southern adjoining industrial building and the western adjoining commercial retail buildings were constructed in 1985.

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR). The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of reasonably ascertainable public records, ECS does not consider the listings to be potential sources of soil, groundwater, or vapor impact on the subject property. Therefore, ECS does not believe that the off-site listings would have issues that result in RECs for the subject property.

ASTM E1527-21 defines a "*data gap*" as: "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." A *"significant data gap"* is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition." Significant data gaps that would be expected to impact our ability to render a professional opinion concerning the subject property were not identified.

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-21 of the Proposed Balsam Edge Apartments property located at 333 Howell Mill Road, in Waynesville, Haywood County, North Carolina, the subject property. Any exceptions to, or deletions from, this practice are described in Section 2.6 of this report. This assessment has revealed the following recognized environmental condition in connection with the subject property:

- A fill port and vent pipe, indicative of a UST, were observed at the southwestern corner of the residence. ECS considers the potential for an undocumented release from the UST to represent a REC.

### 1.1 Recommendations

It is the opinion of ECS Southeast, LLP that additional environmental assessment of the subject property is warranted at this time.

**Table of Critical Dates**

| Item | Date |
|---|---|
| Report Issuance Date & Declaration by Environmental Professional | May 22, 2023 |
| Date of Interview with Past and Present Owners and Occupants | May 15, 2023 |
| Date of Recorded Environmental Cleanup Lien Search | May 18, 2023 |
| Date of Government Record Review Report | May 12, 2023 |
| Date of Visual Inspection of Subject and Adjoining Properties | May 16, 2023 |
| Earliest Date of Interviews, Lien Search, Record Reviews, and Inspections | May 12, 2023 |
| Report Viability Date | November 8, 2023 |

According to ASTM E1527-21: "...an environmental site assessment meeting or exceeding this practice is presumed to be viable when it is conducted within 180 days prior to the date of acquisition of the subject property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction). The dates of the components presented in 4.6.2(i), (iii), (iv), and (v) for interviews, review of government records, visual inspections, and declaration by environmental professional, shall be identified in the report. Completion of searches for recorded environmental cleanup liens (4.6.2(ii)) is a user responsibility; however, if the user has engaged the environmental professional to conduct these searches, then that date shall also be identified in the report." The 180-day viability period begins with the date of the earliest referenced resource noted above.

## 2.0 INTRODUCTION

### 2.1 Purpose and Reason for Performing Phase I ESA

The purpose of the ESA was to:

- evaluate the probability of impact to the surface water, groundwater and/or soils within the property boundaries through a review of regulatory information and a reconnaissance of the subject property and vicinity;
- evaluate historical land usage to identify previous conditions that could potentially impact the environmental condition of the subject property;
- conduct all appropriate inquiry as defined by ASTM E1527-21 and 40 CFR Part 312;
- evaluate the potential for on-site and off-site contamination; and,
- provide a professional opinion regarding the potential for environmental impact at the site and a list of Recognized Environmental Conditions (RECs).

The ESA should allow the Users the opportunity to qualify for landowner liability protection under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) provided certain stipulations are met. The landowner liability protections are: an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser. The User must meet the protection stipulations detailed in CERCLA to qualify as well as meet the User Obligations contained within the ASTM E1527-21 standard.

The reason for conducting this ESA is to perform all appropriate inquiries into the uses and prior ownership of the subject property for the completion of United States Department of Housing and Urban Development (HUD) environmental review requirements.

### 2.2 Scope of Services

The environmental assessment was conducted in general accordance with ASTM E1527-21, which is in accordance with EPA Standards and Practices for All Appropriate Inquiry (40 CFR §312.10). The environmental assessment was conducted under the supervision or responsible charge of an individual that qualifies as an environmental professional, as defined in 40 CFR §312.10.

ECS was contracted by Mountain Housing Opportunities, Inc to perform an ASTM E1527-21, Phase I Environmental Site Assessment (ESA) of the Proposed Balsam Edge Apartments property located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. ECS was not contracted to address non-scope considerations.

### 2.3 Definitions

ASTM E1527-21 defines a "*recognized environmental condition (REC)*" as "(1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment." For the purposes of this definition,

"likely" is that which is neither certain nor proved, but can be expected or believed by a reasonable observer based on the logic and/or experience of the environmental professional, and/or available evidence, as stated in the report to support the opinions given therein.

ASTM E1527-21 defines a "*historical recognized environmental condition (HREC)*" as "a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition."

ASTM E1527-21 defines a "*controlled recognized environmental condition (CREC)*" as "recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations)."

ASTM E1527-21 defines a "*business environmental risk (BER)*" as "a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of commercial real estate, not necessarily related to those environmental issues required to be investigated in this practice." This assessment does not include ASTM Non-Scope items or identify business environmental risks unless specifically requested by the Client, and included in Section 8.0 of this report.

ASTM E1527-21 defines a "*de minimis condition" as "a* condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a *de minimis* condition is not a recognized environmental condition nor a controlled recognized environmental condition."

**2.4 Limitations**

The ESA involved a reconnaissance of the subject property and contiguous properties and a review of regulatory and historical information in general accordance with the ASTM standard and EPA regulation referenced herein. No non-scope considerations or additional issues such as asbestos, radon, wetlands or mold were investigated, unless otherwise described in Section 8.0 of this report.

Note: Although potential vapor migration was considered as part of this ASTM E1527-21 Phase I ESA, the Phase I ESA was not intended to fully meet the requirements of the Vapor Encroachment Screen per the ASTM E2600 guide, which is beyond the scope of an ASTM E1527-21 Phase I ESA.

The conclusions and/or recommendations presented within this report are based upon a level of investigation consistent with the standard of care and skill exercised by members of the same profession currently practicing in the same locality under similar conditions. The intent of this assessment is to identify the potential for recognized environmental conditions in connection with the subject property; however, no environmental site assessment can completely eliminate

uncertainty regarding the potential for recognized environmental conditions in connection with the subject property. The findings of this ESA are not intended to serve as an audit for health and safety compliance issues pertaining to improvements or activities at the subject property. ECS is not liable for the discovery or elimination of hazards that may potentially cause damage, accidents or injury.

Observations, conclusions and/or recommendations pertaining to environmental conditions at the subject property are necessarily limited to conditions observed, and or materials reviewed at the time this study was undertaken. It was not the purpose of this study to determine the actual presence, degree or extent of contamination, if any, at this subject property. This could require additional exploratory work, including sampling and laboratory analysis. No warranty, expressed or implied, is made with regard to the conclusions and/or recommendations presented within this report.

This report is provided for the exclusive use of Mountain Housing Opportunities, Inc. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties will be at such party's sole risk and ECS disclaims liability for any such third party use or reliance. The use of this report is subject to the same terms, conditions and scope of work reflected in this report and the associated proposal.

### 2.5 Data Gaps

ASTM E1527-21 defines a "*data gap*" as: "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." A *"significant data gap"* is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition."

Use of the subject property was generally documented back to 1893. Historical use of the subject property prior to 1893 could not be discerned based on reasonably ascertainable records reviewed. The ASTM E1527-21 standard requires review of reasonably ascertainable historical resources to develop a history of previous uses of the subject property, adjoining properties, and surrounding area from 1940 or first developed use, at intervals not to exceed five years. Review of reasonably ascertainable historical sources for this assessment has identified gaps in the historical record that exceeded five years during which the use of the subject property could not be discerned, which is considered a data failure per ASTM E1527-21. However, based on the other information obtained, this data failure would not be expected to alter the findings of this ESA, and is not considered to be a significant data gap.

### 2.6 Limiting Conditions/Deviations

ASTM E1527-21 requires that the Environmental Professional identify limiting conditions, deletions, and deviations from the ASTM E1527-21 standard, if any, including client-imposed constraints. The following limiting conditions and/or deviations were encountered during the performance of this Phase I ESA:

Dense vegetation covered portions of the subject property and may have obscured environmentally significant features and direct observation of the ground surface. ECS was unable to access the interior portion of the residence, and cannot attest to environmental conditions within areas that were not directly observed.

## 3.0 SUBJECT PROPERTY DESCRIPTION

### 3.1 Subject Property Location and Legal Description

| | |
|---|---|
| **Site Name** | Proposed Balsam Edge Apartments |
| **Property Address** | 333 Howell Mill Road |
| **Property City, State** | Waynesville, North Carolina |
| **Property County** | Haywood County |
| **Number of Parcels** | One |
| **Property ID Number(s)** | 8616-42-5414 |
| **Property Size** | 5.1 Acres |
| **Property Owner of Record** | Mountain Housing Opportunities, Inc |
| **Property Legal Description** | HOWELL MILL RD #1-#6 |

### 3.2 Physical Setting and Hydrogeology

| **United States Geological Survey (USGS) Topographic Map** | |
|---|---|
| **Quad Designation** | Clyde, Waynesville, Hazelwood, and Dellwood, North Carolina |
| **Date** | 2019 |
| **Subject Property Settings** | |
| **Geologic Province** | Blue Ridge Mountains |
| **Average Subject Property Elevation (in feet or meters)** | Approximately 2,680 feet above mean sea level (msl) |
| **General Sloping Direction** | West-southwest |
| **Bodies of Water** | A tributary to Richland Creek is located along the western property boundary |
| **Presumed Direction of Groundwater Flow** | West-southwest |
| **Up-gradient Property Direction** | East-northeast and west |

| Nearby Properties' Setting | |
|---|---|
| **General Sloping Direction** | Northern, eastern, and southern areas slope south and west, western areas slope east |
| **Bodies of Water** | A tributary to Richland Creek is located to the northwest and southwest, Richland Creek is located approximately 700 feet south of the subject property |
| **General Directions of Surface Flow** | Northern, eastern, and southern areas flow south and west, western areas flow east |
| **Presumed Direction of Groundwater Flow** | Northern, eastern, and southern areas flow south and west, western areas flow east |

Regional influences may have an impact on groundwater flow. The actual groundwater flow direction cannot be determined without site-specific information obtained through the gauging of groundwater monitoring wells.

Regional groundwater flow in the immediate vicinity of the site is generally to the east and west-southwest. Properties to the east-northeast and west are presumed to be "hydrogeologically upgradient" and properties to the south are presumed to be "hydrogeologically downgradient" in relation to the subject property. The topographic and hydrogeologic term "crossgradient" is used for properties that are neither upgradient nor downgradient, but generally on a line from the subject property perpendicular to the presumed direction of groundwater flow. Other properties not in the same drainage watershed are presumed to be "disconnected" from the groundwater in the immediate vicinity of the subject property.

### 3.3 Current Use and Description of the Site

The subject property consists of an approximately 5.1-acre parcel that consists of grass-covered and wooded land. The subject property is improved with a vacant, single-family residence and an asphalt driveway in the southeastern portion of the property, and a dilapidated outbuilding in the eastern portion of the property. The subject property is located in an area that can generally be described as residential and commercial.

## 4.0 USER PROVIDED INFORMATION

The ASTM standard includes disclosure and obligations of the User to help the Environmental Professional identify the potential for Recognized Environmental Conditions associated with the subject property. The ASTM E1527-21 User Questionnaire was submitted to and completed by Ms. Adeline Wolfe, representing Mountain Housing Opportunities, Inc (User of the report). Section 4.0 is based on the completed User Questionnaire. A copy of the completed User Questionnaire is included in Appendix II.

### 4.1 Title Information

ECS reviewed the following records online through the American Title Research, LLC. Environmental Lien and AUL Search Report. Environmental concerns were not noted. The records indicated the following:

- Deed Book 133, Page 179, dated January 13, 1947 - Robert and Ann Shook obtained the property from W.C. and Myrtle Phillips.
- Deed Book 150, Page 370, dated November 19, 1951 - Kate Phillips obtained the property from D.J. and Louise Phillips.
- Deed Book 159, Page 83, dated November 20, 1953 - Myra Killian obtained the property from Kate Phillips.
- Deed Book 202, Page 318, dated February 5, 1964 - Robert and Ann Shook obtained the property from Bill and Wilda Maney.
- Deed Book 486, Pages 472 and 478, dated February 13, 2001 - R. Timothy and Patricia Shook obtained the property from Ann Shook.
- Deed Book 489, Page 264, dated March 30, 2001 - R. Timothy and Patricia Shook obtained the property from Ann Shook.
- Deed Book 1050, Page 24, dated December 7, 2021 - Mountain Housing Opportunities, Inc. obtained the property from Robert, Timothy, and Patricia Shook.

### 4.2 Environmental Liens or Activity and Use Limitations

ECS was contracted by the User to obtain environmental liens or activity and use limitations (AULs) information. According to the information provided by American Title Research, LLC., no environmental liens or AULs were identified in the deed information for the subject property. A copy of the American Title Research, LLC. report is included in Appendix II of this report.

### 4.3 Specialized Knowledge

The User indicated that they did not possess specialized knowledge of the subject property.

### 4.4 Commonly Known or Reasonably Ascertainable Information

The User indicated that the property has been used as a single-family dwelling, was previously developed with an additional family dwelling, and was used as a cow pasture.

### 4.5 Valuation Reduction for Environmental Issues

According to the User, the purchase price being paid for the subject property reasonably reflects its fair market value.

### 4.6 Owner, Property Manager, and Occupant Information

The User indicated that Mountain Housing Opportunities, Inc. is the property owner.

### 4.7 Degree of Obviousness

The User stated that they were not aware of obvious indicators that point to the presence or likely presence of contamination at the subject property.

## 5.0 RECORDS REVIEW

A regulatory records search of ASTM standard and supplemental databases was conducted for the subject property and is included in Appendix III. The regulatory search report in the appendix includes additional details about the regulatory databases that were reviewed. The regulatory records search involves searching a series of databases for facilities that are located within a specified distance from the subject property. The ASTM standard specifies an approximate minimum search distance from the subject property for each database. Pursuant to ASTM, the approximate minimum search distance may be reduced for each standard environmental record except for Federal NPL site list, and Federal RCRA TSD list. According to ASTM, government information obtained from nongovernmental sources may be considered current if the source updates the information at least every 90 days or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public. The following table indicates the standard environmental record sources and the approximate minimum search distances for each record.

| Standard Environmental Record Sources | Approximate Minimum Search Distance Per ASTM (miles) | Subject Property | Off-Site Properties |
|---|---|---|---|
| Federal NPL | 1.0 | No | 0 |
| Federal Delisted NPL | 0.5 | No | 0 |
| Federal CERCLIS | 0.5 | No | 0 |
| Federal CERCLIS NFRAP | 0.5 | No | 0 |
| Federal RCRA CORRACTS | 1.0 | No | 0 |
| Federal RCRA non-CORRACTS TSD | 0.5 | No | 0 |
| Federal RCRA Generators | Subject Site and Adjoining Properties | No | 1 Non-gen |
| Federal IC/EC | Subject Site Only | No | N/A |
| Federal ERNS | Subject Site Only | No | N/A |
| State and Tribal Hazardous Waste Sites (NPL Equivalent) | 1.0 | No | 1 |

| Standard Environmental Record Sources | Approximate Minimum Search Distance Per ASTM (miles) | Subject Property | Off-Site Properties |
|---|---|---|---|
| State and Tribal Hazardous Waste Sites (CERCLIS Equivalent) | 0.5 | No | 3 |
| State and Tribal Landfill and/or solid waste disposal sites | 0.5 | No | 4 |
| State and Tribal Leaking Tanks | 0.5 | No | 10 |
| State and Tribal Registered UST and AST | Subject Site and Adjoining Properties | No | 1 |
| State and Tribal IC/ EC | Subject Site Only | No | N/A |
| State and Tribal Voluntary Cleanup (VCP) | 0.5 | No | 0 |
| State and Tribal Brownfield Sites | 0.5 | No | 0 |

Based on our knowledge of the subject property and the surrounding area, ECS attempts to verify and interpret this data. While this attempt at verification is made with due diligence, ECS cannot guarantee the accuracy of the record(s) search beyond that of information provided by the regulatory report(s). ECS makes no warranty regarding the accuracy of the database report information included within the regulatory report(s).

The regulatory database search was performed by EDR, and their report is dated May 12, 2023. ECS did not reduce the minimum ASTM search distances stipulated in the standard. The regulatory databases reviewed by ECS included supplemental databases researched by EDR.

### 5.1 Federal ASTM Databases

#### 5.1.1 Federal RCRIS - Generators

RCRIS identifies facilities that generate hazardous wastes as defined by the RCRA. Very small quantity generators (VSQG) (previously identified as conditionally exempt small quantity generators or CESQGs) generate less than 100 kilograms of hazardous waste, or less than 1 kilogram of acutely

hazardous waste, per month. Small quantity generators (SQGs) generate between 100 and 1,000 kilograms of hazardous waste per month. Large quantity generators (LQGs) generate more than 1,000 kilograms of hazardous waste or more than 1 kilogram of acutely hazardous waste per month.

The subject property was not listed on the RCRA databases.

No off-site properties within the minimum search distance of inquiry (adjoining properties) were reported by EDR as being on the Federal RCRIS Generators database. One off-site property within 0.25 miles of the subject property was reported as being on the RCRA Non-Generator (Non-Gen)/No Longer Regulated (NLR) database, which lists facilities that do not currently generate hazardous wastes but were previously tracked as generators. This facility is discussed below:

> **North Carolina Department of Transportation, 90 Howell Mill Road.** This facility is located approximately 110 feet southwest of the subject property. This site is hydrologically separated from the subject property by an unnamed stream. In September 2014, the facility was listed as a provisional LQG and was listed as a handler of hazardous waste. The facility was listed for the shipment of hazardous waste from the facility and the status was granted for 90 days. This status was created for the removal of soil impacted by automotive debris at the site. The facility was listed as a non-generator in March 2015. RCRA violations were not listed for the facility. This facility is discuss in the SHWS section (Section 5.2.2) below.

## 5.2 State ASTM Databases

### 5.2.1 State Hazardous Substance Disposal Site (HSDS)

The State HSDS records are locations of uncontrolled and unregulated hazardous waste sites. The records include sites on the NPL as well as those on the state priority list.

The subject property was not listed on the State HSDS database.

The database report lists one property within the designated search radius for this database. This property is discussed below:

> **Schulhoffer Junkyard, North Carolina.** This facility is located approximately 1,960 feet east of the subject property. Based on the distance from the subject property, ECS does not believe issues at this off-site listing would result in a REC for the subject property.

### 5.2.2 State Hazardous Waste Sites (SHWS) Inventory

State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not be already listed on the federal CERCLIS database.

The subject property was not listed on the SHWS database.

The database report lists three properties within the designated search radius for this database. One of these properties is discussed below:

**WR Boyd Investments, 90 Howell Mill Road.** This facility is located approximately 110 feet southwest of the subject property. This site is hydrologically separated from the subject property by an unnamed stream. This site was formerly used as a junkyard and automotive recycling facility. During a North Carolina Department of Transportation (NCDOT) project, a stream was diverted onto this site as part of road improvement activities. The stream is located approximately 880 feet southwest of the subject property. During stream excavation activities, black soil mixed with broken glass and car parts was encountered in the stream diversion. Soil from the ditch, including some black soil mixed with car parts, was excavated and stockpiled near the excavation area. The downgradient portion of the ditch, located to the south, and a small upgradient portion of the ditch, located to the north, were excavated. Soil assessment activities were conducted to determine the extent of potential impacted soil in the stream diversion ditch. It was determined that the black soil was impacted with polychlorinated biphenyls (PCBs), petroleum constituents, oil & grease, and heavy metals above the Department of Environment and Natural Resources (DENR) target levels. Based on the Resource Conservation and Recovery Act (RCRA) metals analytical results, lead concentrations exceeded the RCRA regulatory threshold for characteristically hazardous waste in the soil located in the sidewalls of the downgradient position of the ditch and in the surface soil located in the central portion of the ditch. The impacted stockpiled soil was determined to be non-hazardous. Impacted soil that was hindering and disturbing the NCDOT road project was removed. Impacted soil outside the NCDOT work areas was left in place. Approximately 111.6 tons of black stained soil from the stream diversion area was excavated and removed. Approximately 252.4 tons of non-hazardous impacted stockpiled soil was transported off-site. The area was backfilled and four post excavation confirmation samples were collected. Concentrations of total petroleum hydrocarbon diesel range organic (TPH DRO) and oil and grease (O&G) were detected above the soil remediation goals (SRGs). Low level volatile organic compounds (VOCs) were also detected. A low level of chloromethane was detected in excess of soil remediation goals. Elevated metals including arsenic, barium, cadmium, lead, mercury, and/or selenium were also detected. Based on our review of reasonably ascertainable information, distance from the subject property, and measured groundwater flow to the south and away from the subject property, issues at this site are not considered to present a REC for the subject property.

ECS has reviewed the remaining listings reported by EDR on the SHWS database. These other off-site listings are reported more than 1,960 feet from the subject property. Based on the distance from the subject property, ECS does not believe issues at these off-site listings would result in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

### 5.2.3 Old Landfill Inventory (OLI)

The OLI is an old landfill inventory maintained by the State regulatory agency. The inventory does not include no further action sites and other agency lead sites.

The subject property was not listed on the OLI database.

The database report lists one property within the designated search radius for this database. This property is discussed below:

**Town of Waynesville Dump, Bible Baptist Road.** This listing is located approximately 840 feet north of the subject property. Based on the distance from the subject property, ECS does not believe issues at this off-site listing would result in a REC for the subject property.

### 5.2.4 State Leaking Aboveground Storage Tank (LAST)

The LAST list is a record of reported leaking aboveground storage tank incidents.

The subject property was not listed on the LAST database.

The database report lists one property within the designated search radius for this database. This property is discussed below:

**Brown NCDOT Parcel 32, 838 Howell Mill Road.** This listing is located approximately 2,300 feet east of the subject property. Based on the distance from the subject property, ECS does not believe issues at this listing would result in a REC for the subject property.

### 5.2.5 Leaking Underground Storage Tank (LUST) List

The LUST list is a record of reported leaking underground storage tank incidents. The LUST list may also identify properties that have had soil and/or groundwater contamination associated with documented releases from aboveground storage tanks (ASTs), surface spills, and other sources.

The subject property was not listed on the LUST database.

The database report lists nine properties within the designated search radius for this database. ECS has reviewed the listings reported by EDR on the LUST database. These off-site listings are reported more than 910 feet from the subject property. Based on the distance from the subject property, ECS does not believe releases at these off-site listings would result in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

### 5.2.6 Registered Underground Storage Tank (UST) List

The Registered UST List inventories underground storage tanks registered with the state. This list does not identify USTs that have not been registered or are exempt, such as home heating oil tanks and other unregulated tanks.

The subject property was not listed on the UST database.

The database report identified one UST facility within 0.25 mile of the subject property. This facility is described below:

**Ingles Gas Express 723, 201 Barber Boulevard.** This listing is located approximately 1,140 feet west of the subject property. Based on the distance from the subject property, ECS does not believe this off-site listing would have issues that would present a REC for the subject property.

### 5.3 Additional Environmental Record Sources

#### 5.3.1 Additional Non-ASTM Federal Databases

Neither the subject property nor properties within the designated search radii were identified on the additional non-ASTM federal databases researched for this assessment.

#### 5.3.2 Additional Non-ASTM State Databases

##### 5.3.2.1 Leaking Underground Storage Tanks (LUST TRUST)

The LUST TRUST database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

The subject property was not listed on the LUST TRUST database.

The database report lists two properties within the designated search radius for this database. ECS has reviewed the properties listed on the LUST TRUST database. These off-site listings are reported more than 910 feet from the subject property. Based on the distance from the subject property, ECS does not believe these off-site listings would have issues that would result in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

##### 5.3.2.2 Incident Management Database (IMD)

The IMD is a database of groundwater and soil contamination incidents.

The subject property was not listed on the IMD database.

The database report lists five properties within the designated search radius for this database. ECS has reviewed the off-site listings reported by EDR on the IMD database. These off-site listings are reported more than 1,000 feet from the subject property. Based on the distance from the subject property, ECS does not believe issues at these listings would result in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

##### 5.3.2.3 Solid Waste Recycling (SWRCY) Facilities

The Solid Waste Recycling Facilities database identifies sites considered to be recycling centers.

The subject property was not listed on the SWRCY database.

The database report lists one facility within the designated search radius for this database. This facility is discussed below:

> **Schulhofers, Inc., 525 Howell Mill Road.** This facility is located approximately 620 feet east of the subject property. Based on the distance from the subject property, ECS does not believe this off-site listing would have issues that would result in a REC for the subject property.

#### 5.3.2.4 Other State Database

**DEBRIS:** NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency.

The subject property was not listed on the DEBRIS database.

The database report lists one facility within the designated search radius for this database. This facility is discussed below:

> **Town of Waynesville, End of Bible Baptist Road.** This listing is located approximately 840 feet north of the subject property. Based on the distance from the subject property, ECS does not believe issues at this off-site listing would result in a REC for the subject property.

**LCID:** A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

The subject property was not listed on the LCID database.

The database report lists two facilities within the designated search radius for this database. ECS has reviewed the facilities listed on the SWRCY database. These off-site listings are reported more than 840 feet from the site. Based on the distance from the subject property, ECS does not believe these off-site listings would have issues that result in RECs for the subject property. Additional information pertaining to these listings can be viewed in the regulatory report included in Appendix III.

### 5.3.3 Other Proprietary Databases

Neither the subject property nor properties within the designated search radii were identified on the other proprietary databases researched for this assessment.

### 5.3.4 Unmapped (Orphan) Facilities and Sites

One property was identified on the Orphan Summary List. This facility is considered unmappable because the facility information in the database is insufficient and/or does not report accurate facility locations. Based on available address and location information, ECS did not identify the listed orphan site within the vicinity of the subject property.

## 5.4 Regulatory Review Summary

A regulatory database search report was provided by EDR. The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of reasonably ascertainable public

records, ECS does not consider the listings to be potential sources of soil, groundwater, or vapor impact on the subject property. Therefore, ECS does not believe that the off-site listings would have issues that result in RECs for the subject property.

## 6.0 HISTORICAL USE INFORMATION

### 6.1 Aerial Photograph Review

ECS reviewed aerial photographs of the subject property and immediately surrounding properties for evidence of former usage which may indicate potential environmental issues. The aerial photographs were obtained from EDR and Google Earth. The aerial photographs reviewed were dated 1956, 1975, 1986, 1989, 1992, 1995, 1998, 2006, 2009, 2012, 2016, and 2022. Aerial photographs dated prior to 1956 were not available for review. The ECS review is dependent on the quality and scale of the photographs.

The following is a description of relevant information from the aerial photographs:

| Year(s) | Subject Property | Adjoining Properties | REC? (yes or no) |
|---|---|---|---|
| 1956 | Cleared and wooded land developed with the current southeastern residence, a residence and outbuildings in the central portion of the property | Agricultural, cleared, and wooded land, Calhoun Road and residences to the north, residences to the east and southeast, Howell Mill Road to the south, Calhoun Road and apparent tree farm to the west | No |
| 1975 | Similar to 1956 aerial | Similar to 1956 aerial with interstate farther north, commercial development farther south and southwest | No |
| 1986 and 1989 | Similar to 1975 aerial | Similar to 1975 aerial with the current industrial facility on the southern adjoining property, the current commercial retail center to the west | No |
| 1992 through 1998 | Similar to 1989 aerial | Similar to 1989 aerial with commercial development farther west | No |
| 2006 | Similar to 1998 aerial | Similar to 1998 aerial with commercial development farther east, addition to the southern adjoining industrial building | No |
| 2009 through 2022 | Similar to 2006 aerial | Similar to 2006 aerial with electrical substation to the northwest | No |

### 6.2 Sanborn Fire Insurance Map Review

In an effort to identify past uses, ECS utilized EDR to search for historical Sanborn Fire Insurance Maps (Sanborn) for the subject property and surrounding area. Sanborn maps were not available for this area. The absence of such maps generally indicates that the subject property is located in an area where Sanborn maps were not produced because the area was rural or it was not economically feasible. ECS does not expect the lack of Sanborn maps to impact our ability to render a professional opinion concerning the subject property given the amount of historical information obtained from our research, the USGS topographic map, aerial photographs, city directories, and other historical records obtained. A copy of the Unmapped Property report is included within Appendix IV.

### 6.3 Historical USGS Topographic Maps

Topographic maps are produced by the USGS for various time periods. ECS reviewed topographic maps of the subject property and immediately surrounding properties for evidence of former usage that may indicate potential environmental issues. The topographic maps were obtained from EDR and were dated 1893/1894/1897, 1901/1905, 1906, 1935, 1941, 1942, 1967, 1979, 2013, 2016, and 2019. Topographic maps dated prior to 1893 were not available for review.

The following is a description of relevant information from the topographic maps:

| Year(s) | Subject Property | Adjoining Properties | REC? (yes or no) |
|---|---|---|---|
| 1893/ 1894/1897 | Undeveloped land generally sloping south-southeast | Undeveloped land generally sloping east and south, Richland Creek followed by railroad tracks to the south | No |
| 1901/1905 | Similar to 1893/1894/1897 map | Similar to 1893/1894/1897 map with a road and scattered residences to the north and west | No |
| 1906 and 1979 | Not depicted | Not depicted | No |
| 1935 | Cleared land developed with a residence in the central portion of the property, unpaved driveway in the northeastern portion of the property, tributary to Richland Creek along the western property boundary | Cleared and wooded land with unpaved roads to the north, east, and west, scattered residences to the north, east, and southeast, Howell Mill Road to the south, tributary to Richland Creek to the northwest and southwest, Richland Creek farther south, commercial buildings farther southwest | No |

| Year(s) | Subject Property | Adjoining Properties | REC? (yes or no) |
|---|---|---|---|
| 1941 and 1942 | Similar to 1935 map, depicted as cleared and wooded land generally sloping south-southwest, western tributary not depicted | Similar to 1935 map, depicted as cleared and wooded land generally sloping south, northwestern and southwestern tributary not depicted | No |
| 1967 | Similar to 1942 map with the current residence in the southeastern portion of the property, wooded land in the central portion of the property, tributary depicted along the western property boundary | Similar to 1942 map with residential development to the east and southeast, apparent tree farm to the west, tributary depicted to the northwest and southwest | No |
| 2013 | Cleared land, structural layer not depicted, topographically similar to 1967 map | Cleared land with roads, structural layer not depicted, topographically similar to 1967 map | No |

### 6.4 City Directory Review

One of the ASTM standard historical sources to be reviewed for previous subject property uses is local street directories, commonly known as City Directories. The purpose of the directory review is to identify past occupants of the subject property, adjoining properties, or nearby properties. In some rural areas, street directories information is limited.

ECS reviewed city directories obtained from EDR. The subject property address utilized for the research was 333 Howell Mill Road. The directories reviewed were dated 1974, 1980, 1985, 1987, 1992, 1995, 2000, 2005, 2010, 2014, and 2017. The directories reviewed prior to 2000 did not provide listings for the subject property or surrounding area. Directories dated prior to 1974 were not provided for review. A copy of the city directory report is included in Appendix IV.

The following is a description of relevant information from the city directories:

| Year(s) | Listed Occupants | REC? (yes or no) |
|---|---|---|
| **Subject property (333 Howell Mill Road)** | | |
| 2005, 2014, and 2017 | Residence | No |
| 2010 | Occupant Unknown | No |

| Year(s) | Listed Occupants | REC? (yes or no) |
|---|---|---|
| **Northern adjoining (157 Calhoun Road)** | | |
| 2000 through 2017 | Residence | No |
| **Eastern adjoining (11 Palmer Hill Road)** | | |
| 2010 and 2014 | Residence | No |
| **Eastern adjoining (90 Palmer Hill Road)** | | |
| 2005 through 2017 | Residence | No |
| **Southern adjoining (288 Howell Mill Road)** | | |
| 2000 through 2010 | Associated Packaging Enterprises/Associated Packaging Technology, Inc. (not a REC based on presumed groundwater flow away from the subject property) | No |
| 2014 and 2017 | Associated Packaging Enterprises, Sonoco Products | No |
| **Western adjoining (271 Howell Mill Road)** | | |
| 2005, 2010, and 2017 | Residence | No |
| 2014 | Occupant Unknown | No |

### 6.5 Property Tax Files

Property tax files may include records of past ownership, appraisals, maps, sketches, photos, or other information kept by the local jurisdiction for property tax assessment purposes. According to the Haywood County tax assessor online information, the subject property is owned by Mountain Housing Opportunities, Inc. The subject property is listed as a 5.1-acre parcel with an identification number of 8616-42-5414. Additionally, the on-site residence is reported as being constructed in 1950 and contains 1,880 square feet of space.

### 6.6 Recorded Land Title Records

Recorded land title records may include leases, land contracts, and AULs recorded by the local jurisdiction. Land title records may provide only a list of the names of previous owners and may be of limited use; however, they may provide useful information about uses or occupancy of the property when employed in combination with other sources.

ECS reviewed the following records online through the Haywood County GIS website and the American Title Research, LLC. Environmental Lien and AUL Search Report. Environmental concerns were not noted. The records indicated the following:

- Deed Book 133, Page 179, dated January 13, 1947 - Robert and Ann Shook obtained the property from W.C. and Myrtle Phillips.

- Deed Book 150, Page 370, dated November 19, 1951 - Kate Phillips obtained the property from D.J. and Louise Phillips.
- Deed Book 159, Page 83, dated November 20, 1953 - Myra Killian obtained the property from Kate Phillips.
- Deed Book 202, Page 318, dated February 5, 1964 - Robert and Ann Shook obtained the property from Bill and Wilda Maney.
- Deed Book 486, Pages 472 and 478, dated February 13, 2001 - R. Timothy and Patricia Shook obtained the property from Ann Shook.
- Deed Book 489, Page 264, dated March 30, 2001 - R. Timothy and Patricia Shook obtained the property from Ann Shook.
- Deed Book 1050, Page 24, dated December 7, 2021 - Mountain Housing Opportunities, Inc. obtained the property from Robert, Timothy, and Patricia Shook.

### 6.7 Building Department Records

The term building department records means those records of the local government indicating permissions of the local government to construct, alter or demolish improvements on the property.

ECS contacted the Town of Waynesville Building Department to determine if they had historical information regarding construction dates, inspections, or other information regarding the subject property. A Freedom of Information Act request was submitted to the Building Department on May 17, 2023. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

### 6.8 Zoning/Land Use Records

The term zoning/land use records refer to records of the local government indicating the uses permitted by the government in particular zones within its jurisdictions.

ECS reviewed zoning/land use records obtained from Haywood County GIS. The subject property is currently zoned for urban residential use.

### 6.9 Previous Reports

We have not been provided with environmental or engineering assessment reports for the subject property completed by others, nor has ECS completed similar studies or prior assessments of the subject property.

### 6.10 Other Historical Sources

Other credible historical sources may be reviewed to identify past uses of the subject property. These sources may include websites, county or state road maps, historical society documents, or local library information.

### 6.10.1 Local Fire Department

The Town of Waynesville Fire Department was contacted to determine if they had historical information regarding environmental issues or responses at the subject property. A Freedom of Information Act request was submitted to the Fire Department on May 17, 2023. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

### 6.10.2 Local Health Department

Ms. Olivia Richard contacted the Environmental Health Department on May 17, 2023 to determine if they had historical information regarding environmental issues or responses at the subject property. No information has been received at the time of the report completion. If information is received that changes the conclusions or recommendations of this report, ECS will forward the information to the Client.

### 6.11 Historical Use Summary

According to historical research, the subject property consisted of undeveloped land as early as 1893. Between 1905 and 1935, the property was developed with a residence in the central portion of the property. The current southeastern residence was constructed in 1950. Outbuildings were constructed in the central portion of the property by 1956. The property consisted of cleared and wooded land with the current southeastern residence and a residence and outbuildings in the central portion of the property between at least 1956 and 2022. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the property has consisted of grass-covered and wooded land with the southeastern residence.

Historical aerial photographs depict an apparent residence and outbuilding structures on the subject property that were not located on the subject property during our site reconnaissance. ECS does not have technical evidence how these structures were heated, or if the structures utilized septic tanks or water supply wells. Based on the age, it is possible that the structures were heated with oil stored in USTs. ECS did not observe evidence of USTs, septic tanks, or water supply wells during our site reconnaissance. While not considered a REC, if encountered during site development, USTs, septic systems, and water supply wells should be closed in accordance with applicable laws.

The surrounding area has developed slowly from a primarily agricultural and residential area to a residential and commercial area beginning in the 1970s. The northern and eastern adjoining residences were constructed prior to the 1950s. The southern adjoining industrial building and the western adjoining commercial retail buildings were constructed in 1985.

No obvious indications of RECs were identified in the historical data review.

## 7.0 SITE AND AREA RECONNAISSANCE

### 7.1 Methodology

Ms. Olivia Richard of ECS conducted the field reconnaissance on May 16, 2023. The weather at the time of the reconnaissance was approximately 75 degrees Fahrenheit and partly cloudy. Observations were made from a walking reconnaissance around the perimeter, around the building, and along several transects across the subject property. Access or visibility limitations, if any, are discussed in Section 2.6. Subject property photographs are included in Appendix V.

### 7.2 On-Site Features

#### 7.2.1 Observed Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The property generally slopes from the east-northeast to the west-southwest.

#### 7.2.2 Past Site Uses

During the site reconnaissance, ECS observed the subject property for evidence of past occupancy or usage that could indicate the presence of environmental concerns. Based on current site conditions observed during the site reconnaissance, ECS did not identify evidence of past uses or occupancy that would indicate the presence of a REC for the subject property.

#### 7.2.3 Current Uses

The subject property is approximately 5.1 acres in size and consists of grass-covered and wooded land. The southeastern portion of the property is developed with a paved driveway and an approximate 1,880 square foot single-family residence that was reportedly constructed in 1950. A vent pipe and fill port indicative of a UST are located at the southwestern corner of the residence. A dilapidated modular movable shed is located in the eastern portion of the property. Logged trees are located in the central portion of the property. Water services are available to the subject property through the Town of Waynesville. The residence is reportedly serviced by a private septic tank. The residence appears to be currently heated with electricity and to have previously been heated with heating oil.

Howell Mill Road affords access to the subject property

The table below lists pertinent features of interest that were assessed for the subject property. Relevant information regarding pertinent features is discussed further in this section.

| Feature | Yes | No |
|---|---|---|
| Hazardous Substances and Petroleum Products in Connection with Identified Uses | ✔ | |
| Hazardous Substance and Petroleum Product Containers Not in Connection with Identified Uses | | ✔ |

| Feature | Yes | No |
|---|---|---|
| Drums, Totes, and Intermediate Bulk Containers | | ✔ |
| Unidentified Substance Containers | | ✔ |
| Underground or Aboveground Storage Tanks | ✔ | |
| Strong, Pungent or Noxious Odors | | ✔ |
| Standing Surface Water and Pools or Sumps Containing Liquids Likely to be Hazardous Substances or Petroleum Products | | ✔ |
| Known or Suspect PCB-containing Equipment | | ✔ |
| Stains or Corrosion to Floors, Walls or Ceilings | | ✔ |
| Stained Soil or Pavement | | ✔ |
| Floor Drains and Sump Pumps | | ✔ |
| Pits, Ponds or Lagoons | | ✔ |
| Stressed Vegetation | | ✔ |
| Solid Waste Mounds or Non-natural Fill Materials | ✔ | |
| Water/Wastewater Discharge | | ✔ |
| Groundwater Wells | | ✔ |
| Septic Systems or Cesspools | | ✔ |
| Hydraulic Equipment (Elevators, Lifts, Compactors, Etc.) | | ✔ |
| Dry Cleaning | | ✔ |
| Specialized Industrial Equipment | | ✔ |
| Onsite Electrical Generators | | ✔ |
| Oil-water Separators | | ✔ |

**Hazardous Substances and Petroleum Products in Connection with Identified Uses**

Several one-gallon buckets of paint were observed on the retaining wall located to the northeast of the residence. The observed buckets were situated on asphalt and brick surfaces. Staining was not observed on the buckets or the ground surfaces in the vicinity of the buckets.

**Underground or Aboveground Storage Tanks**

A fill port and vent pipe indicative of a UST, likely used for storing heating oil, is located at the southwestern corner of the building. Staining indicative of overfill was not observed near the fill port. We did not observe evidence of other USTs or ASTs at the subject property at the time of our site visit.

**Solid Waste Mounds or Non-natural Fill Materials**

ECS observed a debris pile consisting of soil, concrete blocks, and bricks to the northeast of the residence. This pile appears to contain debris remaining from the demolition of a portion of the retaining wall located to the north of the paved driveway. This portion of the retaining wall was demolished in order to afford access for demolition equipment/machinery to the northern and central portions of the property. ECS observed logged trees and discarded wire in the central portion of the property. The wire is reportedly left from Duke Power cutting the wires prior to the demolition of the central residence and outbuildings in March 2022.

### 7.3 Adjoining and Nearby Properties

Contiguous and nearby properties were observed during a walking and vehicular reconnaissance of the subject property boundary and public places. The subject property is located in a residential and commercial area of Waynesville, Haywood County, North Carolina.

| Direction | Description | Relative Gradient | REC |
|---|---|---|---|
| North | Calhoun Road followed by residences | Up-gradient to cross-gradient | No |
| East | Residences with several outbuildings | Up-gradient | No |
| South | Howell Mill Road followed by Sonoco Plastics | Down-gradient | No |
| West | A residence and Calhoun Road followed by wooded land | Down-gradient to up-gradient | No |

Aboveground storage tanks (ASTs), likely containing heating oil, were observed at the eastern and western adjoining residences. Staining was not observed on the ASTs or on the ground surfaces in the vicinity of the ASTs. These ASTs do not represent RECs.

Other pertinent features of environmental concern were not observed on adjoining or nearby properties during the site reconnaissance.

### 7.4 Site and Area Reconnaissance Summary

According to our observations of the subject and surrounding properties, the subject property is a vacant, residential property. Details pertaining to our on-site and off-site observations are referenced previously. The following REC was identified during our on-site and off-site reconnaissance:

- A fill port and vent pipe, indicative of a UST, were observed at the southwestern corner of the residence. ECS considers the potential for an undocumented release from the UST to represent a REC.

## 8.0 ADDITIONAL SERVICES

ASTM guidelines identify non-scope issues, which are beyond the scope of this practice. Non-scope issues have the potential to be business environmental risks. Some of these non-scope issues include; asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, and suspected microbial growth.

In addition to the Phase I ESA, ECS has been contracted to perform a HUD Environmental Assessment and a Radon Mitigation Design. The results will be provided under separate covers.

## 9.0 INTERVIEWS

Ms. Olivia Richard interviewed Ms. Adeline Wolfe with Mountain Housing Opportunities, Inc., the property owner, on May 15, 2023. Mountain Housing Opportunities, Inc. has owned the subject property since December 2021, and Ms. Wolfe has limited knowledge related to the subject property and associated activities. She indicated that to her knowledge, there was previously an additional residence and a barn located in the central portion of the property. To her knowledge, there are no water supply wells or storage tanks at the property. She believes the current residence is serviced by a private septic tank. Water is provided to the subject property by the Town of Waynesville and the property is not connected to municipal sewer services. Ms. Wolfe is unaware of how the current residence and former residence were heated. She indicated that the property is being assessed as part of a HUD environmental review.

Ms. Wolfe indicated that she is not aware of 1) any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, at, or from the subject property; 2) any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the subject property; or 3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

ECS interviewed local government officials and agencies via written Freedom of Information Act requests. The information gained from such sources is included in Section 6.10.

## 10.0 FINDINGS AND CONCLUSIONS

### 10.1 Findings and Opinions

The subject property is identified by the Haywood County Geographic Information System (GIS) website as Parcel Identification Number (PIN) 8616-42-5414 and is owned by Mountain Housing Opportunities, Inc. The approximately 5.1-acre subject property consists of grass-covered and wooded land. The southeastern portion of the property is developed with a paved driveway and a vacant, approximate 1,880 square foot single-family residence that was reportedly constructed in 1950. A vent pipe and fill port indicative of an underground storage tank (UST) are located at the southwestern corner of the residence. A dilapidated modular movable shed is located in the eastern portion of the property. Logged trees are located in the central portion of the property. Water services are available to the subject property through the Town of Waynesville. The residence is reportedly serviced by a private septic tank. The residence appears to currently be heated with electricity and to have previously been heated with heating oil.

The subject property is located in a residential and commercial area of Waynesville, North Carolina. Based on our review of site topography and conditions observed during the site reconnaissance, it is our opinion that properties to the east-northeast and west are presumed to be hydrogeologically up-gradient of the subject property. The adjoining properties to the north of the subject property consist of Calhoun Road followed by residences; residences with several outbuildings to the east; Howell Mill Road followed by Sonoco Plastics to the south; and a residence and Calhoun Road followed by wooded land to the west. ECS did not identify environmental issues associated with current occupants or activities at adjoining or nearby properties that are believed to present a recognized environmental condition (REC) at the subject property.

Based on the records search, site reconnaissance and interviews, it appears that the subject property consisted of undeveloped land as early as 1893. Between 1905 and 1935, the property was developed with a residence in the central portion of the property. The current southeastern residence was constructed in 1950. Outbuildings were constructed in the central portion of the property by 1956. The property consisted of cleared and wooded land with the current southeastern residence and a residence and outbuildings in the central portion of the property between at least 1956 and 2022. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the property has consisted of grass-covered and wooded land with the southeastern residence. Historical records prior to 1893 were not reasonably ascertainable for the subject property.

Historical aerial photographs depict an apparent residence and outbuilding structures on the subject property that were not located on the subject property during our site reconnaissance. ECS does not have technical evidence how these structures were heated, or if the structures utilized septic tanks or water supply wells. Based on the age, it is possible that the structures were heated with oil stored in USTs. ECS did not observe evidence of USTs, septic tanks, or water supply wells during our site reconnaissance. While not considered a REC, if encountered during site development, USTs, septic systems, and water supply wells should be closed in accordance with applicable laws.

Our review of historical information for adjoining or nearby properties identified the area as originally agricultural and residential land that transitioned to a residential and commercial area beginning in the 1970s. The northern and eastern adjoining residences were constructed prior to the 1950s. The southern adjoining industrial building and the western adjoining commercial retail buildings were constructed in 1985.

A regulatory database search report was provided by Environmental Data Resources, Inc. (EDR). The database search involves researching a series of Federal, State, Local, and other databases for facilities and properties that are located within specified minimum search distances from the subject property. The report did not identify the subject property on the databases researched. The EDR report identified several off-site properties within the minimum ASTM search distances. Based on our review of reasonably ascertainable public records, ECS does not consider the listings to be potential sources of soil, groundwater, or vapor impact on the subject property. Therefore, ECS does not believe that the off-site listings would have issues that result in RECs for the subject property.

### 10.2 Significant Data Gaps

Significant data gaps that would be expected to impact our ability to render a professional opinion concerning the subject property were not identified.

### 10.3 De Minimis Conditions

ECS did not identify *de minimis* conditions associated with the subject property during this assessment.

### 10.4 Conclusions

We have performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E1527-21 of the Proposed Balsam Edge Apartments property located at 333 Howell Mill Road, in Waynesville, Haywood County, North Carolina, the subject property. Any exceptions to, or deletions from, this practice are described in Section 2.6 of this report. This assessment has revealed the following recognized environmental condition in connection with the subject property:

- A fill port and vent pipe, indicative of a UST, were observed at the southwestern corner of the residence. ECS considers the potential for an undocumented release from the UST to represent a REC.

### 10.5 Recommendations

It is the opinion of ECS Southeast, LLP that additional environmental assessment of the subject property is warranted at this time.

## 11.0 REFERENCES

ASTM E1527-21. Standard Practice for Environmental Site Assessment, Phase I Environmental Site Assessment Process.

Environmental Data Resources, Inc., EDR Aerial Photo Decade Package (years 1956, 1975, 1986, 1989, 1992, 1995, 1998, 2006, 2009, 2012, and 2016), dated November 21, 2022.

Environmental Data Resources, Inc., EDR Certified Sanborn Map Report (no coverage), dated November 17, 2022.

Environmental Data Resources, Inc., EDR City Directory Image Report (years 1974, 1980, 1985, 1987, 1992, 1995, 2000, 2005, 2010, 2014, and 2017), dated November 22, 2022.

Environmental Data Resources, Inc., EDR Database Report, dated May 12, 2023.

Environmental Data Resources, Inc., EDR Historical Topo Map Report (years 1893/1894/1897, 1901/ 1905, 1906, 1935, 1941, 1942, 1967, 1979, 2013, 2016, and 2019), dated November 17, 2022.

Haywood County Environmental Health Department Freedom of Information Request, submitted May 17, 2023.

Haywood County GIS website, accessed on May 17, 2023.

North Carolina Department of Environmental Quality regulatory file review.

Property owner interview with Ms. Adeline Wolfe with Mountain Housing Opportunities, Inc., dated May 15, 2023.

Town of Waynesville Building Department Freedom of Information Request, submitted accessed May 17, 2023.

Town of Waynesville Fire Department Freedom of Information Request, submitted May 17, 2023.

User Questionnaire, completed by Ms. Adeline Wolfe, dated May 11, 2023.

# Appendix I: Figures

**Figure 1**

Site Location Map
Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, North Carolina 28786

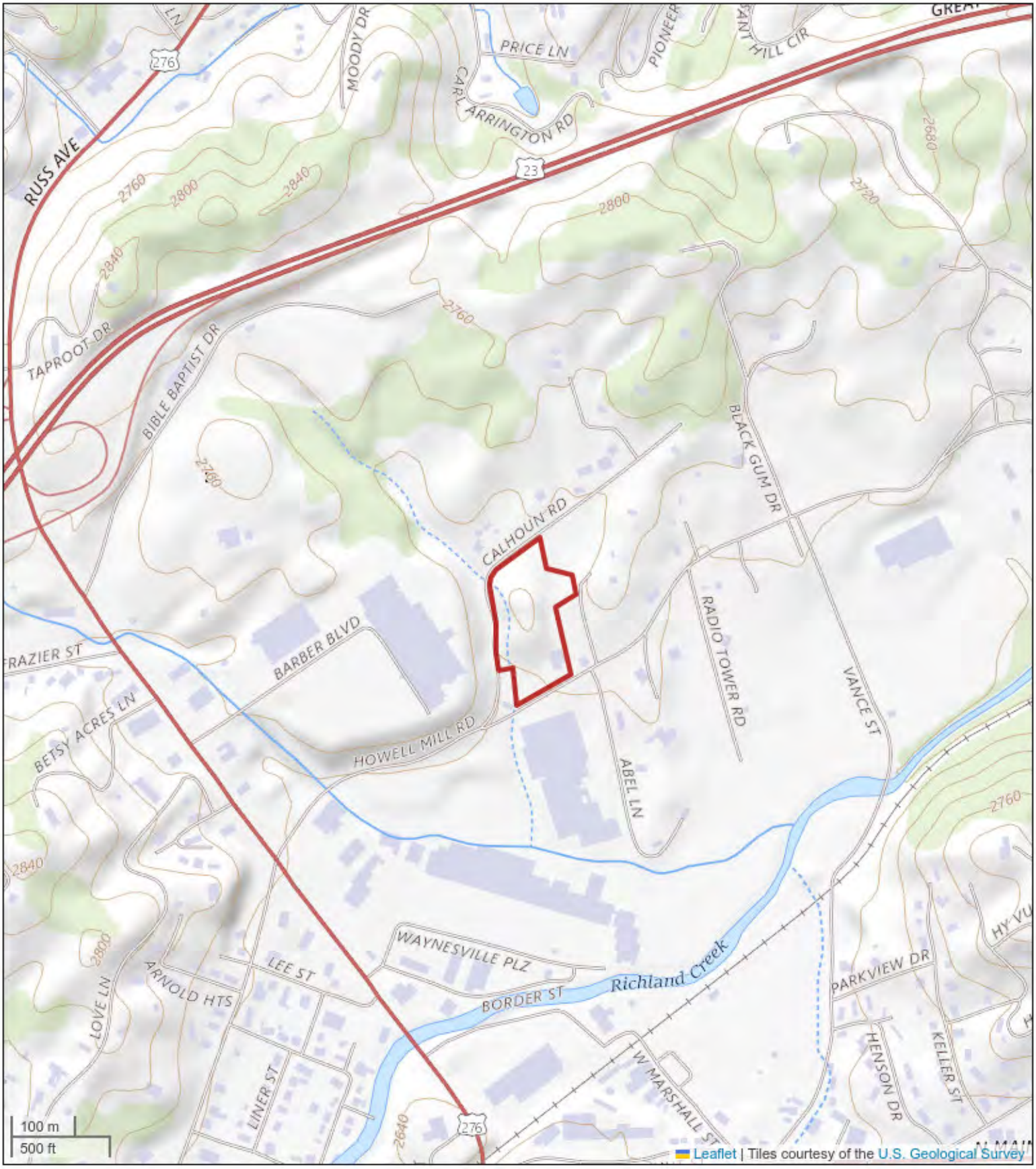


**Figure 2**

USGS Topographic Map
Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, North Carolina 28786

**Figure 3**

Area Features Map
Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, North Carolina 28786

# Appendix II: Interviews, Correspondence and User Questionnaire

# Environmental Questionnaire for User

**Completion required for conformance with ASTM E 1527-21. Failure to provide this information may preclude CERCLA liability protections for the property purchaser. Please return answered form to ECS.**

**Site Name:** 271 Howell Mill Road. Waynesville, NC

**Name and Title of Person Completing Questionnaire (Please Print):**

Adeline Wolfe, Project Manager

**Signature of Person Completing Questionnaire:**

**Date:** 5/11/2023

**Name of Your Company and Your Contact Number (Please Print):**

Mountain Housing Opportunities, Inc. 828.254.4030 ext. 133

**ASTM E 1527-21 indicates that, "Either the user shall make known to the environmental professional the reason why the user wants to have the Phase I Environmental Site Assessment performed or, if the user does not identify the purpose of the Phase I Environmental Site Assessment, the environmental professional shall assume the purpose is to qualify for an LLP to CERCLA liability and state this in the report."** As the user of this ESA, what is the reason for conducting the Phase I ESA? If this question is unanswered, ECS will assume that the user's reason for the ESA is to qualify for landowner liability protections to CERCLA liability.

Please state reason for having ESA performed: Completion of HUD environmental review requirements

**Will you provide Property Title Records and a Legal Description to ECS?**

Please select one: **NO** ○ **YES** ◉

**Will you provide a 50-year chain of title abstract to ECS?**

Please select one: **NO** ◉ **YES** ○

**Please Send Information Promptly**

**(1a.) Environmental liens that are filed or recorded against the site (40 CFR 312.25).** ASTM E 1527-21 states that the user should perform a review of recorded land title records and judicial records for environmental liens or activity and use limitations for the site. Please forward the results of the land title record and judicial record review. If you would prefer, ECS can obtain this information from a third party provider for **an additional fee**. Please let ECS know if you would like to contract ECS for this service.

Please select one: **Client to Provide** ○ **ECS to Obtain** ◉

**(1b.)** **Activity and use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).** Are you aware of any activity and use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

**(2.)** **Specialized knowledge -** As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

**(3.)** **Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).** Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

**(a.)** Do you know the past uses of the property?

Please select one: **NO** ○ **YES** ◉
**If yes, please state uses**: _____
Property has been used as single family dwelling and before that a single family dwelling that used the property as a cow pasture

**(b.)** Do you know of specific chemicals that are present or once were present at the property?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

**(c.)** Do you know of spills or other chemical releases that have taken place at the property?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

**(d.)** Do you know of any environmental cleanups that have taken place at the property?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

_____

_____

**(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).** Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Please select one: **NO** ○ **YES** ◉
**If no, please explain**: _____

_____

_____

If you are aware that there is a difference, is the lower purchase price because contamination is known or believed to be present at the property?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

_____

_____

**(5.) Parcel Property Owner(s) & Contact Number(s):**

A. Mountain Housing Opportunities, Inc. 828.254.4030 ext. 133

B. _____

C. _____

D. _____

**Property Manager and Occupant(s) & Contact Number(s)**

**Property Manager**: _____

**Occupant/Tenant**: _____

**Occupant/Tenant**: _____

**(6.) The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).** As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Please select one: **NO** ◉ **YES** ○
**If yes, please explain**: _____

_____

_____

# Appendix III: Regulatory Records Documentation

**Proposed Balsam Edge Apartments**
271 Howell Mill Road
Waynesville, NC 28786

Inquiry Number: 7335415.2s
May 12, 2023

# The EDR Radius Map™ Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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**GEOCHECK ADDENDUM**

**GeoCheck - Not Requested**


***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.


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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

271 HOWELL MILL ROAD
WAYNESVILLE, NC 28786

### COORDINATES

| | |
|---|---|
| Latitude (North): | 35.5047540 - 35˚ 30' 17.11'' |
| Longitude (West): | 82.9843800 - 82˚ 59' 3.76'' |
| Universal Tranverse Mercator: | Zone 17 |
| UTM X (Meters): | 320025.0 |
| UTM Y (Meters): | 3930632.0 |
| Elevation: | 2681 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 13896599 CLYDE, NC |
| Version Date: | 2019 |
| Southeast Map: | 13742066 WAYNESVILLE, NC |
| Version Date: | 2019 |
| Southwest Map: | 13837547 HAZELWOOD, NC |
| Version Date: | 2019 |
| Northwest Map: | 13837535 DELLWOOD, NC |
| Version Date: | 2019 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20141019 |
| Source: | USDA |

# MAPPED SITES SUMMARY

Target Property Address:
271 HOWELL MILL ROAD
WAYNESVILLE, NC 28786

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| Reg | SCHULHOFFER JUNKYARD | | NC HSDS | Same | 2001, 0.379, ENE |
| 1 | INGLES GAS EXPRESS 7 | 201 BARBER BLVD | UST, Financial Assurance | Higher | 524, 0.099, West |
| A2 | NORTH CAROLINA DEPT | 90 HOWELL MILL RD | RCRA NonGen / NLR | Lower | 563, 0.107, SSW |
| A3 | WR BOYD INVESTMENTS | 90 HOWELL MILL RD | SHWS | Lower | 563, 0.107, SSW |
| 4 | SCHULHOFERS, INC. | 525 HOWELL MILL ROAD | SWRCY | Lower | 894, 0.169, ENE |
| B5 | PLAZA BP | 598 RUSS AVENUE | LUST, UST, IMD, Financial Assurance | Lower | 1377, 0.261, SW |
| C6 | TOWN OF WAYNESVILLE | BIBLE BAPTIST RD. | OLI | Higher | 1388, 0.263, NW |
| D7 | TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | LCID | Higher | 1399, 0.265, NNW |
| D8 | TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | DEBRIS | Higher | 1452, 0.275, NNW |
| E9 | AZTEX 209 | 504 RUSS AVENUE | LUST, LUST TRUST, UST, ASBESTOS, Financial... | Lower | 1462, 0.277, SSW |
| B10 | AMOCO FOOD SHOP #209 | 601 RUSS AVENUE | LUST, IMD | Lower | 1475, 0.279, SW |
| C11 | TOWN OF WAYNESVILLE | BIBLE BAPTIST DRIVE | LCID | Higher | 1475, 0.279, NNW |
| E12 | RUSS AVE SHELL (FORM | 475 RUSS AVENUE | IMD | Lower | 1636, 0.310, SSW |
| F13 | RUSS AVE SHELL (FORM | 800/475 RUSS AVENUE | LUST | Lower | 1701, 0.322, West |
| 14 | MESSER'S EXXON STATI | 701 DELLWOOD ROAD | LUST, UST, IMD | Lower | 1841, 0.349, SW |
| F15 | MOUNTAIN ENERGY STOR | 843 RUSS AVE | LUST, INST CONTROL | Higher | 1936, 0.367, West |
| 16 | WC MINI STORAGE | 187 WEST MARSHALL ST | LUST | Lower | 1948, 0.369, South |
| 17 | TOWN OF WAYNESVILLE | 75 VANCE STREET | LUST, LUST TRUST | Lower | 2181, 0.413, SE |
| G18 | HANDY MART | 1002 RUSS AVE | LUST, UST, INST CONTROL | Higher | 2217, 0.420, WNW |
| G19 | HANDY MART (HANDY PA | 1002 RUSS AVENUE | IMD | Higher | 2217, 0.420, WNW |
| H20 | SCHULHOFFER JUNKYARD | HOWELL MILL ROAD | SHWS | Lower | 2364, 0.448, ENE |
| H21 | BROWN NCDOT PARCEL 3 | 838 HOWELL MILL RD | LAST | Lower | 2410, 0.456, ENE |
| 22 | A.C. LAWRENCE LEATHE | 100 WEST MAIN STREET | SHWS | Higher | 5115, 0.969, South |

# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### *Lists of Federal NPL (Superfund) sites*

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

### *Lists of Federal Delisted NPL sites*

Delisted NPL ---------- National Priority List Deletions

### *Lists of Federal sites subject to CERCLA removals and CERCLA orders*

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

### *Lists of Federal CERCLA sites with NFRAP*

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

### *Lists of Federal RCRA facilities undergoing Corrective Action*

CORRACTS ---------- Corrective Action Report

### *Lists of Federal RCRA TSD facilities*

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

### *Lists of Federal RCRA generators*

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

### *Federal institutional controls / engineering controls registries*

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

***Federal ERNS list***

ERNS ..... Emergency Response Notification System

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF ..... List of Solid Waste Facilities

***Lists of state and tribal leaking storage tanks***

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

***Lists of state and tribal registered storage tanks***

FEMA UST ..... Underground Storage Tank Listing
AST ..... AST Database
INDIAN UST ..... Underground Storage Tanks on Indian Land

***Lists of state and tribal voluntary cleanup sites***

VCP ..... Responsible Party Voluntary Action Sites
INDIAN VCP ..... Voluntary Cleanup Priority Listing

***Lists of state and tribal brownfield sites***

BROWNFIELDS ..... Brownfields Projects Inventory

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS ..... A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

HIST LF ..... Solid Waste Facility Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
ODI ..... Open Dump Inventory
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ..... Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL ..... Delisted National Clandestine Laboratory Register
US CDL ..... National Clandestine Laboratory Register

***Local Land Records***

LIENS 2 ..... CERCLA Lien Information

***Records of Emergency Release Reports***

HMIRS ..... Hazardous Materials Information Reporting System

SPILLS ..... Spills Incident Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch
SPILLS 80 ..... SPILLS 80 data from FirstSearch

***Other Ascertainable Records***

FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
FINDS ..... Facility Index System/Facility Registry System
ECHO ..... Enforcement & Compliance History Information
UXO ..... Unexploded Ordnance Sites
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ..... EPA Fuels Program Registered Listing
PFAS NPL ..... Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ..... Federal Sites PFAS Information
PFAS TSCA ..... PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST ..... PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ..... PFAS Contamination Site Location Listing
PFAS WQP ..... Ambient Environmental Sampling for PFAS
PFAS NPDES ..... Clean Water Act Discharge Monitoring Information
PFAS ECHO ..... Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING ..... Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT ..... All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ..... Aqueous Foam Related Incidents Listing
PFAS ..... PFAS Contamination Site Listing

AIRS ---------- Air Quality Permit Listing
ASBESTOS ---------- ASBESTOS
COAL ASH ---------- Coal Ash Disposal Sites
DRYCLEANERS ---------- Drycleaning Sites
Financial Assurance ---------- Financial Assurance Information Listing
NPDES ---------- NPDES Facility Location Listing
UIC ---------- Underground Injection Wells Listing
AOP ---------- Animal Operation Permits Listing
SEPT HAULERS ---------- Permitted Septage Haulers Listing
PFAS TRIS ---------- List of PFAS Added to the TRI
CCB ---------- Coal Ash Structural Fills (CCB) Listing
PCSRP ---------- Petroleum-Contaminated Soil Remediation Permits
MINES MRDS ---------- Mineral Resources Data System

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of state- and tribal (Superfund) equivalent sites***

NC HSDS: The Hazardous Substance Disposal Sites list contains locations of uncontrolled and unregulated hazardous waste sites. The file contains sites on the national priority list as well as the state priority list. The data source is the North Carolina Center for Geographic Information and Analysis.

A review of the NC HSDS list, as provided by EDR, and dated 08/09/2011 has revealed that there is 1

NC HSDS site within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SCHULHOFFER JUNKYARD | | ENE 1/4 - 1/2 (0.379 mi.) | 0 | 8 |

***Lists of state- and tribal hazardous waste facilities***

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environment & Natural Resources' Inactive Hazardous Sites Program.

A review of the SHWS list, as provided by EDR, and dated 11/20/2022 has revealed that there are 3 SHWS sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| A.C. LAWRENCE LEATHE<br>Facility Id: NC0000195701 | 100 WEST MAIN STREET | S 1/2 - 1 (0.969 mi.) | 22 | 49 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| WR BOYD INVESTMENTS<br>Facility Id: NONCD0002469 | 90 HOWELL MILL RD | SSW 0 - 1/8 (0.107 mi.) | A3 | 12 |
| SCHULHOFFER JUNKYARD<br>Facility Id: NCD024852675 | HOWELL MILL ROAD | ENE 1/4 - 1/2 (0.448 mi.) | H20 | 47 |

***Lists of state and tribal landfills and solid waste disposal facilities***

OLI: Old Landfill Inventory Database.

A review of the OLI list, as provided by EDR, and dated 07/05/2022 has revealed that there is 1 OLI site within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| TOWN OF WAYNESVILLE<br>Facility Id: NONCD0000356 | BIBLE BAPTIST RD. | NW 1/4 - 1/2 (0.263 mi.) | C6 | 18 |

DEBRIS: NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency.. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency

A review of the DEBRIS list, as provided by EDR, and dated 12/09/2022 has revealed that there is 1 DEBRIS site within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | NNW 1/4 - 1/2 (0.275 mi.) | D8 | 19 |

# EXECUTIVE SUMMARY

LCID: A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

A review of the LCID list, as provided by EDR, and dated 08/09/2022 has revealed that there are 2 LCID sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | NNW 1/4 - 1/2 (0.265 mi.) | D7 | 18 |
| TOWN OF WAYNESVILLE | BIBLE BAPTIST DRIVE | NNW 1/4 - 1/2 (0.279 mi.) | C11 | 28 |

***Lists of state and tribal leaking storage tanks***

LAST: A listing of leaking aboveground storage tank site locations.

A review of the LAST list, as provided by EDR, and dated 01/27/2023 has revealed that there is 1 LAST site within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BROWN NCDOT PARCEL 3<br>Close Out: 02/05/2014<br>Incident Number: 89134<br>Current Status: C | 838 HOWELL MILL RD | ENE 1/4 - 1/2 (0.456 mi.) | H21 | 48 |

LUST: The Leaking Underground Storage Tank Incidents Management Database contains an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environment, & Natural Resources' Incidents by Address.

A review of the LUST list, as provided by EDR, and dated 01/13/2023 has revealed that there are 9 LUST sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MOUNTAIN ENERGY STOR***<br>Incident Phase: CO<br>Incident Number: 41491<br>Current Status: File Located in Archives | ***843 RUSS AVE*** | ***W 1/4 - 1/2 (0.367 mi.)*** | ***F15*** | ***36*** |
| ***HANDY MART***<br>Incident Phase: CO<br>Incident Number: 28272<br>Current Status: File Located in Archives | ***1002 RUSS AVE*** | ***WNW 1/4 - 1/2 (0.420 mi.)*** | ***G18*** | ***42*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***PLAZA BP***<br>Incident Phase: CO<br>Incident Number: 20417<br>Current Status: File Located in Archives | ***598 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.261 mi.)*** | ***B5*** | ***13*** |
| ***AZTEX 209***<br>Incident Phase: CO<br>Incident Number: 28694<br>Current Status: File Located in House | ***504 RUSS AVENUE*** | ***SSW 1/4 - 1/2 (0.277 mi.)*** | ***E9*** | ***19*** |
| ***AMOCO FOOD SHOP #209*** | ***601 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.279 mi.)*** | ***B10*** | ***23*** |

| | | | | |
|---|---|---|---|---|
| Incident Phase: CO<br>Incident Number: 15745<br>Current Status: File Located in Archives | | | | |
| RUSS AVE SHELL (FORM<br>Incident Phase: CO<br>Incident Number: 22477<br>Current Status: File Located in House | 800/475 RUSS AVENUE | W 1/4 - 1/2 (0.322 mi.) | F13 | 30 |
| ***MESSER'S EXXON STATI***<br>Incident Phase: CO<br>Incident Number: 28141<br>Current Status: File Located in House | ***701 DELLWOOD ROAD*** | ***SW 1/4 - 1/2 (0.349 mi.)*** | ***14*** | ***32*** |
| WC MINI STORAGE<br>Incident Phase: CO<br>Incident Number: 48507<br>Current Status: File Located in House | 187 WEST MARSHALL ST | S 1/4 - 1/2 (0.369 mi.) | 16 | 39 |
| ***TOWN OF WAYNESVILLE***<br>Incident Number: 41184<br>Current Status: File Located in House | ***75 VANCE STREET*** | ***SE 1/4 - 1/2 (0.413 mi.)*** | ***17*** | ***40*** |

LUST TRUST: This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

A review of the LUST TRUST list, as provided by EDR, and dated 12/09/2022 has revealed that there are 2 LUST TRUST sites within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***AZTEX 209***<br>Facility Id: 00-0-0000009928<br>Site ID: 28694 | ***504 RUSS AVENUE*** | ***SSW 1/4 - 1/2 (0.277 mi.)*** | ***E9*** | ***19*** |
| ***TOWN OF WAYNESVILLE***<br>Site ID: 41184 | ***75 VANCE STREET*** | ***SE 1/4 - 1/2 (0.413 mi.)*** | ***17*** | ***40*** |

***Lists of state and tribal registered storage tanks***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Natural Resources' Petroleum Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 01/27/2023 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***INGLES GAS EXPRESS 7***<br>Tank Status: Current<br>Facility Id: 00-0-0000037004 | ***201 BARBER BLVD*** | ***W 0 - 1/8 (0.099 mi.)*** | ***1*** | ***8*** |

# EXECUTIVE SUMMARY

***State and tribal institutional control / engineering control registries***

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring.

A review of the INST CONTROL list, as provided by EDR, and dated 11/20/2022 has revealed that there are 2 INST CONTROL sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MOUNTAIN ENERGY STOR*** | ***843 RUSS AVE*** | ***W 1/4 - 1/2 (0.367 mi.)*** | ***F15*** | ***36*** |
| ***HANDY MART*** | ***1002 RUSS AVE*** | ***WNW 1/4 - 1/2 (0.420 mi.)*** | ***G18*** | ***42*** |

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: A listing of recycling center locations.

A review of the SWRCY list, as provided by EDR, and dated 01/31/2022 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SCHULHOFERS, INC. | 525 HOWELL MILL ROAD | ENE 1/8 - 1/4 (0.169 mi.) | 4 | 13 |

***Records of Emergency Release Reports***

IMD: Incident Management Database.

A review of the IMD list, as provided by EDR, and dated 01/13/2023 has revealed that there are 5 IMD sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| HANDY MART (HANDY PA<br>Facility Id: 28272 | 1002 RUSS AVENUE | WNW 1/4 - 1/2 (0.420 mi.) | G19 | 45 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***PLAZA BP***<br>Facility Id: 20417 | ***598 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.261 mi.)*** | ***B5*** | ***13*** |
| ***AMOCO FOOD SHOP #209***<br>Facility Id: 00-0-0000010903<br>Facility Id: 15745 | ***601 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.279 mi.)*** | ***B10*** | ***23*** |
| RUSS AVE SHELL (FORM<br>Facility Id: 22477 | 475 RUSS AVENUE | SSW 1/4 - 1/2 (0.310 mi.) | E12 | 28 |
| ***MESSER'S EXXON STATI***<br>Facility Id: 28141 | ***701 DELLWOOD ROAD*** | ***SW 1/4 - 1/2 (0.349 mi.)*** | ***14*** | ***32*** |

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/06/2023 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

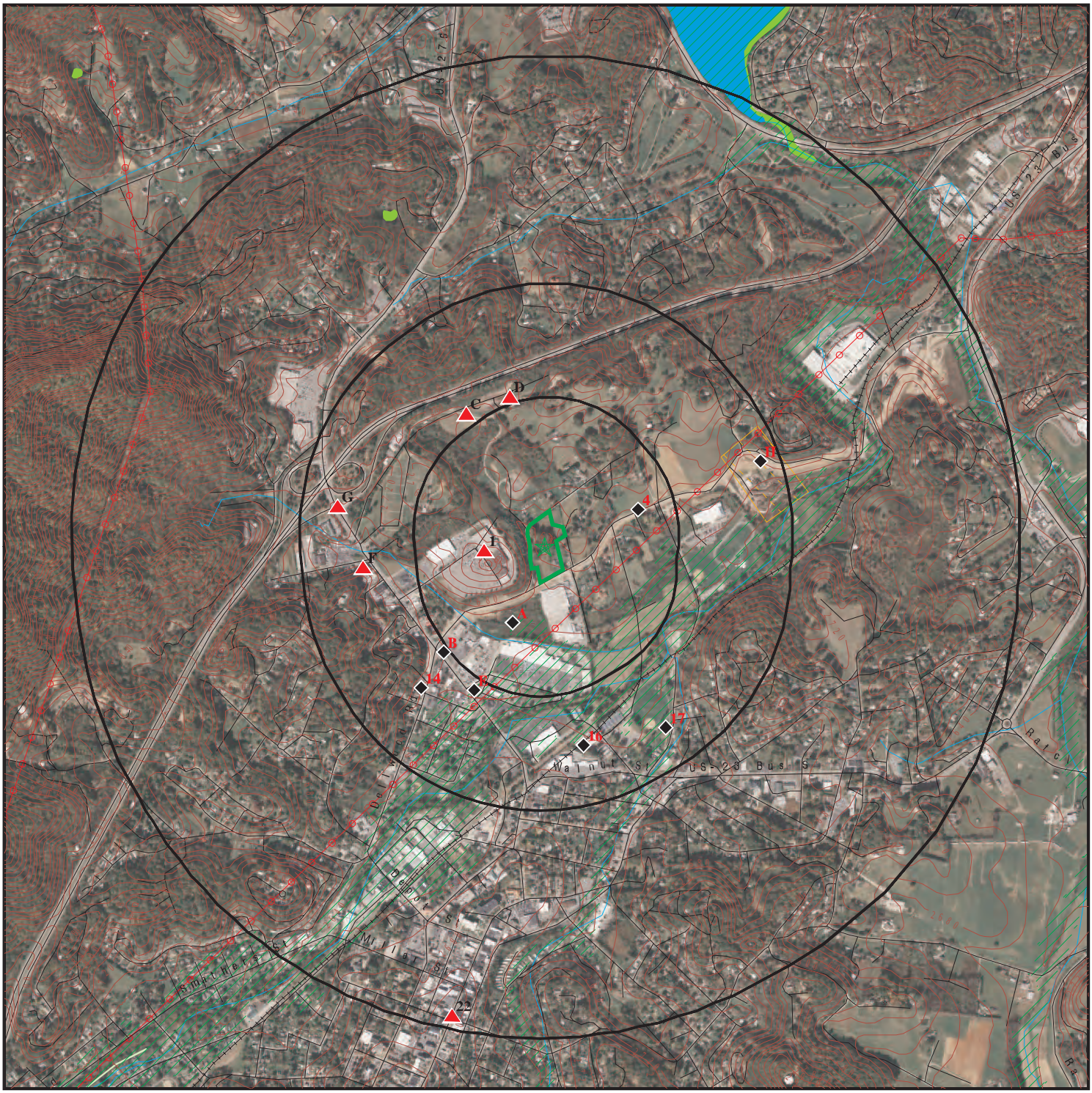
| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NORTH CAROLINA DEPT<br>EPA ID:: NCP090314036 | 90 HOWELL MILL RD | SSW 0 - 1/8 (0.107 mi.) | A2 | 10 |

# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

| Site Name | Database(s) |
|---|---|
| BARBER ORCHARD | SHWS |

# OVERVIEW MAP - 7335415.2S




0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Balsam Edge Apartments | CLIENT: | ECS Southeast, LLP |
| ADDRESS: | 271 Howell Mill Road<br>Waynesville NC 28786 | CONTACT: | Olivia Richard |
| | | INQUIRY #: | 7335415.2s |
| LAT/LONG: | 35.504754 / 82.98438 | DATE: | May 12, 2023 9:35 am |

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# DETAIL MAP - 7335415.2S

Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Proposed Balsam Edge Apartments | CLIENT: | ECS Southeast, LLP |
| ADDRESS: | 271 Howell Mill Road<br>Waynesville NC 28786 | CONTACT: | Olivia Richard |
| | | INQUIRY #: | 7335415.2s |
| LAT/LONG: | 35.504754 / 82.98438 | DATE: | May 12, 2023 9:35 am |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Lists of Federal NPL (Superfund) sites*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal Delisted NPL sites*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal sites subject to CERCLA removals and CERCLA orders*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal CERCLA sites with NFRAP*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA facilities undergoing Corrective Action*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal RCRA TSD facilities*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA generators*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-VSQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | TP | | NR | NR | NR | NR | NR | 0 |
| ***Lists of state- and tribal (Superfund) equivalent sites*** | | | | | | | | |
| NC HSDS | 1.000 | | 0 | 0 | 1 | 0 | NR | 1 |
| ***Lists of state- and tribal hazardous waste facilities*** | | | | | | | | |
| SHWS | 1.000 | | 1 | 0 | 1 | 1 | NR | 3 |
| ***Lists of state and tribal landfills and solid waste disposal facilities*** | | | | | | | | |
| SWF/LF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| OLI | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| DEBRIS | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| LCID | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| ***Lists of state and tribal leaking storage tanks*** | | | | | | | | |
| LAST | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| LUST | 0.500 | | 0 | 0 | 9 | NR | NR | 9 |
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LUST TRUST | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| ***Lists of state and tribal registered storage tanks*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UST | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| AST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***State and tribal institutional control / engineering control registries*** | | | | | | | | |
| INST CONTROL | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| ***Lists of state and tribal voluntary cleanup sites*** | | | | | | | | |
| VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal brownfield sites*** | | | | | | | | |
| BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| SWRCY | 0.500 | | 0 | 1 | 0 | NR | NR | 1 |
| HIST LF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US HIST CDL | TP | | NR | NR | NR | NR | NR | 0 |
| US CDL | TP | | NR | NR | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS 2 | TP | | NR | NR | NR | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | TP | | NR | NR | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| SPILLS | TP | | NR | NR | NR | NR | NR | 0 |
| IMD | 0.500 | | 0 | 0 | 5 | NR | NR | 5 |
| SPILLS 90 | TP | | NR | NR | NR | NR | NR | 0 |
| SPILLS 80 | TP | | NR | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| FUDS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | TP | | NR | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | TP | | NR | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | TP | | NR | NR | NR | NR | NR | 0 |
| TRIS | TP | | NR | NR | NR | NR | NR | 0 |
| SSTS | TP | | NR | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | TP | | NR | NR | NR | NR | NR | 0 |
| RAATS | TP | | NR | NR | NR | NR | NR | 0 |
| PRP | TP | | NR | NR | NR | NR | NR | 0 |
| PADS | TP | | NR | NR | NR | NR | NR | 0 |
| ICIS | TP | | NR | NR | NR | NR | NR | 0 |
| FTTS | TP | | NR | NR | NR | NR | NR | 0 |
| MLTS | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH DOE | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | TP | | NR | NR | NR | NR | NR | 0 |
| RADINFO | TP | | NR | NR | NR | NR | NR | 0 |
| HIST FTTS | TP | | NR | NR | NR | NR | NR | 0 |
| DOT OPS | TP | | NR | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | TP | | NR | NR | NR | NR | NR | 0 |
| US AIRS | TP | | NR | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| FINDS | TP | | NR | NR | NR | NR | NR | 0 |
| ECHO | TP | | NR | NR | NR | NR | NR | 0 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOCKET HWC | TP | | NR | NR | NR | NR | NR | 0 |
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPL | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS FEDERAL SITES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TSCA | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS RCRA MANIFEST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ATSDR | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS WQP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPDES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ECHO | 0.250 | | 0 | 0 | NR | NR | NR | 0 |

# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| PFAS ECHO FIRE TRAINING | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PART 139 AIRPORT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AQUEOUS FOAM NRC | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AIRS | TP | | NR | NR | NR | NR | NR | 0 |
| ASBESTOS | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DRYCLEANERS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| Financial Assurance | TP | | NR | NR | NR | NR | NR | 0 |
| NPDES | TP | | NR | NR | NR | NR | NR | 0 |
| UIC | TP | | NR | NR | NR | NR | NR | 0 |
| AOP | TP | | NR | NR | NR | NR | NR | 0 |
| SEPT HAULERS | TP | | NR | NR | NR | NR | NR | 0 |
| PFAS TRIS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| CCB | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCSRP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| MINES MRDS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| EDR Hist Cleaner | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| RGA HWS | TP | | NR | NR | NR | NR | NR | 0 |
| RGA LF | TP | | NR | NR | NR | NR | NR | 0 |
| RGA LUST | TP | | NR | NR | NR | NR | NR | 0 |
| - Totals -- | | 0 | 3 | 1 | 25 | 1 | 0 | 30 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

**HSDS** **SCHULHOFFER JUNKYARD** **NC HSDS** **S102442589**
**Region** **N/A**
**ENE** **, NC**
**1/4-1/2**
**2001 ft.**

HSDS:

| | |
|---|---|
| Name: | SCHULHOFFER JUNKYARD |
| Address: | Not reported |
| City: | Not reported |
| Site Type: | 1 |
| Superfun Number: | Not reported |
| Total area in coverage units: | 50371.1289063 |
| Total perimeter in coverage units: | 926.11425781 |
| X-value coordinate in feet: | 816955.625 |
| Y-value coordinate in feet: | 663204.75 |
| Sites designated as superfund cleanup sites: | 468 |
| Length of feature in internal units: | 926.114259608 |
| Area of feature in internal units squared: | 50371.1278289 |

---

**1** **INGLES GAS EXPRESS 723** **UST** **U004122986**
**West** **201 BARBER BLVD** **Financial Assurance** **N/A**
**< 1/8** **WAYNESVILLE, NC 28786**
**0.099 mi.**
**524 ft.**

**Relative:**
**Higher**

**Actual:**
**2758 ft.**

UST:

| | |
|---|---|
| Name: | INGLES GAS EXPRESS 723 |
| Address: | 201 BARBER BLVD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility Id: | 00-0-0000037004 |
| Contact: | INGLES MARKETS, INCORPORATED |
| Contact Address1: | PO BOX 6676 |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | ASHEVILLE, NC 28816-6676 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.50487 |
| Longitude: | -82.9866 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1A |
| Tank Status: | Current |
| Installed Date: | 05/14/2008 |
| Perm Close Date: | Not reported |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 25000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | 0 |
| Commercial: | No |
| Regulated: | No |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Unknown |

**INGLES GAS EXPRESS 723 (Continued)** **U004122986**

Decode for PSYS_KEY: Unknown

Tank Id: 1B
Tank Status: Current
Installed Date: 05/14/2008
Perm Close Date: Not reported
Product Name: Gasoline, Gas Mix
Tank Capacity: 7000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: No
Regulated: No
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Not reported
Decode for TCONS_KEY: Not reported
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Tank Id: 2A
Tank Status: Current
Installed Date: 05/14/2008
Perm Close Date: Not reported
Product Name: Diesel
Tank Capacity: 5000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: No
Regulated: No
Other CP Tank: Not reported
Overfill Protection Name: Unknown
Spill Protection Name: Unknown
Leak Detection Name: Not reported
Decode for TCONS_KEY: Not reported
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Tank Id: 2B
Tank Status: Current
Installed Date: 05/14/2008
Perm Close Date: Not reported
Product Name: Diesel
Tank Capacity: 5000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: No
Regulated: No

**INGLES GAS EXPRESS 723 (Continued)** **U004122986**

| | |
|---|---|
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Unknown |
| Decode for PSYS_KEY: | Unknown |

NC Financial Assurance 1:

| | |
|---|---|
| Name: | INGLES GAS EXPRESS 723 |
| Address: | 201 BARBER BLVD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-0000037004 |
| Region: | 1 |
| Financial Responsibility Desc: | Insurance & Risk Retension |
| Financial Responsibility Name: | Ace American Insurance Company |
| Started Date: | 09/30/2013 |
| Ended Date: | 09/30/2014 |

---

**A2** **NORTH CAROLINA DEPT OF TRANSPORTATION** **RCRA NonGen / NLR** **1016958770**
**SSW** **90 HOWELL MILL RD** **NCP090314036**
**< 1/8** **WAYNESVILLE, NC 28786**
**0.107 mi.**
**563 ft.** **Site 1 of 2 in cluster A**

**Relative:** **Lower**

**Actual:** **2629 ft.**

RCRA Listings:

| | |
|---|---|
| Date Form Received by Agency: | 20150310 |
| Handler Name: | North Carolina Dept Of Transportation |
| Handler Address: | 90 HOWELL MILL RD |
| Handler City,State,Zip: | WAYNESVILLE, NC 28786 |
| EPA ID: | NCP090314036 |
| Contact Name: | GORDON BOX |
| Contact Address: | BIRCH RIDGE DR |
| Contact City,State,Zip: | RALEIGH, NC 27610 |
| Contact Telephone: | 919-707-6859 |
| Contact Fax: | Not reported |
| Contact Email: | GHBOX@NCDOT.GOV |
| Contact Title: | ENV PROJ MGR |
| EPA Region: | 04 |
| Land Type: | Private |
| Federal Waste Generator Description: | Not a generator, verified |
| Non-Notifier: | Not reported |
| Biennial Report Cycle: | Not reported |
| Accessibility: | Not reported |
| Active Site Indicator: | Not reported |
| State District Owner: | NC |
| State District: | NC |
| Mailing Address: | BIRCH RIDGE DR |
| Mailing City,State,Zip: | RALEIGH, NC 27610 |
| Owner Name: | W.R. Boyd Investments |
| Owner Type: | Private |
| Operator Name: | Not reported |
| Operator Type: | Not reported |
| Short-Term Generator Activity: | No |
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |

**NORTH CAROLINA DEPT OF TRANSPORTATION (Continued)** **1016958770**

| | |
|---|---|
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | NN |
| Sub-Part K Indicator: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| 202 GPRA Corrective Action Baseline: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: | Not reported |
| Handler Date of Last Change: | 20150310 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | Not reported |
| Manifest Broker: | Not reported |
| Sub-Part P Indicator: | No |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: W.R. BOYD INVESTMENTS | |
| Legal Status: | Private |
| Date Became Current: | 16010101 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 44 ACADEMY STREET |
| Owner/Operator City,State,Zip: | WAYNESVILLE, NC 28786 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: W.R. BOYD INVESTMENTS | |
| Legal Status: | Private |
| Date Became Current: | 16010101 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 44 ACADEMY STREET |

**NORTH CAROLINA DEPT OF TRANSPORTATION (Continued)** **1016958770**

Owner/Operator City,State,Zip: WAYNESVILLE, NC 28786
Owner/Operator Telephone: Not reported
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:
Receive Date: 20150310
Handler Name: NORTH CAROLINA DEPT OF TRANSPORTATION
Federal Waste Generator Description: Not a generator, verified
State District Owner: NC
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 20140903
Handler Name: NORTH CAROLINA DEPT OF TRANSPORTATION
Federal Waste Generator Description: Large Quantity Generator
State District Owner: NC
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:
NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:
Violations: No Violations Found

Evaluation Action Summary:
Evaluations: No Evaluations Found

---

**A3** **WR BOYD INVESTMENTS** **SHWS** **S118161282**
**SSW** **90 HOWELL MILL RD** **N/A**
**< 1/8** **WAYNESVILLE, NC**
**0.107 mi.**
**563 ft.** **Site 2 of 2 in cluster A**

**Relative:** SHWS:
**Lower**
Name: WR BOYD INVESTMENTS
**Actual:** Address: 90 HOWELL MILL RD
**2629 ft.** City,State,Zip: WAYNESVILLE, NC
EPAID: NONCD0002469
Lat/Longitude: 35.50212 / -82.98703
Geolocation Method: ON SCREEN PLACEMENT ON GEOREFERENCED MAP

**WR BOYD INVESTMENTS (Continued)** **S118161282**

Click here to access the North Carolina DEQ records for this facility:

---

**4**
**ENE**
**1/8-1/4**
**0.169 mi.**
**894 ft.**

**SCHULHOFERS, INC.**
**525 HOWELL MILL ROAD**
**WAYNESVILLE, NC 28786**

**SWRCY** **S111445226**
**N/A**

**Relative:**
**Lower**

**Actual:**
**2660 ft.**

SWRCY:

| | |
|---|---|
| Name: | SCHULHOFERS, INC. |
| Address: | 525 HOWELL MILL ROAD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Mailing Address: | P.O. Box 314 |
| Mailing City: | Waynesville |
| Mailing State: | NC |
| Mailing Zip: | 287860314 |
| Company Type: | - Broker;- Handler;- Processor;; |
| Company Service Area: | - Western North Carolina; |

---

**B5**
**SW**
**1/4-1/2**
**0.261 mi.**
**1377 ft.**

**PLAZA BP**
**598 RUSS AVENUE**
**WAYNESVILLE, NC 28786**

**Site 1 of 2 in cluster B**

**LUST** **U003091652**
**UST** **N/A**
**IMD**
**Financial Assurance**

**Relative:**
**Lower**

**Actual:**
**2640 ft.**

LUST:

| | |
|---|---|
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-1804 |
| Incident Number: | 20417 |
| Source Type: | 3 |
| Date Reported: | 04/19/1999 |
| Closure Request: | Not reported |
| Close Out: | 04/19/1999 |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 9 |
| Current Status: | A |
| RBCA GW: | Not reported |
| PETOPT: | 3 |

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| RPL: | False |
| CD Num: | 101 |
| Reel Num: | 0 |
| RPOW: | False |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | JCA |
| Company: | HAYWOOD OIL CO. |
| Telephone: | 8284567035 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-1804 |
| Facility Id: | 20417 |
| Date Occurred: | 2/16/1999 |
| Date Reported: | 2/16/1999 |
| Owner/Operator: | DAVID BLEVINS |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | 9/9/1999 |
| Wells Affected Y/N: | Not reported |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Not reported |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | PIRF |
| Err Type: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | Not reported |

LUST:

| | |
|---|---|
| Incident Number: | 20417 |
| Last Modified: | 6/7/2002 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | 4/19/1999 |

UST:

| | |
|---|---|
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Facility Id: | 00-0-0000009726 |
| Contact: | HAYWOOD OIL COMPANY, INCORPORATED |
| Contact Address1: | PO DRAWER 1110 |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | WAYNESVILLE, NC 28786 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.49909 |
| Longitude: | -82.9862 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1 |
| Tank Status: | Removed |
| Installed Date: | 05/05/1972 |
| Perm Close Date: | 02/16/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 10000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 2 |
| Tank Status: | Removed |
| Installed Date: | 05/05/1972 |
| Perm Close Date: | 02/16/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 10000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 3 |
| Tank Status: | Removed |
| Installed Date: | 05/05/1972 |

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Perm Close Date: | 02/16/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 10000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

IMD:

| | |
|---|---|
| Facility ID: | 20417 |
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Date Occurred: | 2/16/1999 |
| Submit Date: | 9/9/1999 |
| Incident Desc: | SOIL CONTAM. WAS CONFIRMED DURING CLOSURE OF THREE USTS. |
| Operator: | DAVID BLEVINS |
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | Not reported |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 4 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 6 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Commercial |
| Responsible Party County: | Not reported |
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | L |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | 9/9/1999 |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | Not reported |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.495 |
| Longitude: | -82.98527777 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | 8284567035 |
| Owner Company: | HAYWOOD OIL CO. |
| Operator Address: | P. O. DRAWER |
| Operator City,State,Zip: | WAYNESVILLE, NC 28786- |
| Operator County: | Not reported |
| Material: | GASOLINE |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 3 |
| Risk Site: | L |
| Priority Code: | L |
| Dem Contact: | JCA |
| Wells Contam: | Not reported |
| Latitude Number: | 352942 |
| Longitude Number: | 825907 |
| Latitude Decimal: | 35.495 |
| Longitude Decimal: | 82.9852777777778 |
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 20417 |
| Last Modified: | 2002-06-07 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | 1999-04-19 00:00:00 |

NC Financial Assurance 1:

| | |
|---|---|
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-0000009726 |
| Region: | 1 |
| Financial Responsibility Desc: | Self-Insurance |
| Financial Responsibility Name: | Haywood Oil Company, Inc. |
| Started Date: | Not reported |
| Ended Date: | Not reported |

---

**C6** **TOWN OF WAYNESVILLE DUMP** **OLI** **S109136309**
**NW** **BIBLE BAPTIST RD.** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.263 mi.**
**1388 ft.** **Site 1 of 2 in cluster C**

**Relative:**
**Higher**

**Actual:**
**2724 ft.**

NC OLI:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE DUMP |
| Address: | BIBLE BAPTIST RD. |
| City,State,Zip: | WAYNESVILLE, NC |
| Facility ID: | NONCD0000356 |
| State Plane X: | -82.987602 |
| State Plane Y: | 35.50865196 |
| Status: | Activity Pending |
| Contact: | PRLF Unit Supervisor |
| Phone: | 919-707-8333 |
| Email: | False |
| NFA With Restriction: | https://edocs.deq.nc.gov/WasteManagement/Search.aspx?dbid=0&searchcommand={[WM]:[Program_ID]= |
| File Link: | 35.50865196 |

---

**D7** **TOWN OF WAYNESVILLE LANDFILL** **LCID** **S123083051**
**NNW** **END OF BIBLE BAPTIST DRIVE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.265 mi.**
**1399 ft.** **Site 1 of 2 in cluster D**

**Relative:**
**Higher**

**Actual:**
**2761 ft.**

LCID:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE LANDFILL |
| Address: | END OF BIBLE BAPTIST DRIVE |
| City,State,Zip: | WAYNESVILLE, NC |
| Location ID: | N0593 |
| Status: | Open |
| X Coords: | -9237928.4275 |
| Y Coords: | 4233349.7091 |
| Latitude: | 35.509589 |
| Longitude: | -82.985723 |

**D8** **TOWN OF WAYNESVILLE** **DEBRIS** **S122873972**
**NNW** **END OF BIBLE BAPTIST DRIVE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.275 mi.**
**1452 ft.** **Site 2 of 2 in cluster D**

**Relative:** **Higher**
**Actual:** **2745 ft.**

DEBRIS:

| | |
|---|---|
| DS Number: | DS44-008 |
| Name: | TOWN OF WAYNESVILLE |
| Address: | END OF BIBLE BAPTIST DRIVE |
| City,State,Zip: | WAYNESVILLE, NC |
| Size of Site: | 2 |
| Type of Debris: | Not reported |
| Contact: | Daryl Hannah |
| Contact Phone: | 828-456-3706 |
| Second Contact: | David Foster |
| Second Contact Phone: | 828-456-3706 |
| Confirm Year: | 2016 |
| Status: | Not Active |
| Latitude: | 35.509485 |
| Longitude: | -82.986475 |

---

**E9** **AZTEX 209** **LUST** **U003143883**
**SSW** **504 RUSS AVENUE** **LUST TRUST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786** **UST**
**0.277 mi.** **ASBESTOS**
**1462 ft.** **Site 1 of 2 in cluster E** **Financial Assurance**

**Relative:** **Lower**
**Actual:** **2623 ft.**

LUST:

| | |
|---|---|
| Name: | AZTEX #209 |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-3555 |
| Incident Number: | 28694 |
| Source Type: | 3 |
| Date Reported: | 02/11/2009 |
| Closure Request: | Not reported |
| Close Out: | 12/05/2019 |
| Level Of Soil Cleanup Achieved: | S2 |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | 1 |
| Site Risk Reason: | Not reported |
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | 11/25/2019 |
| GPS Confirmed: | 9 |
| Current Status: | C |
| RBCA GW: | G2 |
| PETOPT: | 3 |
| RPL: | True |

**AZTEX 209 (Continued)** **U003143883**

| | |
|---|---|
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | MES |
| Company: | HACKNEY PETROLEUM, INC. |
| Telephone: | 8655849600 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-3555 |
| Facility Id: | 28694 |
| Date Occurred: | 2/10/2009 |
| Date Reported: | 2/11/2009 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 4 |
| Cause: | 4 |
| Source: | C |
| UST Number: | P |

LUST:

| | |
|---|---|
| Incident Number: | 28694 |
| Last Modified: | 12/5/2019 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

LUST TRUST:

| | |
|---|---|
| Name: | AZTEX #209 |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Facility ID: | 00-0-0000009928 |

**AZTEX 209 (Continued)** **U003143883**

Site ID: 28694
Site Note: Commercial; $20,000 deductible; 100% eligible for costs that exceed the $20,000 deductible.[CGS 6/12/17]
Site Eligible?: True
Commercial Find: 100% Commercial
Priority Rank: Not reported
Deductable Amount: 20000
3rd Party Deductable Amt: 0
Sum 3rd Party Amt Applied: 0

UST:
Name: AZTEX 209
Address: 504 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC 28786
Facility Id: 00-0-0000009928
Contact: HACKNEY PETROLEUM, INC.
Contact Address1: 1209 HILTON RD
Contact Address2: Not reported
Contact City/State/Zip: KNOXVILLE, TN 37921
FIPS County Desc: Haywood
Latitude: 35.4956
Longitude: -82.9858

Click here to access the North Carolina DEQ records for this facility:

Tank Id: B-3
Tank Status: Removed
Installed Date: 05/07/1976
Perm Close Date: 07/18/2016
Product Name: Gasoline, Gas Mix
Tank Capacity: 6000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Auto Shutoff Device
Spill Protection Name: Catchment Basin
Leak Detection Name: Not reported
Decode for TCONS_KEY: Not reported
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Pressurized System

Tank Id: P-1
Tank Status: Removed
Installed Date: 05/07/1976
Perm Close Date: 07/18/2016
Product Name: Gasoline, Gas Mix
Tank Capacity: 4000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0

**AZTEX 209 (Continued)** **U003143883**

| | |
|---|---|
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Auto Shutoff Device |
| Spill Protection Name: | Catchment Basin |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Pressurized System |

| | |
|---|---|
| Tank Id: | R-2 |
| Tank Status: | Removed |
| Installed Date: | 05/07/1976 |
| Perm Close Date: | 07/18/2016 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 6000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | 0 |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Auto Shutoff Device |
| Spill Protection Name: | Catchment Basin |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Pressurized System |

ASBESTOS:

| | |
|---|---|
| Name: | UNOCCUPIED COMMERCIAL BUILDING |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Permit Number: | Not reported |
| NESHAP Number: | 63707 |
| Contractor: | NEO Corporation |
| Owner Name: | NCDOT |
| Phone: | (910) 621-6102 |
| Removal Start Date: | Not reported |
| Removal End Date: | Not reported |
| Demo Start Date: | 02-09-21 |
| Demo End Date: | 02-12-21 |
| Linear Feet: | 0 |
| Square Feet: | 0 |
| Cubic Feet: | 0 |
| Type: | D |

NC Financial Assurance 1:

| | |
|---|---|
| Name: | AZTEX 209 |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-0000009928 |
| Region: | 1 |
| Financial Responsibility Desc: | Self-Insurance |

**AZTEX 209 (Continued)** **U003143883**

Financial Responsibility Name: Hackney Petroleum, Inc.
Started Date: Not reported
Ended Date: Not reported

---

**B10** **AMOCO FOOD SHOP #209** **LUST** **S105892944**
**SW** **601 RUSS AVENUE** **IMD** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.279 mi.**
**1475 ft.** **Site 2 of 2 in cluster B**

**Relative:**
**Lower**

**Actual:**
**2646 ft.**

LUST:

| | |
|---|---|
| Name: | AMOCO FOOD SHOP #209 |
| Address: | 601 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-1457 |
| Incident Number: | 15745 |
| Source Type: | 3 |
| Date Reported: | 05/01/1996 |
| Closure Request: | Not reported |
| Close Out: | 05/27/1999 |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | Not reported |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | H |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | 75 B |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | Not reported |
| MTBE1: | Y |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 5 |
| Current Status: | A |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | False |
| CD Num: | 101 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | MES |
| Company: | SARA KAMPWERTH (CONTACT) |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-1457 |

**AMOCO FOOD SHOP #209 (Continued)** **S105892944**

| | |
|---|---|
| Facility Id: | 15745 |
| Date Occurred: | 6/19/1996 |
| Date Reported: | 7/3/1996 |
| Owner/Operator: | SARA KAMPWERTH (CONTACT) |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | 4/15/1998 |
| Wells Affected Y/N: | N |
| Samples Include: | 0 |
| 7#5 Minute Quad: | 3 |
| 5 Minute Quad: | 1 |
| Pirf/Min Soil: | Not reported |
| Release Code: | 091E |
| Source Code: | Pirf |
| Err Type: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | Not reported |

LUST:

| | |
|---|---|
| Incident Number: | 15745 |
| Last Modified: | 5/27/1999 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

IMD:

| | |
|---|---|
| Facility ID: | 00-0-0000010903 |
| Name: | TAYLOR MOTOR CO. |
| Address: | 601 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Date Occurred: | Not reported |
| Submit Date: | Not reported |
| Incident Desc: | Not reported |
| Operator: | Not reported |
| UST ID: | AS-2586 |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | Not reported |
| Responsible Party Contact Name: | Not reported |
| Operation: | Not reported |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | NC |
| Ownership: | Not reported |

**AMOCO FOOD SHOP #209 (Continued)** **S105892944**

| | |
|---|---|
| Operation Type: | Not reported |
| Responsible Party County: | Not reported |
| Source: | Not reported |
| Type: | Not reported |
| Location: | Not reported |
| Petroleum Type: | Not reported |
| Date Incident Reported: | 1994-09-20 00:00:00 |
| Whether Tank is Commercial or Non Commercial: | BOTH |
| Site Priority: | Not reported |
| Whether Tank is Regulated: | BOTH AT SAME SITE |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | Not reported |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Not reported |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | L |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 0 |
| Longitude: | 0 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | 1994-09-20 00:00:00 |
| Extent of Contamination: | None |
| Number of Supply Wells Located on Property: | 0 |
| MTBE in Well Y/N/U Yes, No or Unknown: | 0 |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | U |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | 1994-09-20 00:00:00 |
| Record Status: | ARCHIVED RECORD |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | 49 |
| RP Owner?: | False |
| RP Operator?: | False |
| RP Landowner?: | False |
| Comments: | 1-3000 & 1-4000 HEATING OIL USTS, clean closure |
| GW Contam: | Not reported |
| Soil Contam: | Not reported |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | Not reported |
| Operator City,State,Zip: | Not reported |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |

**AMOCO FOOD SHOP #209 (Continued)** **S105892944**

| | |
|---|---|
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | Not reported |
| Priority Code: | Not reported |
| Dem Contact: | Not reported |
| Wells Contam: | Not reported |
| Latitude Number: | Not reported |
| Longitude Number: | Not reported |
| Latitude Decimal: | Not reported |
| Longitude Decimal: | Not reported |
| GPS: | Not reported |
| Agency: | Not reported |
| | |
| Facility ID: | 15745 |
| Name: | AMOCO FOOD SHOP #209 |
| Address: | RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE28786, NC |
| Date Occurred: | 5/1/1996 |
| Submit Date: | 7/3/1996 |
| Incident Desc: | SOIL AND GW CONTAM. CONFIRMED AS A RESULT OF PHASE II. |
| Operator: | HACKNEY PETROLEUM, INC. |
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | Not reported |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 4 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 6 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Commercial |
| Responsible Party County: | Not reported |
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | 75 B |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | 4/15/1998 |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | 0 |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | 3 |
| Samples Include: | 1 |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | 091E |
| Intermediate Condition Present: | Not reported |

**AMOCO FOOD SHOP #209 (Continued)** **S105892944**

| | |
|---|---|
| Latitude: | 35.49555555 |
| Longitude: | -82.99111111 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | Yes, Groundwater Contamination has been detected |
| Soil Contam: | No |
| Contact Phone: | Not reported |
| Owner Company: | SARA KAMPWERTH (CONTACT) |
| Operator Address: | P. O. BOX 50038/1207 HILTON RD |
| Operator City,State,Zip: | KNOXVILLE, TN 37950-0038 |
| Operator County: | Not reported |
| Material: | GASOLINE |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 3 |
| Risk Site: | H |
| Priority Code: | H |
| Dem Contact: | MES |
| Wells Contam: | Not reported |
| Latitude Number: | 352944 |
| Longitude Number: | 825928 |
| Latitude Decimal: | 35.4955555555556 |
| Longitude Decimal: | 82.9911111111111 |
| GPS: | NOD |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 15745 |
| Last Modified: | 1999-05-27 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |

**AMOCO FOOD SHOP #209 (Continued)** **S105892944**

Close-out Report: Not reported

---

**C11** **TOWN OF WAYNESVILLE LANDFILL** **LCID** **S123083113**
**NNW** **BIBLE BAPTIST DRIVE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.279 mi.**
**1475 ft.** **Site 2 of 2 in cluster C**

**Relative:** **Higher**
**Actual:** **2733 ft.**

LCID:
Name: TOWN OF WAYNESVILLE LANDFILL
Address: BIBLE BAPTIST DRIVE
City,State,Zip: WAYNESVILLE, NC
Location ID: N0660
Status: Open
X Coords: -9237920.0785
Y Coords: 4233380.6154
Latitude: 35.509815
Longitude: -82.985648

---

**E12** **RUSS AVE SHELL (FORMER)** **IMD** **S105764104**
**SSW** **475 RUSS AVENUE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.310 mi.**
**1636 ft.** **Site 2 of 2 in cluster E**

**Relative:** **Lower**
**Actual:** **2617 ft.**

IMD:
Facility ID: 22477
Name: RUSS AVE SHELL (FORMER)
Address: 475 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC
Date Occurred: Not reported
Submit Date: 11/6/2000
Incident Desc: SOIL CONTAMINATION DISCOVERED DURING UST INVESTIGATION
Operator: Not reported
UST ID: Not reported
Incident ID: Not reported
Initials of UST Regional Contact: Not reported
Regional Office: Not reported
Responsible Party/Company Name: Not reported
Ownership: 4
Responsible Party Contact Name: Not reported
Operation: 6
Responsible Party Mailing Address: Not reported
Responsible Party City,State,Zip: Not reported
Ownership: Private
Operation Type: Commercial
Responsible Party County: Not reported
Source: Leak-underground
Type: GASOLINE/DIESEL
Location: 1
Petroleum Type: Not reported
Date Incident Reported: Not reported
Whether Tank is Commercial or Non Commercial: Not reported
Site Priority: H
Whether Tank is Regulated: Not reported

**RUSS AVE SHELL (FORMER) (Continued)** **S105764104**

| | |
|---|---|
| Priority Update: | 11/6/2000 |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.49944444 |
| Longitude: | -82.9875 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | Not reported |
| Operator City,State,Zip: | Not reported |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 3 |
| Risk Site: | H |
| Priority Code: | H |
| Dem Contact: | DME |
| Wells Contam: | Not reported |
| Latitude Number: | 352958 |
| Longitude Number: | 825915 |
| Latitude Decimal: | 35.4994444444444 |
| Longitude Decimal: | 82.9875 |

**RUSS AVE SHELL (FORMER) (Continued)** **S105764104**

| | |
|---|---|
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 22477 |
| Last Modified: | 2014-09-02 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

---

**F13** **RUSS AVE SHELL (FORMER)** **LUST** **S123344796**
**West** **800/475 RUSS AVENUE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.322 mi.**
**1701 ft.** **Site 1 of 2 in cluster F**

**Relative:** LUST:
**Lower**

**Actual:**
**2671 ft.**

| | |
|---|---|
| Name: | RUSS AVE SHELL (FORMER) |
| Address: | 800/475 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-1907 |
| Incident Number: | 22477 |
| Source Type: | 3 |
| Date Reported: | 12/30/1996 |
| Closure Request: | Not reported |
| Close Out: | 09/02/2014 |
| Level Of Soil Cleanup Achieved: | S2 |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | H |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 9 |
| Current Status: | C |
| RBCA GW: | G2 |
| PETOPT: | Not reported |
| RPL: | False |
| CD Num: | 0 |

**RUSS AVE SHELL (FORMER) (Continued)** **S123344796**

| | |
|---|---|
| Reel Num: | 0 |
| RPOW: | False |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | STF |
| Company: | Not reported |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-1907 |
| Facility Id: | 22477 |
| Date Occurred: | 12/1/1996 |
| Date Reported: | 11/6/2000 |
| Owner/Operator: | AYDOCK DANELLEY |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | 11/6/2000 |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Not reported |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 9 |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | Not reported |

LUST:

| | |
|---|---|
| Incident Number: | 22477 |
| Last Modified: | 9/2/2014 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

**14**
**SW**
**1/4-1/2**
**0.349 mi.**
**1841 ft.**

**MESSER'S EXXON STATION**
**701 DELLWOOD ROAD**
**WAYNESVILLE, NC 28786**

**LUST** **U001192574**
**UST** **N/A**
**IMD**

**Relative:**
**Lower**

**Actual:**
**2641 ft.**

LUST:

| | |
|---|---|
| Name: | MESSERS EXXON |
| Address: | 701 DELLWOOD ROAD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-2881 |
| Incident Number: | 28141 |
| Source Type: | 3 |
| Date Reported: | 04/13/1999 |
| Closure Request: | Not reported |
| Close Out: | 07/14/1999 |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 9 |
| Current Status: | C |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | False |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | DME |
| Company: | Not reported |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-2881 |
| Facility Id: | 28141 |
| Date Occurred: | 3/22/1999 |
| Date Reported: | 4/13/1999 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | Not reported |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | s |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 2 |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | C |

LUST:

| | |
|---|---|
| Incident Number: | 28141 |
| Last Modified: | 7/14/1999 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

UST:

| | |
|---|---|
| Name: | MESSER'S EXXON STATION |
| Address: | 701 DELLWOOD ROAD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility Id: | 00-0-0000010402 |
| Contact: | JOE MESSER |
| Contact Address1: | 701 DELLWOOD ROAD |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | WAYNESVILLE, NC 28786 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.5204 |
| Longitude: | -82.9790 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1 |
| Tank Status: | Removed |
| Installed Date: | 05/09/1971 |
| Perm Close Date: | 02/25/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 1000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 2 |
| Tank Status: | Removed |
| Installed Date: | 05/09/1971 |
| Perm Close Date: | 02/25/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 1000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 3 |
| Tank Status: | Removed |
| Installed Date: | 05/09/1971 |
| Perm Close Date: | 02/25/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 550 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Unknown |
| Spill Protection Name: | Unknown |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

IMD:

| | |
|---|---|
| Facility ID: | 28141 |
| Name: | MESSERS EXXON |
| Address: | 701 DELLWOOD ROAD |
| City,State,Zip: | WAYNESVILLE, NC |

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| Date Occurred: | 3/22/1999 |
| Submit Date: | 4/13/1999 |
| Incident Desc: | additional samples collected, reported clean on July 9, 1999, NFA letter sent 7/14/1999 |
| Operator: | Joe Messer |
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | Not reported |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 4 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 6 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Commercial |
| Responsible Party County: | Not reported |
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | Not reported |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | Not reported |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | Y |
| Samples Include: | s |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.49916666 |
| Longitude: | -82.98916666 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | 701 Dellwood Road |
| Operator City,State,Zip: | Waynesville, NC 28786 |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | L |
| Priority Code: | Not reported |
| Dem Contact: | SEP |
| Wells Contam: | Not reported |
| Latitude Number: | 352957 |
| Longitude Number: | 825921 |
| Latitude Decimal: | 35.4991666666667 |
| Longitude Decimal: | 82.9891666666667 |
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 28141 |
| Last Modified: | 1999-07-14 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

---

**F15** **MOUNTAIN ENERGY STORE #108** **LUST** **S120839860**
**West** **843 RUSS AVE** **INST CONTROL** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.367 mi.**
**1936 ft.** **Site 2 of 2 in cluster F**

**Relative:**
**Higher**

**Actual:**
**2684 ft.**

LUST:

| | |
|---|---|
| Name: | MOUNTAIN ENERGY STORE #108 |
| Address: | 843 RUSS AVE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-4435 |
| Incident Number: | 41491 |

**MOUNTAIN ENERGY STORE #108 (Continued)** **S120839860**

| | |
|---|---|
| Source Type: | 7 |
| Date Reported: | 09/02/2016 |
| Closure Request: | Not reported |
| Close Out: | 05/30/2017 |
| Level Of Soil Cleanup Achieved: | S2 |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | 04/03/2017 |
| GPS Confirmed: | 3 |
| Current Status: | A |
| RBCA GW: | G1 |
| PETOPT: | 3 |
| RPL: | True |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | KM |
| Company: | MOUNTAIN ENERGY CORPORATION |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-4435 |
| Facility Id: | 41491 |
| Date Occurred: | 9/1/2016 |
| Date Reported: | 9/2/2016 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 3 |

**MOUNTAIN ENERGY STORE #108 (Continued)** **S120839860**

| | |
|---|---|
| Cause: | 7 |
| Source: | G |
| UST Number: | P |

LUST:

| | |
|---|---|
| Incident Number: | 41491 |
| Last Modified: | 5/30/2017 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

INST CONTROL:

| | |
|---|---|
| Name: | MOUNTAIN ENERGY STORE #108 |
| Address: | 843 RUSS AVE |
| City,State,Zip: | WAYNESVILLE, NC |
| Project Number: | AS-4435 |
| Object ID: | Not reported |
| DWM Contact: | Asheville Regional Office (828) 296-4500 |
| DWM Program: | Underground Storage Tank Section |
| Project Status: | No Further Action |
| COC: | Multi COC |
| Contamination Source: | Unknown |
| Received Date: | 4/2/2017 |
| Restricted Media: | Soil Only |
| Allowed Use: | Media Restrictions Only |
| Certification: | None |
| Plant Reception Date: | Not reported |
| Instrument Status: | Effective |
| Deed BK: | Not reported |
| Deed PG: | Not reported |
| Plat BK: | Not reported |
| Plat PG: | Not reported |
| Instrument: | Notice and Restriction |
| Deed: | Not reported |
| Deed Date: | Recorded 4-2-2017 |
| Plat: | Not reported |
| Plat Date: | Not reported |
| X Coord: | 812392.94092 |
| Y Coord: | 662315.67851 |

**16**
**South**
**1/4-1/2**
**0.369 mi.**
**1948 ft.**

**WC MINI STORAGE**
**187 WEST MARSHALL STREET**
**WAYNESVILLE, NC 28786**

**LUST** **S128894869**
**N/A**

**Relative:**
**Lower**

**Actual:**
**2625 ft.**

LUST:

| | |
|---|---|
| Name: | WC MINI STORAGE |
| Address: | 187 WEST MARSHALL STREET |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | Not reported |
| UST Number: | AS-29353 |
| Incident Number: | 48507 |
| Source Type: | 3 |
| Date Reported: | 06/08/2022 |
| Closure Request: | Not reported |
| Close Out: | 08/30/2022 |
| Level Of Soil Cleanup Achieved: | S3 |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | N |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | Not reported |
| LUR Filed: | 07/18/2022 |
| GPS Confirmed: | 2 |
| Current Status: | C |
| RBCA GW: | G1 |
| PETOPT: | 4 |
| RPL: | False |
| CD Num: | Not reported |
| Reel Num: | Not reported |
| RPOW: | False |
| RPOP: | True |
| Error Flag: | Not reported |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | dpm |
| Company: | NORECK, LLC. A NC LIMITED LIAB |
| Telephone: | 8280000000 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | Not reported |
| Facility Id: | 48507 |
| Date Occurred: | 5/16/2022 |
| Date Reported: | Not reported |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |

**WC MINI STORAGE (Continued)** **S128894869**

| | |
|---|---|
| Type: | 4 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 1 |
| Cause: | 7 |
| Source: | A |
| UST Number: | 2 |

LUST:

| | |
|---|---|
| Incident Number: | 48507 |
| Last Modified: | 8/30/2022 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

---

**17** **TOWN OF WAYNESVILLE PROPERTY** **LUST** **S115705412**
**SE** **75 VANCE STREET** **LUST TRUST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.413 mi.**
**2181 ft.**

**Relative:** **Lower**

**Actual:** **2630 ft.**

LUST:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE PROPERTY |
| Address: | 75 VANCE STREET |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | Not reported |
| UST Number: | AS-4086 |
| Incident Number: | 41184 |
| Source Type: | 3 |
| Date Reported: | 01/22/2014 |
| Closure Request: | Not reported |
| Close Out: | Not reported |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | N |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | 1 |
| Site Risk Reason: | Not reported |

**TOWN OF WAYNESVILLE PROPERTY (Continued)** **S115705412**

| | |
|---|---|
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | N |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 1 |
| Current Status: | C |
| RBCA GW: | Not reported |
| PETOPT: | 4 |
| RPL: | True |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | MES |
| Company: | TOWN OF WAYNESVILLE |
| Telephone: | 8284565114 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-4086 |
| Facility Id: | 41184 |
| Date Occurred: | 1/7/2014 |
| Date Reported: | 1/22/2014 |
| Owner/Operator: | Not reported |
| Ownership: | 1 |
| Operation Type: | 3 |
| Type: | 4 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 2 |
| Cause: | 7 |
| Source: | A |
| UST Number: | P |

LUST TRUST:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE PROPERTY |
| Address: | 75 VANCE STREET |
| City,State,Zip: | WAYNESVILLE, NC |
| Facility ID: | Not reported |
| Site ID: | 41184 |
| Site Note: | Noncommercial; first apply a $1,000 deductible then reimburse 90% of subsequent approved costs until a maximum deductible of $2,000 is |

**TOWN OF WAYNESVILLE PROPERTY (Continued)** **S115705412**

reached. Then reimburse at 100%. [CGS 1/5/15]
Site Eligible?: True
Commercial Find: 100% Non-Commercial
Priority Rank: Not reported
Deductable Amount: 2000
3rd Party Deductable Amt: 0
Sum 3rd Party Amt Applied: 0

---

**G18** **HANDY MART** **LUST** **U003134468**
**WNW** **1002 RUSS AVE** **UST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786** **INST CONTROL**
**0.420 mi.**
**2217 ft.** **Site 1 of 2 in cluster G**

**Relative:** **Higher**
**Actual:** **2717 ft.**

LUST:
Name: HANDY MART (HANDY PANTRY #115)
Address: 1002 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC 28786
Facility ID: 00-0-000
UST Number: AS-3063
Incident Number: 28272
Source Type: 3
Date Reported: 12/09/2004
Closure Request: Not reported
Close Out: 10/31/2005
Level Of Soil Cleanup Achieved: Not reported
# Of Supply Wells: 0
Commercial/NonCommercial UST Site: C
Risk Classification: L
Risk Class Based On Review: L
Corrective Action Plan Type: Not reported
NOV Issue Date: Not reported
Site Priority: Not reported
Phase Of LSA Req: 1
Site Risk Reason: Not reported
Land Use: IND
MTBE: 0
MTBE1: U
Flag: 0
Flag1: 0
LUR Filed: 11/03/2005
GPS Confirmed: 9
Current Status: A
RBCA GW: Not reported
PETOPT: 3
RPL: False
CD Num: 373
Reel Num: 0
RPOW: False
RPOP: False
Error Flag: 0
Error Code: N
Valid: False
Testlat: Not reported
Regional Officer Project Mgr: DPM
Company: Not reported
Telephone: Not reported
5 Min Quad: Not reported

**HANDY MART (Continued)** **U003134468**

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-3063 |
| Facility Id: | 28272 |
| Date Occurred: | 12/9/2004 |
| Date Reported: | 1/6/2005 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | Not reported |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | n |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 2 |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | C |

LUST:

| | |
|---|---|
| Incident Number: | 28272 |
| Last Modified: | 10/31/2005 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

UST:

| | |
|---|---|
| Name: | HANDY MART |
| Address: | 1002 RUSS AVE |
| City,State,Zip: | WAYNESVILLE, NC 28786-2946 |
| Facility Id: | 00-0-0000007237 |
| Contact: | WILLIAM D. SCHULHOFER |
| Contact Address1: | PO BOX 314 |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | WAYNESVILLE, NC 28786-0314 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.4992 |
| Longitude: | -82.9865 |

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 1

**HANDY MART (Continued)** **U003134468**

| | |
|---|---|
| Tank Status: | Removed |
| Installed Date: | 04/11/1978 |
| Perm Close Date: | 10/21/2004 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 9274 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Auto Shutoff Device |
| Spill Protection Name: | Catchment Basin |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Other |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 2 |
| Tank Status: | Removed |
| Installed Date: | 04/11/1978 |
| Perm Close Date: | 10/21/2004 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 9274 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Auto Shutoff Device |
| Spill Protection Name: | Catchment Basin |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Not reported |
| Decode for PCONS_KEY: | Other |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 3 |
| Tank Status: | Removed |
| Installed Date: | 04/11/1978 |
| Perm Close Date: | 10/21/2004 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 9274 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Auto Shutoff Device |
| Spill Protection Name: | Catchment Basin |
| Leak Detection Name: | Not reported |

**HANDY MART (Continued)** **U003134468**

Decode for TCONS_KEY: Not reported
Decode for PCONS_KEY: Other
Decode for PSYS_KEY: Unknown

INST CONTROL:

| | |
|---|---|
| Name: | HANDY MART (HANDY PANTRY #115) |
| Address: | 1002 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Project Number: | AS-3063 |
| Object ID: | Not reported |
| DWM Contact: | Asheville Regional Office (828) 296-4500 |
| DWM Program: | Underground Storage Tank Section |
| Project Status: | No Further Action |
| COC: | Multi COC |
| Contamination Source: | UST System |
| Received Date: | 11/2/2005 |
| Restricted Media: | Multi-Media |
| Allowed Use: | Media Restrictions Only |
| Certification: | None |
| Plant Reception Date: | Not reported |
| Instrument Status: | Effective |
| Deed BK: | Not reported |
| Deed PG: | Not reported |
| Plat BK: | Not reported |
| Plat PG: | Not reported |
| Instrument: | Notice and Restriction |
| Deed: | Not reported |
| Deed Date: | Recorded 11-2-2005 |
| Plat: | Not reported |
| Plat Date: | Not reported |
| X Coord: | 812623.40536 |
| Y Coord: | 661884.23121 |

---

**G19** **HANDY MART (HANDY PANTRY #115)** **IMD** **S106799433**
**WNW** **1002 RUSS AVENUE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.420 mi.**
**2217 ft.** **Site 2 of 2 in cluster G**

**Relative:**
**Higher**

**Actual:**
**2717 ft.**

IMD:

| | | |
|---|---|---|
| Facility ID: | | 28272 |
| Name: | | HANDY MART (HANDY PANTRY #115) |
| Address: | | 1002 RUSS AVENUE |
| City,State,Zip: | | WAYNESVILLE, NC |
| Date Occurred: | | 12/9/2004 |
| Submit Date: | | 1/6/2005 |
| Incident Desc: | Not reported | |
| Operator: | | William Schulhofer |
| UST ID: | | Not reported |
| Incident ID: | | Not reported |
| Initials of UST Regional Contact: | | Not reported |
| Regional Office: | | Not reported |
| Responsible Party/Company Name: | | Not reported |
| Ownership: | | 4 |
| Responsible Party Contact Name: | | Not reported |
| Operation: | | Not reported |
| Responsible Party Mailing Address: | | Not reported |

**HANDY MART (HANDY PANTRY #115) (Continued)** **S106799433**

| | |
|---|---|
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Not reported |
| Responsible Party County: | Not reported |
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | Not reported |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | y |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | Not reported |
| Longitude: | Not reported |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | PO Box 314 |
| Operator City,State,Zip: | Waynesville, NC 28786 |
| Operator County: | Not reported |

**HANDY MART (HANDY PANTRY #115) (Continued)** **S106799433**

| | |
|---|---|
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | L |
| Priority Code: | Not reported |
| Dem Contact: | DPM |
| Wells Contam: | Not reported |
| Latitude Number: | Not reported |
| Longitude Number: | Not reported |
| Latitude Decimal: | Not reported |
| Longitude Decimal: | Not reported |
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 28272 |
| Last Modified: | 2005-10-31 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

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**H20** **SCHULHOFFER JUNKYARD** **SHWS** **S104919093**
**ENE** **HOWELL MILL ROAD** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.448 mi.**
**2364 ft.** **Site 1 of 2 in cluster H**

**Relative:**
**Lower**

**Actual:**
**2634 ft.**

SHWS:

| | |
|---|---|
| Name: | SCHULHOFFER JUNKYARD |
| Address: | HOWELL MILL ROAD |
| City,State,Zip: | WAYNESVILLE, NC |
| EPAID: | NCD024852675 |
| Lat/Longitude: | 35.50729 / -82.97605 |
| Geolocation Method: | ON SCREEN PLACEMENT ON GEOREFERENCED MAP |

Click here to access the North Carolina DEQ records for this facility:

**H21** **BROWN NCDOT PARCEL 32** **LAST** **S115705216**
**ENE** **838 HOWELL MILL RD** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.456 mi.**
**2410 ft.** **Site 2 of 2 in cluster H**

**Relative:**
**Lower**

**Actual:**
**2640 ft.**

LAST:

| | | |
|---|---|---|
| Name: | BROWN NCDOT PARCEL 32 | |
| Address: | 838 HOWELL MILL RD | |
| City,State,Zip: | WAYNESVILLE, NC 28786 | |
| Facility ID: | Not reported | |
| UST Number: | AS-88297 | |
| Incident Number: | 89134 | |
| Contamination Type: | | SL |
| Source Type: | Not reported | |
| Product Type: | P | |
| Date Reported: | 11/21/2013 | |
| Date Occur: | 11/21/2013 | |
| Cleanup: | Not reported | |
| Closure Request: | Not reported | |
| Close Out: | 02/05/2014 | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | Not reported |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | Not reported |
| Risk Classification: | | L |
| Risk Class Based On Review: | | L |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | Not reported | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | Yes | |
| Flag1: | No | |
| LUR Filed: | Not reported | |
| Release Detection: | 0 | |
| Current Status: | C | |
| RBCA GW: | Not reported | |
| PETOPT: | 3 | |
| RPL: | False | |
| CD Num: | 0 | |
| Reel Num: | 0 | |
| RPOW: | True | |
| RPOP: | False | |
| Error Flag: | 0 | |
| Error Code: | N | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.50759 -82.97581 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | JCA |
| Region: | | ASH |
| Company: | | NCDOT |
| Contact Person: | | Gordon Box |
| Telephone: | | Not reported |

**BROWN NCDOT PARCEL 32 (Continued)** **S115705216**

RP Address: 1589 Mail Service Center
RP City,St,Zip: Raleigh, NC 27699
RP County: Not reported
Comments: NCDOT requested a NFA letter 2/4/2014 NFA letter 2/5/2014 *****ALL FILES ON S LASERFICHE FOR PROCESSING*****
5 Min Quad: Not reported

PIRF:
Facility Id: 89134
Date Occurred: 11/21/2013
Date Reported: 11/21/2013
Description Of Incident: MINOR SOIL NFA LETTER
Owner/Operator: Not reported
Ownership: 7
Operation Type: 3
Type: 1
Location: 8
Site Priority: Not reported
Priority Update: Not reported
Wells Affected Y/N: N
Wells Affected Number: Not reported
Samples Taken By: Y
Samples Include: N
7#5 Min Quad: 1
5 Min Quad: 1
Pirf/Min Soil: Not reported
Release Code: 9
Cause: Not reported
Source: Not reported
Source Type: E

Last Modified: 2/5/2014
**Incident Phase:** **CO**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

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**22**
**South**
**1/2-1**
**0.969 mi.**
**5115 ft.**

**A.C. LAWRENCE LEATHER CO** **SHWS** **S104918920**
**100 WEST MAIN STREET** **N/A**
**HAZELWOOD, NC**

**Relative:**
**Higher**

**Actual:**
**2724 ft.**

SHWS:
Name: A.C. LAWRENCE LEATHER CO
Address: 100 WEST MAIN STREET
City,State,Zip: HAZELWOOD, NC
EPAID: NC0000195701
Lat/Longitude: Not reported
Geolocation Method: Not reported

**A.C. LAWRENCE LEATHER CO (Continued)** **S104918920**

Click here to access the North Carolina DEQ records for this facility:

Count: 1 records. ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| WAYNESVILLE | S125674843 | BARBER ORCHARD | BARBER HILL DRIVE | | SHWS |

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 25

Source: EPA
Telephone: N/A
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

***Lists of Federal Delisted NPL sites***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 12/20/2022
Date Data Arrived at EDR: 12/21/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/28/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Quarterly

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Quarterly

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

***Lists of Federal RCRA generators***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/08/2023
Date Data Arrived at EDR: 02/09/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 82

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/03/2023
Next Scheduled EDR Contact: 08/21/2023
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/20/2023
Date Data Arrived at EDR: 02/21/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/21/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/20/2023
Date Data Arrived at EDR: 02/21/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/21/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 12/19/2022
Number of Days to Update: 5

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/21/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

***Lists of state- and tribal (Superfund) equivalent sites***

HSDS: Hazardous Substance Disposal Site

Locations of uncontrolled and unregulated hazardous waste sites. The file includes sites on the National Priority List as well as those on the state priority list.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 11/08/2011
Date Made Active in Reports: 12/05/2011
Number of Days to Update: 27

Source: North Carolina Center for Geographic Information and Analysis
Telephone: 919-754-6580
Last EDR Contact: 04/13/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: No Update Planned

***Lists of state- and tribal hazardous waste facilities***

SHWS: Inactive Hazardous Sites Inventory

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 11/20/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 02/24/2023
Number of Days to Update: 80

Source: Department of Environment, Health and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 03/08/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Quarterly

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF: List of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/15/2022
Date Data Arrived at EDR: 12/19/2022
Date Made Active in Reports: 03/15/2023
Number of Days to Update: 86

Source: Department of Environment and Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 03/24/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

OLI: Old Landfill Inventory

Old landfill inventory location information. (Does not include no further action sites and other agency lead sites).

Date of Government Version: 07/05/2022
Date Data Arrived at EDR: 10/05/2022
Date Made Active in Reports: 12/21/2022
Number of Days to Update: 77

Source: Department of Environment & Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

DEBRIS: Solid Waste Active Disaster Debris Sites Listing
NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency.. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency

Date of Government Version: 12/09/2022
Date Data Arrived at EDR: 12/09/2022
Date Made Active in Reports: 03/02/2023
Number of Days to Update: 83
Source: Department of Environmental Quality
Telephone: 919-707-8247
Last EDR Contact: 03/16/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Varies

LCID: Land-Clearing and Inert Debris (LCID) Landfill Notifications
A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

Date of Government Version: 08/09/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/16/2022
Number of Days to Update: 74
Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

***Lists of state and tribal leaking storage tanks***

LAST: Leaking Aboveground Storage Tanks
A listing of leaking aboveground storage tank site locations.

Date of Government Version: 01/27/2023
Date Data Arrived at EDR: 02/01/2023
Date Made Active in Reports: 04/24/2023
Number of Days to Update: 82
Source: Department of Environment & Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Quarterly

LUST: Regional UST Database
This database contains information obtained from the Regional Offices. It provides a more detailed explanation of current and historic activity for individual sites, as well as what was previously found in the Incident Management Database. Sites in this database with Incident Numbers are considered LUSTs.

Date of Government Version: 01/13/2023
Date Data Arrived at EDR: 01/20/2023
Date Made Active in Reports: 01/23/2023
Number of Days to Update: 3
Source: Department of Environment and Natural Resources
Telephone: 919-707-8200
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 134
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/19/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/26/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/08/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

LUST TRUST: State Trust Fund Database
This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

Date of Government Version: 12/09/2022
Date Data Arrived at EDR: 01/04/2023
Date Made Active in Reports: 03/21/2023
Number of Days to Update: 76
Source: Department of Environment and Natural Resources
Telephone: 919-733-1315
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Quarterly

***Lists of state and tribal registered storage tanks***

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/29/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

UST: Petroleum Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 01/27/2023
Date Data Arrived at EDR: 02/01/2023
Date Made Active in Reports: 04/24/2023
Number of Days to Update: 82

Source: Department of Environment and Natural Resources
Telephone: 919-733-1308
Last EDR Contact: 04/27/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Quarterly

AST: AST Database
Facilities with aboveground storage tanks that have a capacity greater than 21,000 gallons.

Date of Government Version: 11/22/2022
Date Data Arrived at EDR: 12/07/2022
Date Made Active in Reports: 02/24/2023
Number of Days to Update: 79

Source: Department of Environment and Natural Resources
Telephone: 919-715-6183
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 134

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/23/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/19/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 03/03/2023
Number of Days to Update: 87

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/09/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

***State and tribal institutional control / engineering control registries***

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring

A land use restricted site is a property where there are limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site.

Date of Government Version: 11/20/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 02/24/2023
Number of Days to Update: 80

Source: Department of Environmental Quality
Telephone: 919-508-8400
Last EDR Contact: 03/08/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Quarterly

***Lists of state and tribal voluntary cleanup sites***

VCP: Responsible Party Voluntary Action Sites
Responsible Party Voluntary Action site locations.

Date of Government Version: 11/20/2022
Date Data Arrived at EDR: 12/06/2022
Date Made Active in Reports: 02/24/2023
Number of Days to Update: 80

Source: Department of Environment and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 03/08/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/17/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

***Lists of state and tribal brownfield sites***

BROWNFIELDS: Brownfields Projects Inventory
A brownfield site is an abandoned, idled, or underused property where the threat of environmental contamination has hindered its redevelopment. All of the sites in the inventory are working toward a brownfield agreement for cleanup and liabitliy control.

Date of Government Version: 12/01/2022
Date Data Arrived at EDR: 12/22/2022
Date Made Active in Reports: 03/15/2023
Number of Days to Update: 83

Source: Department of Environment and Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 03/29/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 04/06/2023
Date Data Arrived at EDR: 04/13/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Semi-Annually

***Local Lists of Landfill / Solid Waste Disposal Sites***

HIST LF: Solid Waste Facility Listing
A listing of solid waste facilities.

Date of Government Version: 11/06/2006
Date Data Arrived at EDR: 02/13/2007
Date Made Active in Reports: 03/02/2007
Number of Days to Update: 17

Source: Department of Environment & Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWRCY: Recycling Center Listing
A listing of recycling center locations.

Date of Government Version: 01/31/2022
Date Data Arrived at EDR: 02/02/2022
Date Made Active in Reports: 04/29/2022
Number of Days to Update: 86

Source: Department of Environment & Natural Resources
Telephone: 919-707-8137
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/19/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/12/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/27/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 01/06/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 8

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/02/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 01/06/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 8

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/02/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Quarterly

***Local Land Records***

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/13/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/21/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

SPILLS: Spills Incident Listing

A listing spills, hazardous material releases, sanitary sewer overflows, wastewater treatment plant bypasses and upsets, citizen complaints, and any other environmental emergency calls reported to the agency.

Date of Government Version: 12/22/2022
Date Data Arrived at EDR: 01/04/2023
Date Made Active in Reports: 03/21/2023
Number of Days to Update: 76

Source: Department of Environment & Natural Resources
Telephone: 919-807-6308
Last EDR Contact: 05/04/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Quarterly

IMD: Incident Management Database

Groundwater and/or soil contamination incidents

Date of Government Version: 01/13/2023
Date Data Arrived at EDR: 01/20/2023
Date Made Active in Reports: 04/06/2023
Number of Days to Update: 76

Source: Department of Environment and Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/27/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 06/14/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 02/01/2023
Date Data Arrived at EDR: 02/14/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 77

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/14/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/11/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/11/2023
Next Scheduled EDR Contact: 08/21/2023
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/21/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/01/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/04/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/13/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 02/16/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 75

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/16/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/17/2023
Date Data Arrived at EDR: 01/18/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 91

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/18/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/04/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/13/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/03/2022
Date Data Arrived at EDR: 01/04/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 89

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/29/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Quarterly

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/26/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 13
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/13/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/03/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/27/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/04/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 03/23/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2022
Date Data Arrived at EDR: 01/12/2023
Date Made Active in Reports: 04/07/2023
Number of Days to Update: 85

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/03/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/09/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/26/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/10/2023
Next Scheduled EDR Contact: 08/28/2023
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/25/2023
Date Data Arrived at EDR: 02/02/2023
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 05/02/2023
Next Scheduled EDR Contact: 07/10/2023
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/07/2022
Date Data Arrived at EDR: 11/17/2022
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 85

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/22/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 02/27/2023
Date Data Arrived at EDR: 03/01/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 23

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/20/2022
Date Data Arrived at EDR: 12/20/2022
Date Made Active in Reports: 03/10/2023
Number of Days to Update: 80

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/16/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/02/2023
Date Data Arrived at EDR: 02/28/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 24

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 02/28/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2023
Date Data Arrived at EDR: 01/04/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 89

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/31/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 11/09/2021
Date Data Arrived at EDR: 10/20/2022
Date Made Active in Reports: 01/10/2023
Number of Days to Update: 82

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/27/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/13/2023
Date Data Arrived at EDR: 02/14/2023
Date Made Active in Reports: 04/19/2023
Number of Days to Update: 64

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/14/2023
Next Scheduled EDR Contact: 05/29/2023
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 07/08/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 123

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 04/04/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/07/2023
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 04/20/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/07/2023
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 03/30/2023
Date Data Arrived at EDR: 03/30/2023
Date Made Active in Reports: 04/03/2023
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 04/27/2023
Date Data Arrived at EDR: 04/27/2023
Date Made Active in Reports: 05/02/2023
Number of Days to Update: 5

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/27/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Listing

List of PFAS facilities

Date of Government Version: 05/18/2022
Date Data Arrived at EDR: 05/18/2022
Date Made Active in Reports: 08/08/2022
Number of Days to Update: 82

Source: Department of Environmental Quality
Telephone: 919-707-8233
Last EDR Contact: 05/10/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Varies

AIRS: Air Quality Permit Listing

A listing of facilities with air quality permits.

Date of Government Version: 12/04/2022
Date Data Arrived at EDR: 12/05/2022
Date Made Active in Reports: 02/24/2023
Number of Days to Update: 81

Source: Department of Environmental Quality
Telephone: 919-707-8726
Last EDR Contact: 03/08/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Varies

ASBESTOS: ASBESTOS

Asbestos notification sites

Date of Government Version: 01/31/2023
Date Data Arrived at EDR: 02/15/2023
Date Made Active in Reports: 05/09/2023
Number of Days to Update: 83

Source: Department of Health & Human Services
Telephone: 919-707-5973
Last EDR Contact: 04/13/2023
Next Scheduled EDR Contact: 07/31/2023
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites

A listing of coal combustion products distribution permits issued by the Division for the treatment, storage, transportation, use and disposal of coal combustion products.

Date of Government Version: 12/15/2022
Date Data Arrived at EDR: 12/19/2022
Date Made Active in Reports: 03/15/2023
Number of Days to Update: 86

Source: Department of Environment & Natural Resources
Telephone: 919-807-6359
Last EDR Contact: 03/24/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Sites

Potential and known drycleaning sites, active and abandoned, that the Drycleaning Solvent Cleanup Program has knowledge of and entered into this database.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/13/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 74

Source: Department of Environment & Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 03/16/2023
Next Scheduled EDR Contact: 06/26/2023
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/28/2022
Date Data Arrived at EDR: 10/31/2022
Date Made Active in Reports: 01/19/2023
Number of Days to Update: 80

Source: Department of Environment & Natural Resources
Telephone: 919-733-1322
Last EDR Contact: 04/27/2023
Next Scheduled EDR Contact: 08/14/2023
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/03/2012
Date Made Active in Reports: 10/26/2012
Number of Days to Update: 23

Source: Department of Environmental & Natural Resources
Telephone: 919-508-8496
Last EDR Contact: 03/17/2023
Next Scheduled EDR Contact: 07/03/2023
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information

Hazardous waste financial assurance information.

Date of Government Version: 12/01/2022
Date Data Arrived at EDR: 12/01/2022
Date Made Active in Reports: 02/17/2023
Number of Days to Update: 78

Source: Department of Environment & Natural Resources
Telephone: 919-707-8222
Last EDR Contact: 03/02/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Varies

NPDES: NPDES Facility Location Listing

General information regarding NPDES(National Pollutant Discharge Elimination System) permits.

Date of Government Version: 12/01/2022
Date Data Arrived at EDR: 01/25/2023
Date Made Active in Reports: 02/15/2023
Number of Days to Update: 21

Source: Department of Environment & Natural Resources
Telephone: 919-733-7015
Last EDR Contact: 04/25/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing

A listing of uncerground injection wells locations.

Date of Government Version: 02/22/2022
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 05/27/2022
Number of Days to Update: 87

Source: Department of Environment & Natural Resources
Telephone: 919-807-6412
Last EDR Contact: 03/03/2023
Next Scheduled EDR Contact: 06/12/2023
Data Release Frequency: Quarterly

AOP: Animal Operation Permits Listing

This listing includes animal operations that are required to be permitted by the state.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 05/27/2020
Number of Days to Update: 1

Source: Department of Environmental Quality
Telephone: 919-707-9129
Last EDR Contact: 03/10/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/24/2023
Next Scheduled EDR Contact: 06/05/2023
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: No Update Planned

PCSRP: Petroleum-Contaminated Soil Remediation Permits
To treat petroleum-contaminated soil in order to protect North Carolinaa??s environment and the health of the citizens of North Carolina.

Date of Government Version: 08/18/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/16/2022
Number of Days to Update: 74

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

CCB: Coal Ash Structural Fills (CCB) Listing
These are not permitted Coal Ash landfills A list all of the now closed Coal Ash Structural Fills (CCB) in North Carolina, in point data form. The purpose is to provide the public and other government entities a visual overview of coal ash structural fills throughout the state and increase public awareness of their current locations.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI
Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 03/07/2023
Date Data Arrived at EDR: 03/07/2023
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

SEPT HAULERS: Permitted Septage Haulers Listing

This list of all active and permitted Septage Land Application Site (SLAS) and Septage Detention and Treatment Facility (SDTF) sites in North Carolina. The purpose of this map is to provide the public and government entities a visual overview of the businesses that manage septage and septage facilities throughout the state.

Date of Government Version: 01/17/2023
Date Data Arrived at EDR: 01/18/2023
Date Made Active in Reports: 04/06/2023
Number of Days to Update: 78

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 03/29/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Varies

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/20/2013
Number of Days to Update: 172

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/16/2022
Date Data Arrived at EDR: 11/16/2022
Date Made Active in Reports: 02/06/2023
Number of Days to Update: 82

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/11/2023
Next Scheduled EDR Contact: 08/21/2023
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/30/2023
Next Scheduled EDR Contact: 07/17/2023
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/27/2023
Next Scheduled EDR Contact: 08/07/2023
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/06/2023
Next Scheduled EDR Contact: 07/24/2023
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/10/2022
Next Scheduled EDR Contact: 08/28/2023
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/06/2023
Next Scheduled EDR Contact: 06/19/2023
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facility List
Source: Department of Health & Human Services
Telephone: 919-662-4499

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# Appendix IV: Historical Research Documentation

**Balsam Edge Apartments**

271 Howell Mill Road

Waynesville, NC 28786

Inquiry Number: 7182357.8

November 21, 2022

# The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Aerial Photo Decade Package

11/21/22

**Site Name:**

Balsam Edge Apartments
271 Howell Mill Road
Waynesville, NC 28786
EDR Inquiry # 7182357.8

**Client Name:**

ECS Southeast, LLP
1200 Woodruff Road Suite H-12
Greenville, SC 29607
Contact: Zachary Windham

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

***Search Results:***

| *Year* | *Scale* | *Details* | *Source* |
|---|---|---|---|
| 2016 | 1"=500' | Flight Year: 2016 | USDA/NAIP |
| 2012 | 1"=500' | Flight Year: 2012 | USDA/NAIP |
| 2009 | 1"=500' | Flight Year: 2009 | USDA/NAIP |
| 2006 | 1"=500' | Flight Year: 2006 | USDA/NAIP |
| 1998 | 1"=500' | Acquisition Date: January 01, 1998 | USGS/DOQQ |
| 1995 | 1"=500' | Acquisition Date: January 01, 1995 | USGS/DOQQ |
| 1992 | 1"=500' | Flight Date: April 13, 1992 | USGS |
| 1989 | 1"=500' | Flight Date: February 01, 1989 | USDA |
| 1986 | 1"=500' | Flight Date: March 24, 1986 | USDA |
| 1975 | 1"=500' | Flight Date: April 01, 1975 | USGS |
| 1956 | 1"=500' | Flight Date: October 10, 1956 | USGS |

**When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.**


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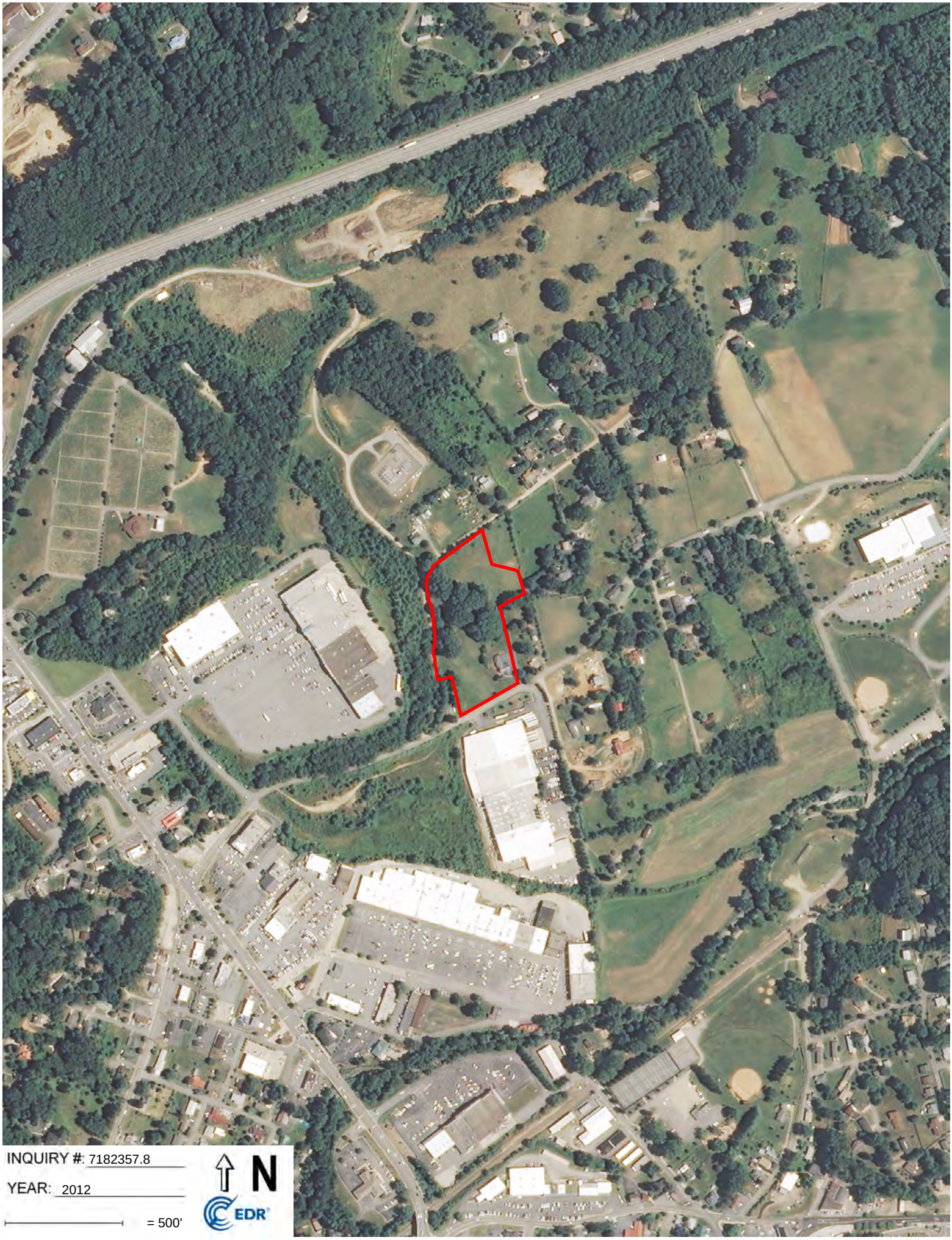
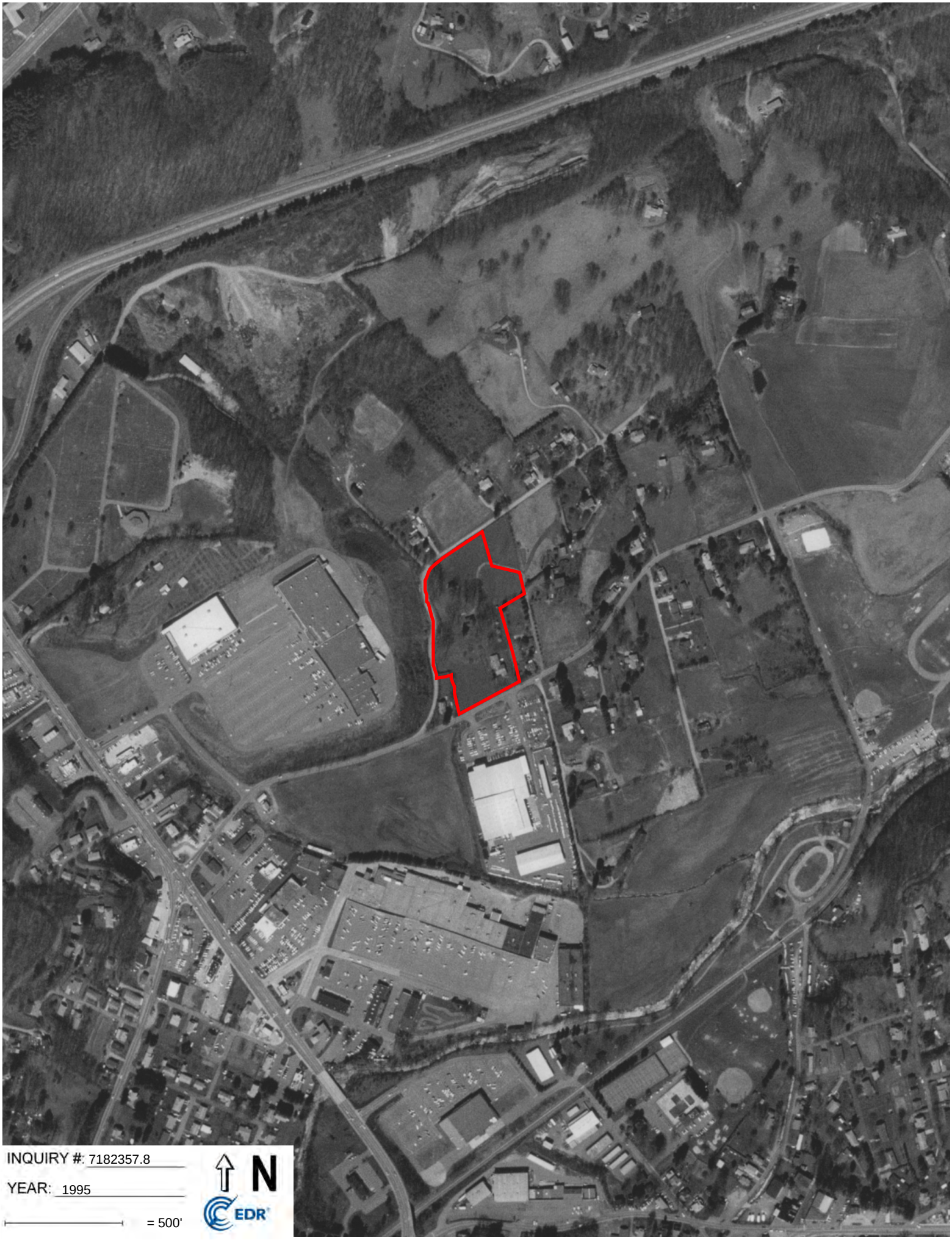
INQUIRY #: 7182357.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 7182357.8
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 7182357.8
YEAR: 2009
= 500'
N
EDR

INQUIRY #: 7182357.8
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 7182357.8
YEAR: 1998
= 500'
N
EDR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YEAR: 1995
= 500'
N
EDR

INQUIRY #: 7182357.8

YEAR: 1992

= 500'

N

EDR

INQUIRY #: 7182357.8
YEAR: 1989
= 500'
N
EDR

INQUIRY #: 7182357.8
YEAR: 1986
= 500'
N
EDR

INQUIRY #: 7182357.8
YEAR: 1975
= 500'
N
EDR

INQUIRY #: 7182357.8
YEAR: 1956
= 500'
N
EDR

Balsam Edge Apartments
271 Howell Mill Road
Waynesville, NC 28786

Inquiry Number: 7182357.3
November 17, 2022

# Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# Certified Sanborn® Map Report

11/17/22

**Site Name:**

Balsam Edge Apartments
271 Howell Mill Road
Waynesville, NC 28786
EDR Inquiry # 7182357.3

**Client Name:**

ECS Southeast, LLP
1200 Woodruff Road Suite H-12
Greenville, SC 29607
Contact: Zachary Windham

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by ECS Southeast, LLP were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

## *Certified Sanborn Results:*

**Certification #** 804A-4379-8094

**PO #** 49-18762

**Project** Balsam Edge Apartments

### UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 804A-4379-8094

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

*The Sanborn Library LLC Since 1866™*

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Balsam Edge Apartments

271 Howell Mill Road

Waynesville, NC 28786

Inquiry Number: 7182357.4

November 17, 2022

# EDR Historical Topo Map Report

## with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

# EDR Historical Topo Map Report

11/17/22

**Site Name:**

Balsam Edge Apartments
271 Howell Mill Road
Waynesville, NC 28786
EDR Inquiry # 7182357.4

**Client Name:**

ECS Southeast, LLP
1200 Woodruff Road Suite H-12
Greenville, SC 29607
Contact: Zachary Windham

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by ECS Southeast, LLP were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

***Search Results:***

**P.O.#** 49-18762
**Project:** Balsam Edge Apartments

***Coordinates:***

| | |
|---|---|
| **Latitude:** | 35.504754 35° 30' 17" North |
| **Longitude:** | -82.98438 -82° 59' 4" West |
| **UTM Zone:** | Zone 17 North |
| **UTM X Meters:** | 320029.22 |
| **UTM Y Meters:** | 3930831.13 |
| **Elevation:** | 2680.20' above sea level |

**Maps Provided:**

| | |
|---|---|
| 2019 | 1906 |
| 2016 | 1901, 1905 |
| 2013 | 1893, 1894, 1897 |
| 1979 | |
| 1967 | |
| 1942 | |
| 1941 | |
| 1935 | |

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## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 2019 Source Sheets

Clyde
2019
7.5-minute, 24000

Waynesville
2019
7.5-minute, 24000

Dellwood
2019
7.5-minute, 24000

Hazelwood
2019
7.5-minute, 24000

### 2016 Source Sheets

Clyde
2016
7.5-minute, 24000

Waynesville
2016
7.5-minute, 24000

Dellwood
2016
7.5-minute, 24000

Hazelwood
2016
7.5-minute, 24000

### 2013 Source Sheets

Clyde
2013
7.5-minute, 24000

Waynesville
2013
7.5-minute, 24000

Dellwood
2013
7.5-minute, 24000

Hazelwood
2013
7.5-minute, 24000

### 1979 Source Sheets

Dellwood
1979
7.5-minute, 24000
Aerial Photo Revised 1976

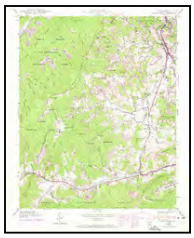
Hazelwood
1979
7.5-minute, 24000
Aerial Photo Revised 1976

Waynesville
1979
7.5-minute, 24000
Aerial Photo Revised 1976

## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1967 Source Sheets



Dellwood
1967
7.5-minute, 24000
Aerial Photo Revised 1966

Hazelwood
1967
7.5-minute, 24000
Aerial Photo Revised 1966

Clyde
1967
7.5-minute, 24000
Aerial Photo Revised 1966

Waynesville
1967
7.5-minute, 24000
Aerial Photo Revised 1966

### 1942 Source Sheets

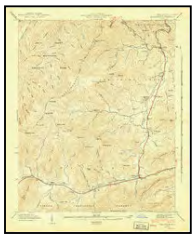
Clyde
1942
7.5-minute, 24000

Waynesville
1942
7.5-minute, 24000

Hazelwood
1942
7.5-minute, 24000

### 1941 Source Sheets

Waynesville
1941
7.5-minute, 24000



Dellwood
1941
7.5-minute, 24000

Hazelwood
1941
7.5-minute, 24000

Clyde
1941
7.5-minute, 24000

### 1935 Source Sheets

Clyde
1935
7.5-minute, 24000

Waynesville
1935
7.5-minute, 24000

Hazelwood
1935
7.5-minute, 24000

Dellwood
1935
7.5-minute, 24000

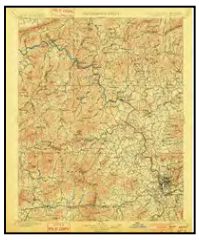
## *Topo Sheet Key*

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

### 1906 Source Sheets

Pisgah
1906
30-minute, 125000

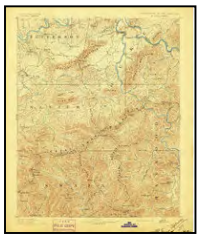
### 1901, 1905 Source Sheets



Asheville
1901
30-minute, 125000

Pisgah
1905
30-minute, 125000

### 1893, 1894, 1897 Source Sheets



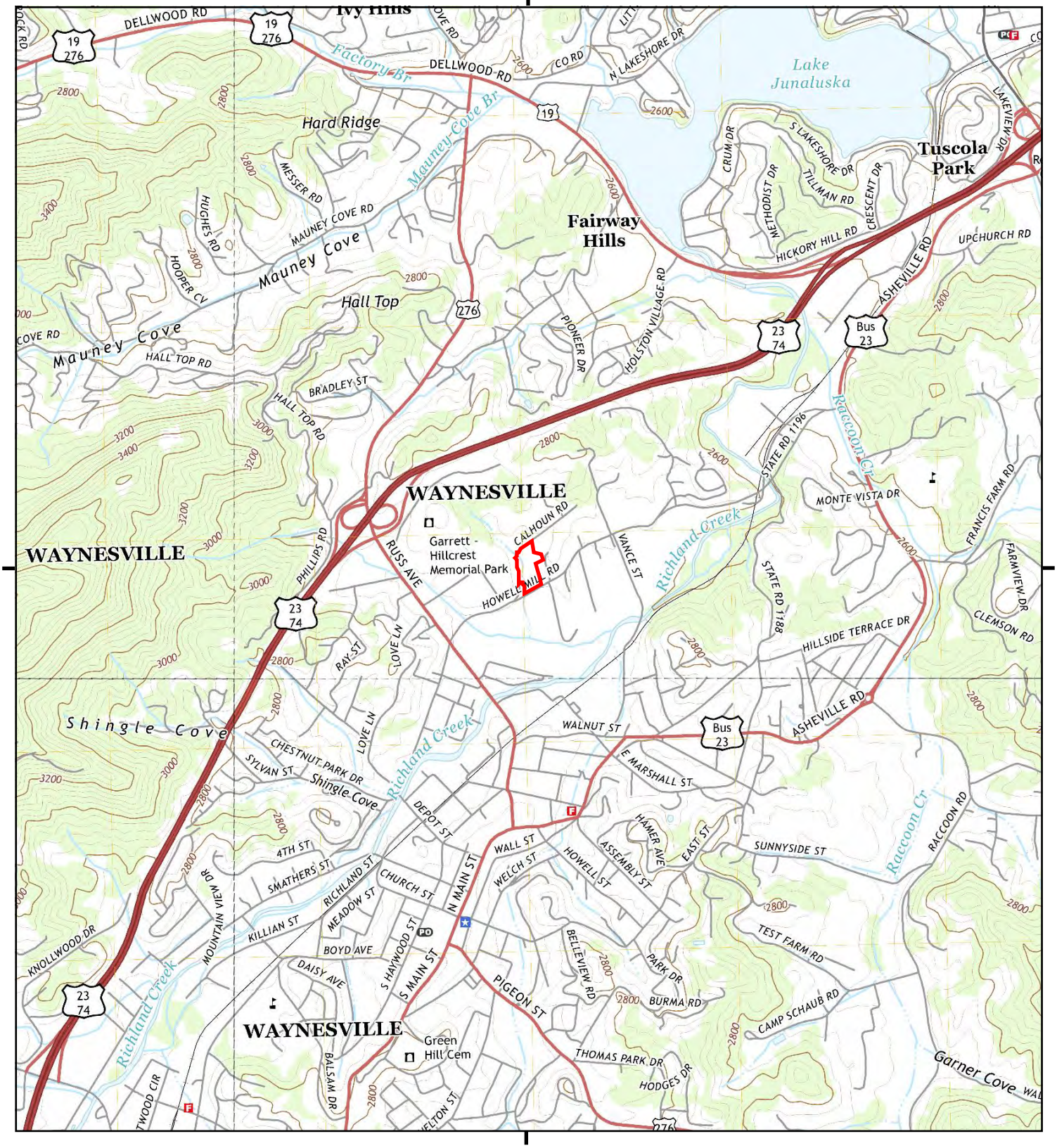
Mt Guyot
1893
30-minute, 125000

Asheville
1894
30-minute, 125000

Cowee
1897
30-minute, 125000

# Historical Topo Map

2019




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

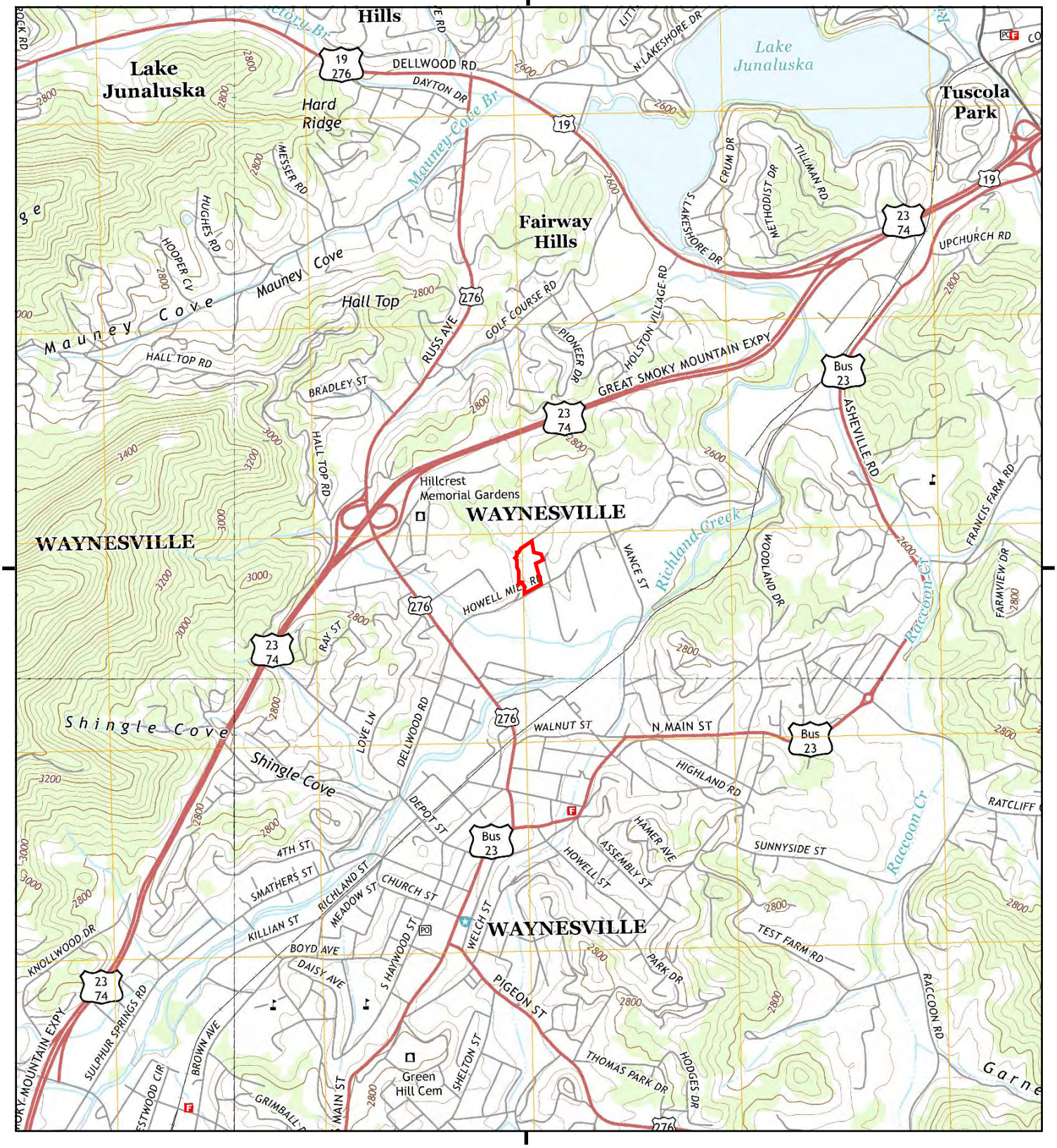
TP, Clyde, 2019, 7.5-minute
SE, Waynesville, 2019, 7.5-minute
SW, Hazelwood, 2019, 7.5-minute
NW, Dellwood, 2019, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N

# Historical Topo Map

2016




This report includes information from the following map sheet(s).

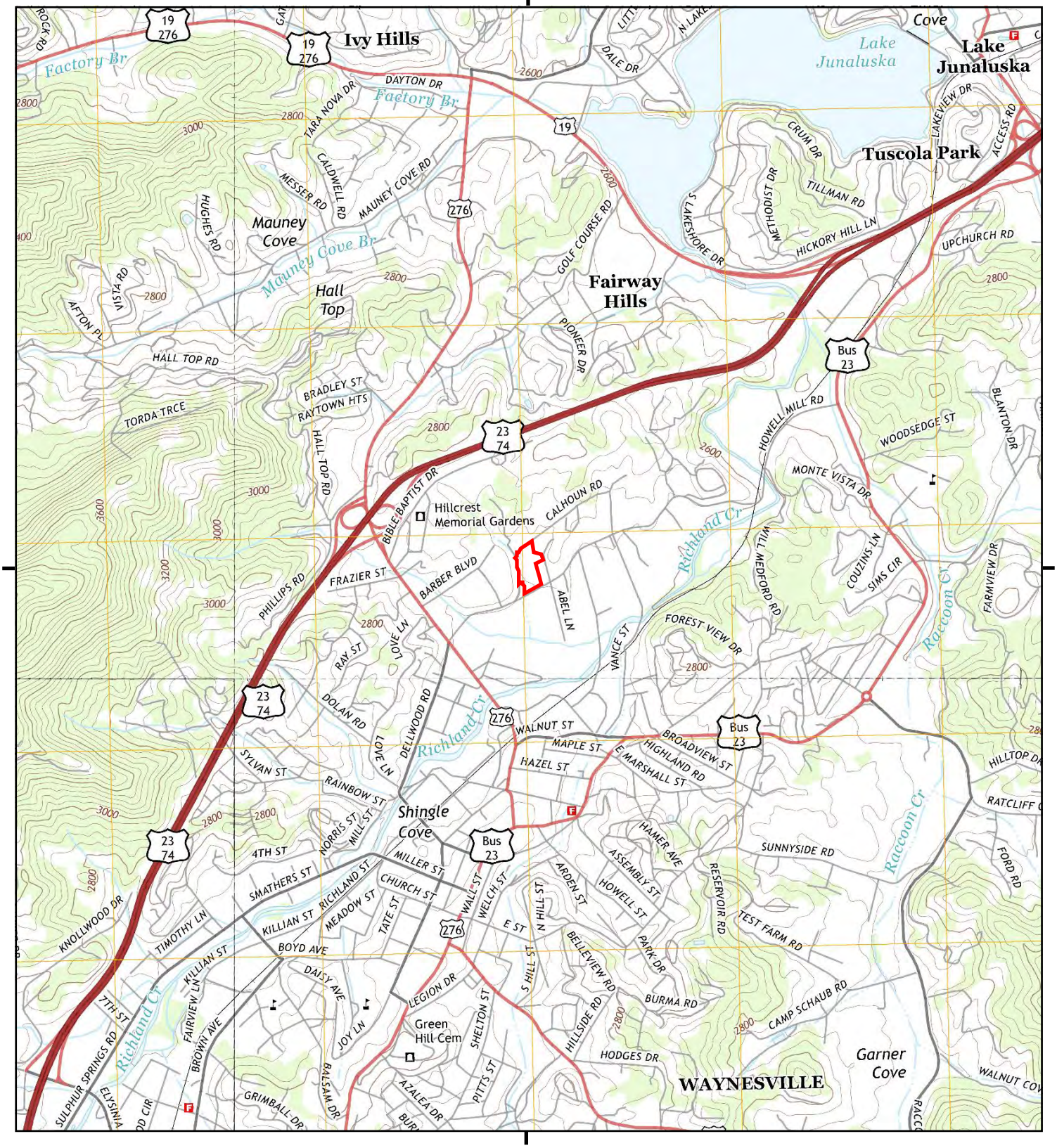
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clyde, 2016, 7.5-minute
SE, Waynesville, 2016, 7.5-minute
SW, Hazelwood, 2016, 7.5-minute
NW, Dellwood, 2016, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N




This report includes information from the following map sheet(s).

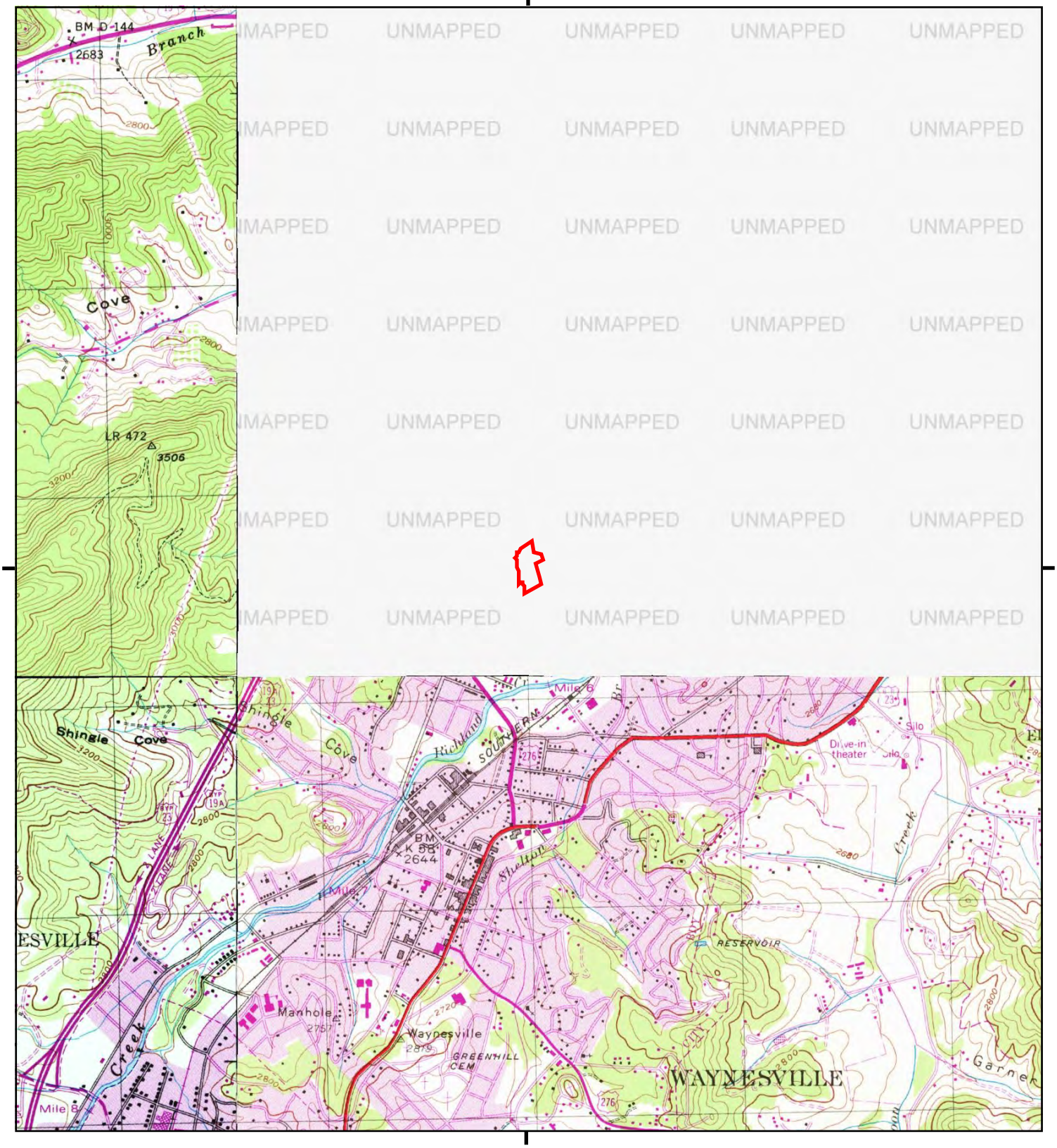
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clyde, 2013, 7.5-minute
SE, Waynesville, 2013, 7.5-minute
SW, Hazelwood, 2013, 7.5-minute
NW, Dellwood, 2013, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N




This report includes information from the following map sheet(s).

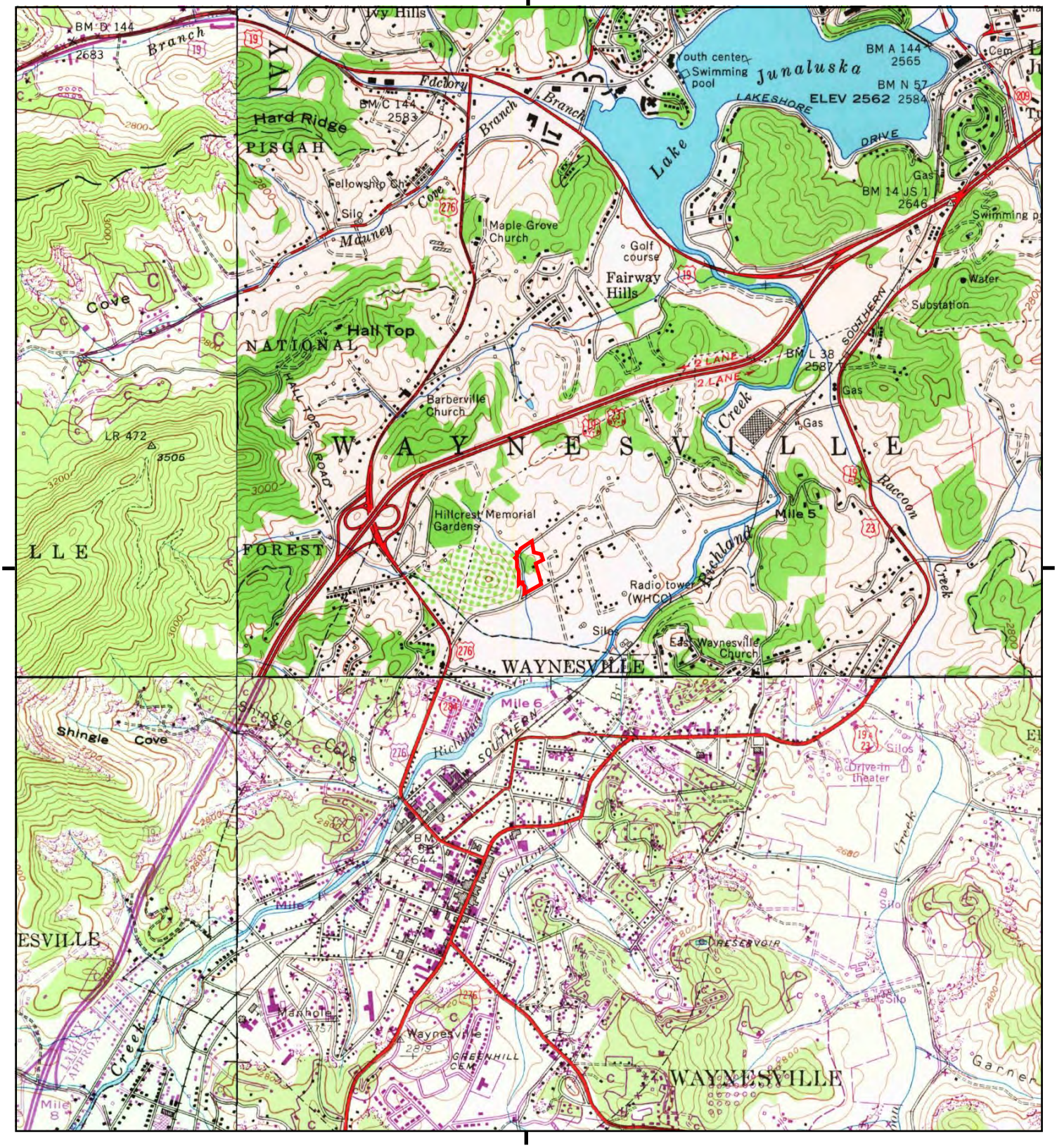
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SE, Waynesville, 1979, 7.5-minute
SW, Hazelwood, 1979, 7.5-minute
NW, Dellwood, 1979, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N

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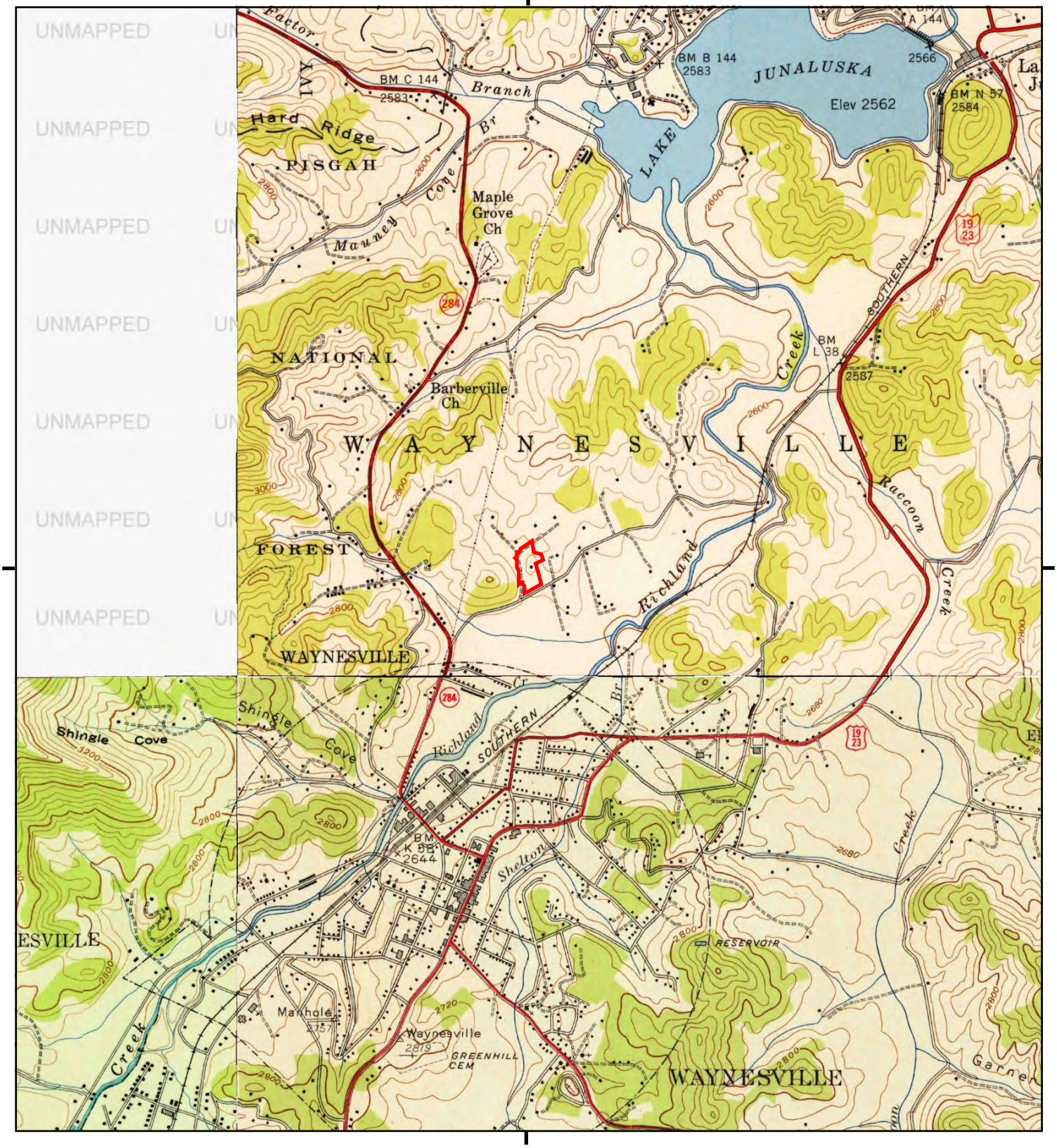
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clyde, 1967, 7.5-minute
SE, Waynesville, 1967, 7.5-minute
SW, Hazelwood, 1967, 7.5-minute
NW, Dellwood, 1967, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

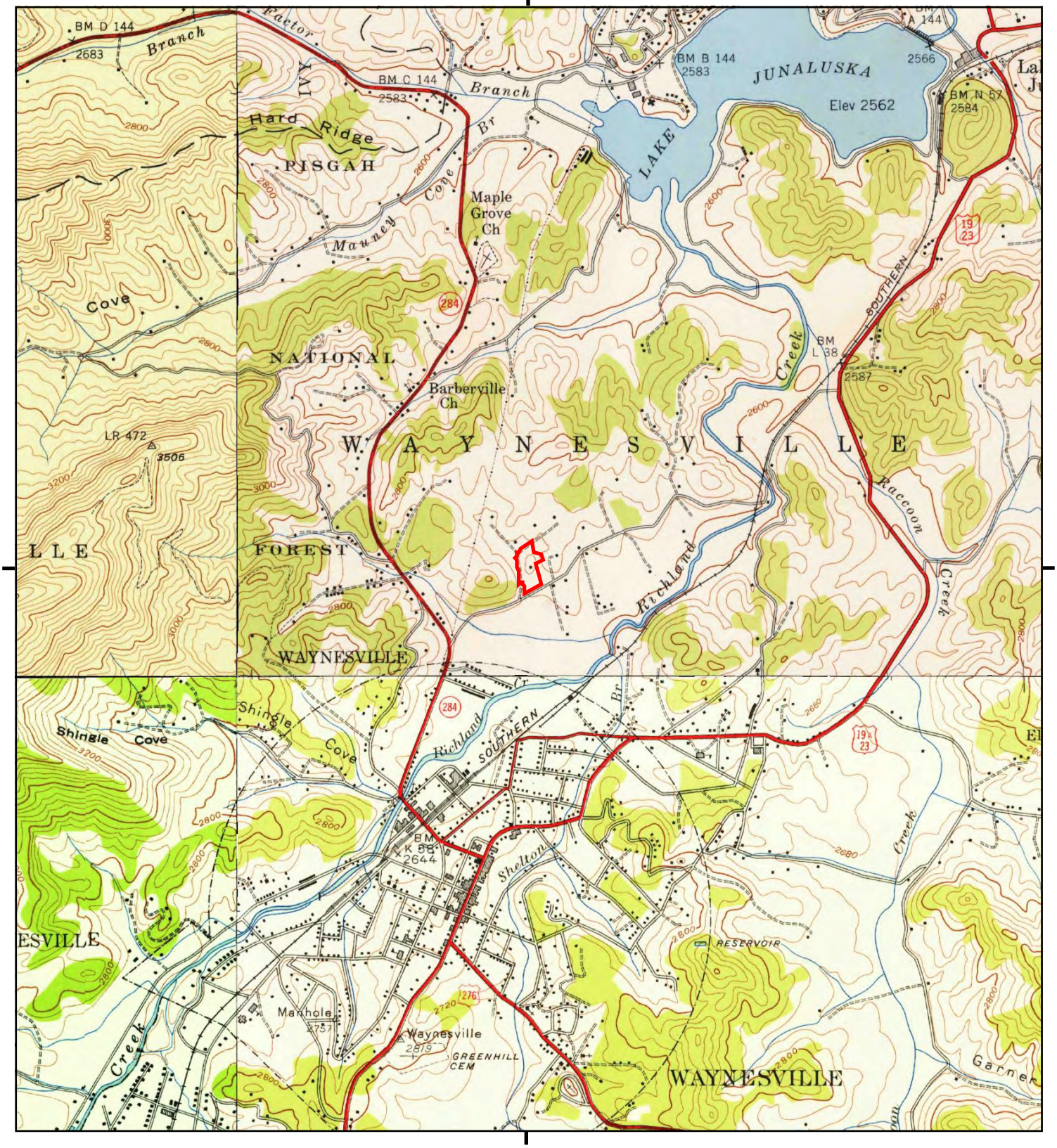
TP, Clyde, 1942, 7.5-minute
SE, Waynesville, 1942, 7.5-minute
SW, Hazelwood, 1942, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N

# Historical Topo Map

1941




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

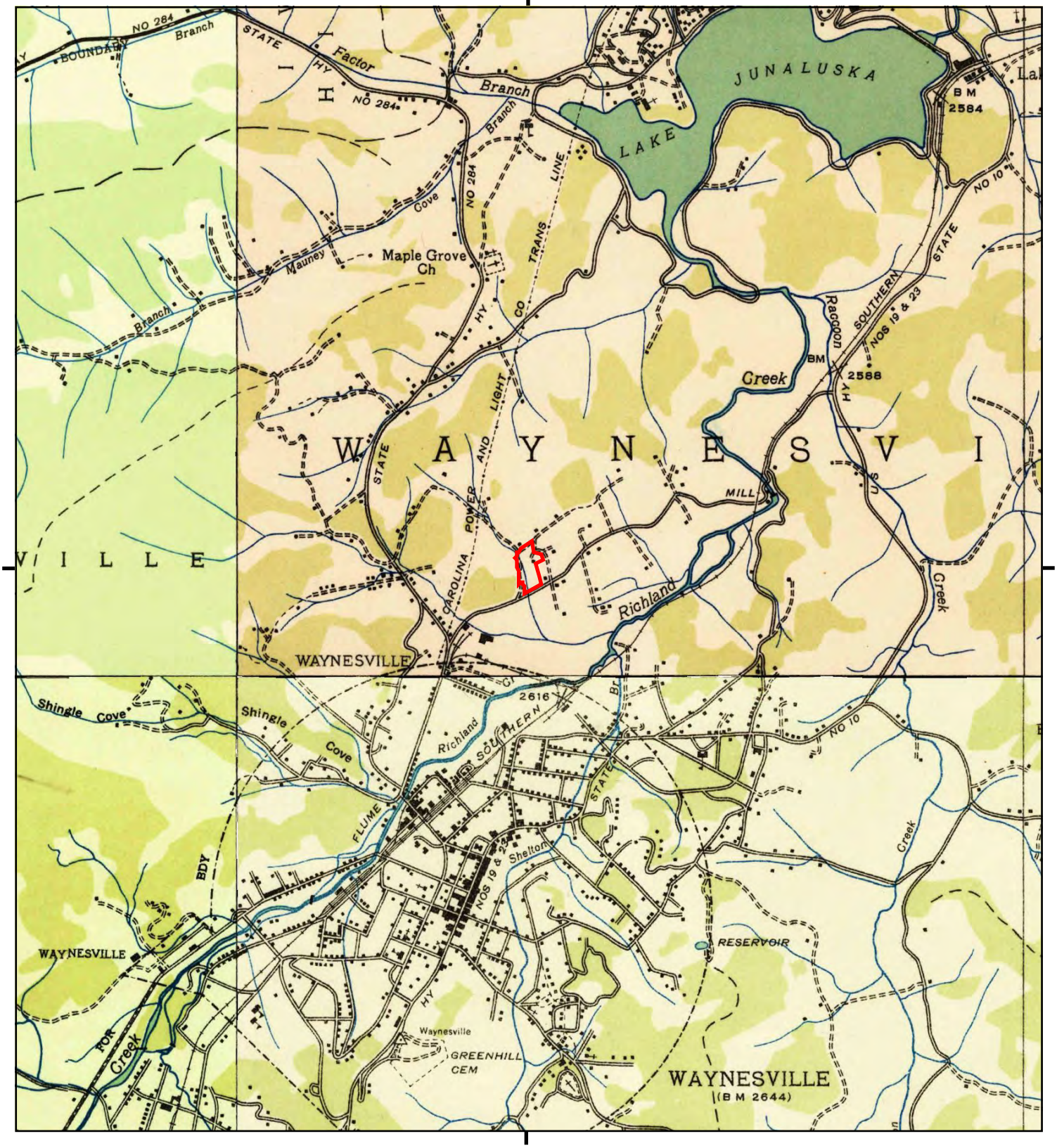
TP, Clyde, 1941, 7.5-minute
SE, Waynesville, 1941, 7.5-minute
SW, Hazelwood, 1941, 7.5-minute
NW, Dellwood, 1941, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N

# Historical Topo Map

1935




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clyde, 1935, 7.5-minute
SE, Waynesville, 1935, 7.5-minute
SW, Hazelwood, 1935, 7.5-minute
NW, Dellwood, 1935, 7.5-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N

UNMAPPED

This report includes information from the following map sheet(s).

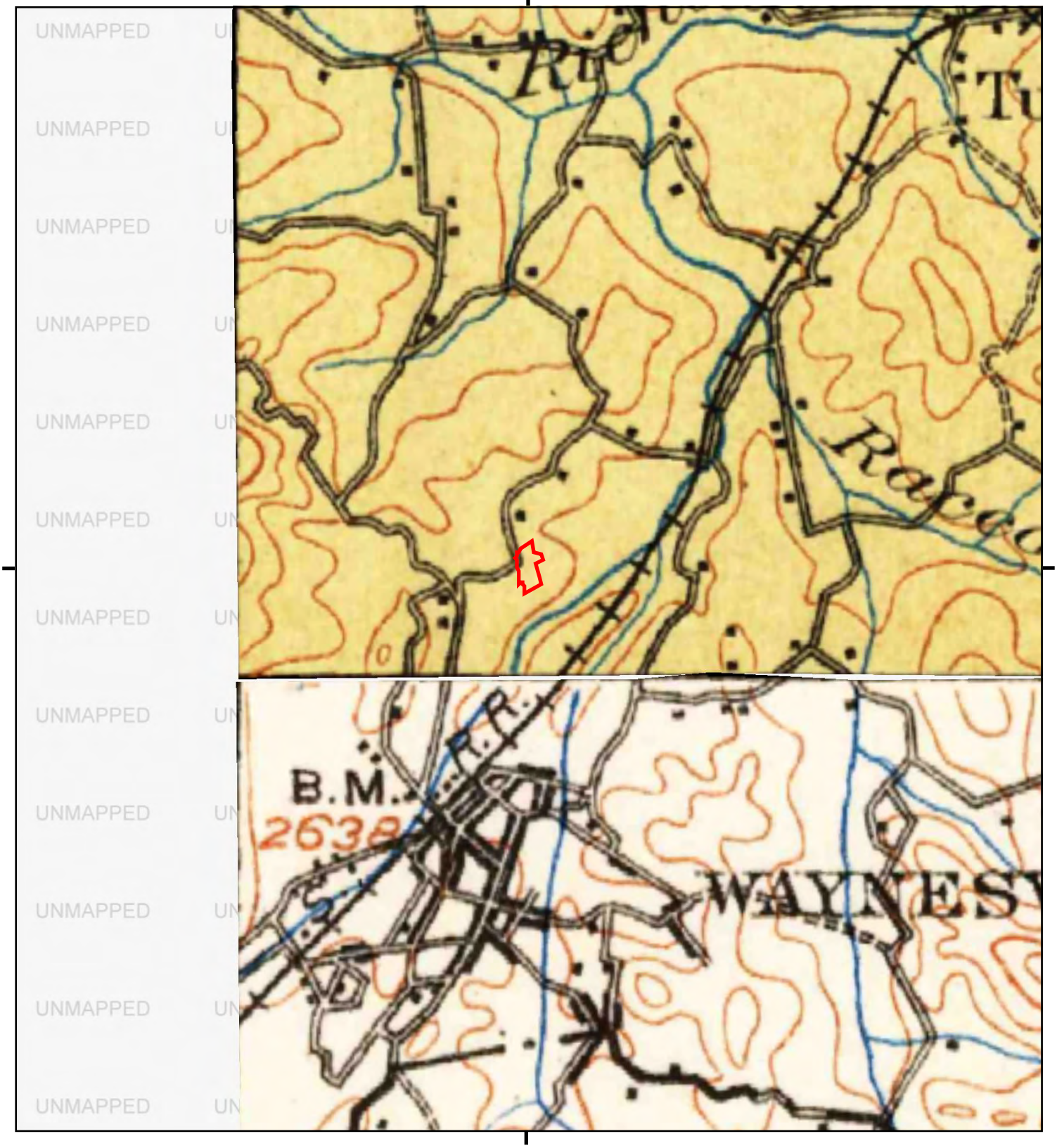
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SE, Pisgah, 1906, 30-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N




This report includes information from the following map sheet(s).

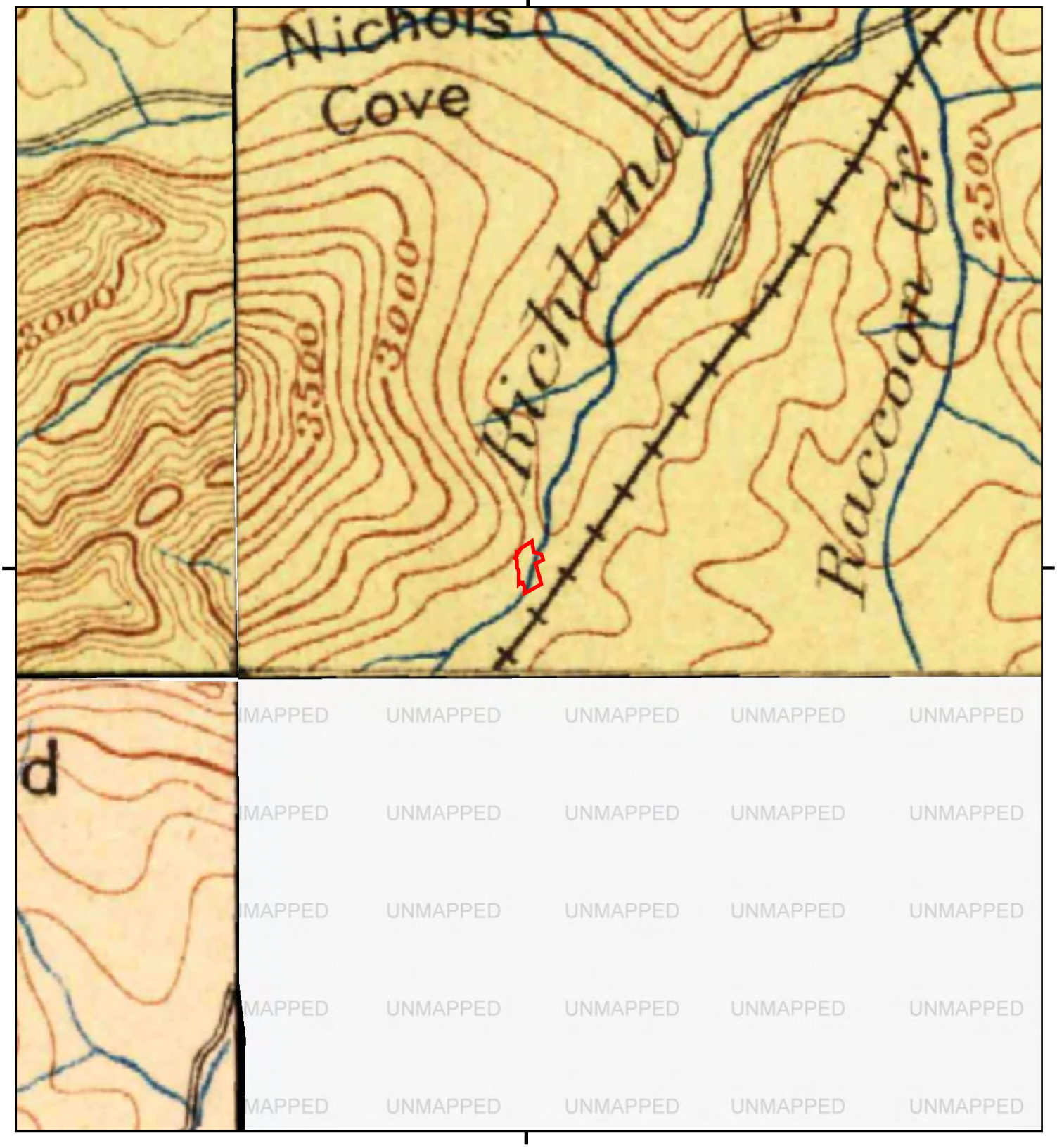
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Asheville, 1901, 30-minute
SE, Pisgah, 1905, 30-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N




This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Asheville, 1894, 30-minute
SW, Cowee, 1897, 30-minute
NW, Mt Guyot, 1893, 30-minute

SITE NAME: Balsam Edge Apartments
ADDRESS: 271 Howell Mill Road
Waynesville, NC 28786
CLIENT: ECS Southeast, LLP

N

**Balsam Edge Apartments**
271 Howell Mill Road
Waynesville, NC 28786

Inquiry Number: 7182357.5
November 22, 2022

# The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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## SECTION

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**Findings**

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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

## DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

## RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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## RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

| Year | Target Street | Cross Street | Source |
|---|---|---|---|
| 2017 | ☑ | ☑ | EDR Digital Archive |
| 2014 | ☑ | ☑ | EDR Digital Archive |
| 2010 | ☑ | ☑ | EDR Digital Archive |
| 2005 | ☑ | ☑ | EDR Digital Archive |
| 2000 | ☑ | ☑ | EDR Digital Archive |
| 1995 | ☑ | ☑ | EDR Digital Archive |
| 1992 | ☑ | ☑ | EDR Digital Archive |
| 1987 | ☑ | ☑ | City Publishing Co |
| 1985 | ☑ | ☑ | City Publishing Co |
| 1980 | ☑ | ☑ | City Publishing Co |
| 1974 | ☑ | ☑ | City Publishing Co |

# FINDINGS

## TARGET PROPERTY STREET

271 Howell Mill Road
Waynesville, NC 28786

| *Year* | *CD Image* | *Source* |
|---|---|---|
| **HOWELL MILL RD** | | |
| 2017 | pg A2 | EDR Digital Archive |
| 2014 | pg A5 | EDR Digital Archive |
| 2010 | pg A8 | EDR Digital Archive |
| 2005 | pg A11 | EDR Digital Archive |
| 2000 | pg A14 | EDR Digital Archive |
| 1995 | pg A16 | EDR Digital Archive |
| 1992 | pg A18 | EDR Digital Archive |
| 1987 | pg A20 | City Publishing Co |
| 1985 | pg A22 | City Publishing Co |
| 1980 | pg A24 | City Publishing Co |
| 1974 | pg A26 | City Publishing Co |

# FINDINGS

## CROSS STREETS

| *Year* | *CD Image* | *Source* | |
|---|---|---|---|
| **CALHOUN RD** | | | |
| 2017 | pg. A1 | EDR Digital Archive | |
| 2014 | pg. A4 | EDR Digital Archive | |
| 2010 | pg. A7 | EDR Digital Archive | |
| 2005 | pg. A10 | EDR Digital Archive | |
| 2000 | pg. A13 | EDR Digital Archive | |
| 1995 | pg. A15 | EDR Digital Archive | |
| 1992 | pg. A17 | EDR Digital Archive | |
| 1987 | pg. A19 | City Publishing Co | |
| 1985 | pg. A21 | City Publishing Co | |
| 1980 | pg. A23 | City Publishing Co | |
| 1974 | pg. A25 | City Publishing Co | |
| **PALMER HILL DR** | | | |
| 1987 | - | City Publishing Co | Street not listed in Source |
| 1985 | - | City Publishing Co | Street not listed in Source |
| 1980 | - | City Publishing Co | Street not listed in Source |
| 1974 | - | City Publishing Co | Street not listed in Source |
| **PALMER HILL RD** | | | |
| 2017 | pg. A3 | EDR Digital Archive | |
| 2014 | pg. A6 | EDR Digital Archive | |
| 2010 | pg. A9 | EDR Digital Archive | |
| 2005 | pg. A12 | EDR Digital Archive | |
| 2000 | - | EDR Digital Archive | Target and Adjoining not listed in Source |
| 1995 | - | EDR Digital Archive | Target and Adjoining not listed in Source |
| 1992 | - | EDR Digital Archive | Target and Adjoining not listed in Source |

# City Directory Images

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

# CALHOUN RD 2017

| | |
| --- | --- |
| 157 | HOLLAND, SYBIL U |
| 217 | KUNTZ, LINDA K |
| 263 | ROGERS, JOSEPH R |
| 267 | HART, LARRY W |
| 274 | BALENTINE, JOHN C |
| 297 | PALMER, BOB |
| 301 | CLARK, KANDICE M |
| 321 | BIRD, WILLIAM T |
| 331 | COOK, CHARLES |
| 346 | MEDFORD, BOYD |
| 364 | MCELROY, STEPHANIE R |
| 365 | LEONARD, STEVEN J |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## HOWELL MILL RD 2017

| | |
|---|---|
| 271 | SNYDER, JAMES L |
| 288 | ASSOCIATED PACKAGING ENTERPRISES |
| | SONOCO PRODUCTS |
| 333 | SHOOK, TIMOTHY |
| 465 | PAXTON, KEVIN L |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## PALMER HILL RD 2017

90 PALMER, LINTON L

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

# CALHOUN RD 2014

| | |
| --- | --- |
| 157 | HENRY, PAULA O |
| 217 | OCCUPANT UNKNOWN, |
| 263 | ROGERS, JOSEPH R |
| 267 | HART, LARRY W |
| 274 | BALENTINE, JOHN C |
| 297 | PALMER, JAMES R |
| 301 | OCCUPANT UNKNOWN, |
| 321 | BIRD, WILLIAM T |
| 324 | RICHARDSON, JOHN P |
| 331 | COOK, CHARLES |
| 346 | MEDFORD, BOYD |
| 365 | LEONARD, STEVEN J |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## HOWELL MILL RD 2014

| | |
|---|---|
| 271 | OCCUPANT UNKNOWN, |
| 288 | ASSOCIATED PACKAGING ENTERPRISES |
| | SONOCO PRODUCTS |
| 333 | SHOOK, PATRICIA W |
| 440 | GOETTSCHE, MATTHEW |
| 495 | AMMONS, HELEN J |
| 499 | PRESLEY, DEBRA |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## PALMER HILL RD 2014

11 ROBINSON, ANDREW F
90 PALMER, LINTON L

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## CALHOUN RD 2010

| | |
| --- | --- |
| 157 | HENRY, LESLIE C |
| 217 | SAWYER, MICHAEL D |
| 263 | ROGERS, JOSEPH R |
| 267 | HART, LARRY W |
| 274 | BALENTINE, JOHN C |
| 297 | PALMER, JAMES R |
| 301 | OCCUPANT UNKNOWN, |
| 321 | BIRD, WILLIAM T |
| 324 | RICHARDSON, JOHN P |
| 331 | COOK, CHARLES |
| 346 | MEDFORD, ROGER B |
| 365 | LEONARD, STEVEN J |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## HOWELL MILL RD 2010

| | |
|---|---|
| 271 | SNYDER, JAMES L |
| 288 | ASSOCIATED PACKAGING ENT |
| 333 | OCCUPANT UNKNOWN, |
| 440 | CATHEY, SARAH J |
| 465 | GAYNE, DANNY |
| 495 | AMMONS, WILEY R |
| 499 | OCCUPANT UNKNOWN, |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## PALMER HILL RD 2010

11 MOODY, NELL
90 PALMER, JARVIS L

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | EDR Digital Archive |

## CALHOUN RD 2005

| | |
|---|---|
| 70 | BROWN, DAVID W |
| 157 | HENRY, CARIS |
| 217 | SAWYER, MICHAEL D |
| 263 | ROGERS, JOSEPH R |
| 267 | HART, LARRY W |
| 274 | BALENTINE, JOHN C |
| 297 | PALMER, BOB |
| 301 | OCCUPANT UNKNOWN, |
| 321 | BIRD, WILLIAM T |
| 324 | RICHARDSON, JOHN P |
| 331 | ADAMS, TIM |
| 346 | MEDFORD, BOYD |
| 364 | OCCUPANT UNKNOWN, |
| 365 | LEONARD, STEVEN J |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## HOWELL MILL RD 2005

| | |
|---|---|
| 271 | SNYDER, JAMES L |
| 288 | ASSOCIATED PACKAGING TECHNOLOGY INC |
| 333 | SHOOK, ROBERT T |
| 440 | CATHEY, JANE W |
| 465 | CUNNINGHAM, RICH J |
| 495 | AMMONS, WILEY R |
| 499 | GALLOWAY, BRENDA K |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## PALMER HILL RD 2005

90 PALMER, JARVIS L

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## CALHOUN RD 2000

| | |
| --- | --- |
| 38 | SAWYER CARPENTER |
| 60 | LEONARD, STEVE J |
| 157 | HENRY, CARIS |
| 263 | ROGERS, J R |
| 274 | BALENTINE, JOHN C |
| 321 | BIRD W T DR |
| | BIRD, WILLIAM T |
| 324 | RICHARDSON, JOHN P |
| 346 | MEDFORD, BOYD |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## HOWELL MILL RD 2000

| | |
|---|---|
| 112 | MOODY, BILL |
| 288 | ASSOCIATED PACKAGING ENTERPRISES |
| 313 | JENKINS, ANN |
| 710 | CHAMPION INTERNATIONAL CORPORATION CANTON MILL |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

# CALHOUN RD 1995

| | |
| --- | --- |
| 30 | HOLLAND, TROY N |
| 38 | SAWYER, CAROLYN C |
| 42 | ROGERS, JOSEPH |
| 44 | HAIN, GINGER |
| | HART, LARRY W |
| 46 | PALMER, BOB |
| 47 | KELLER, HANS |
| | RICHARDSON, JOHN P |
| | VISIONLINK |
| 48 | OCCUPANT UNKNOWNN |
| 49 | MEDFORD, BOYD |
| 50 | BIRD, WILLIAM T |
| 51 | COGDILL, JAMIE |
| | GATES, JOSHUA |
| 54 | ADAMS, JAMES B |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

## HOWELL MILL RD 1995

| | |
|---|---|
| 200 | PALMER, JARVIS L |
| 201 | OCCUPANT UNKNOWNN |
| 205 | PENNY, JAY |
| 207 | HASHIMOTO, YUTAKA |
| 209 | CATHEY, JOE |
| 210 | OCCUPANT UNKNOWNN |
| 300 | WYATT, KEITH |
| 307 | FAUST, GINNY A |
| 310 | WALKER, CLAYTON |
| 312 | LEATHERWOOD, CHARLES |
| 313 | BALENTINE, CHARLES W |
| | RATHBONE, DAVID C |
| | RHINEHART, KENNY |
| 314 | LEATHERWOOD, J W |
| 525 | SCHULHOFERS INC |
| 601 | PHOENIX, PRESTON T |
| 633 | MCCULLY, SAISHA |

| Target Street | Cross Street | Source |
| --- | --- | --- |
| - | ✓ | EDR Digital Archive |

## CALHOUN RD 1992

| | |
| --- | --- |
| 30 | HOLLAND, TROY N |
| 38 | SAWYER, CAROLYN C |
| 44 | HAIN, GINGER |
| | HART, LARRY W |
| 45 | BALENTINE, JOHN C |
| 47 | LIPE, R C |
| | RICHARDSON, JOHN P |
| 49 | MEDFORD, BOYD |
| 50 | BIRD, WILLIAM T |
| 54 | ADAMS, JAMES B |

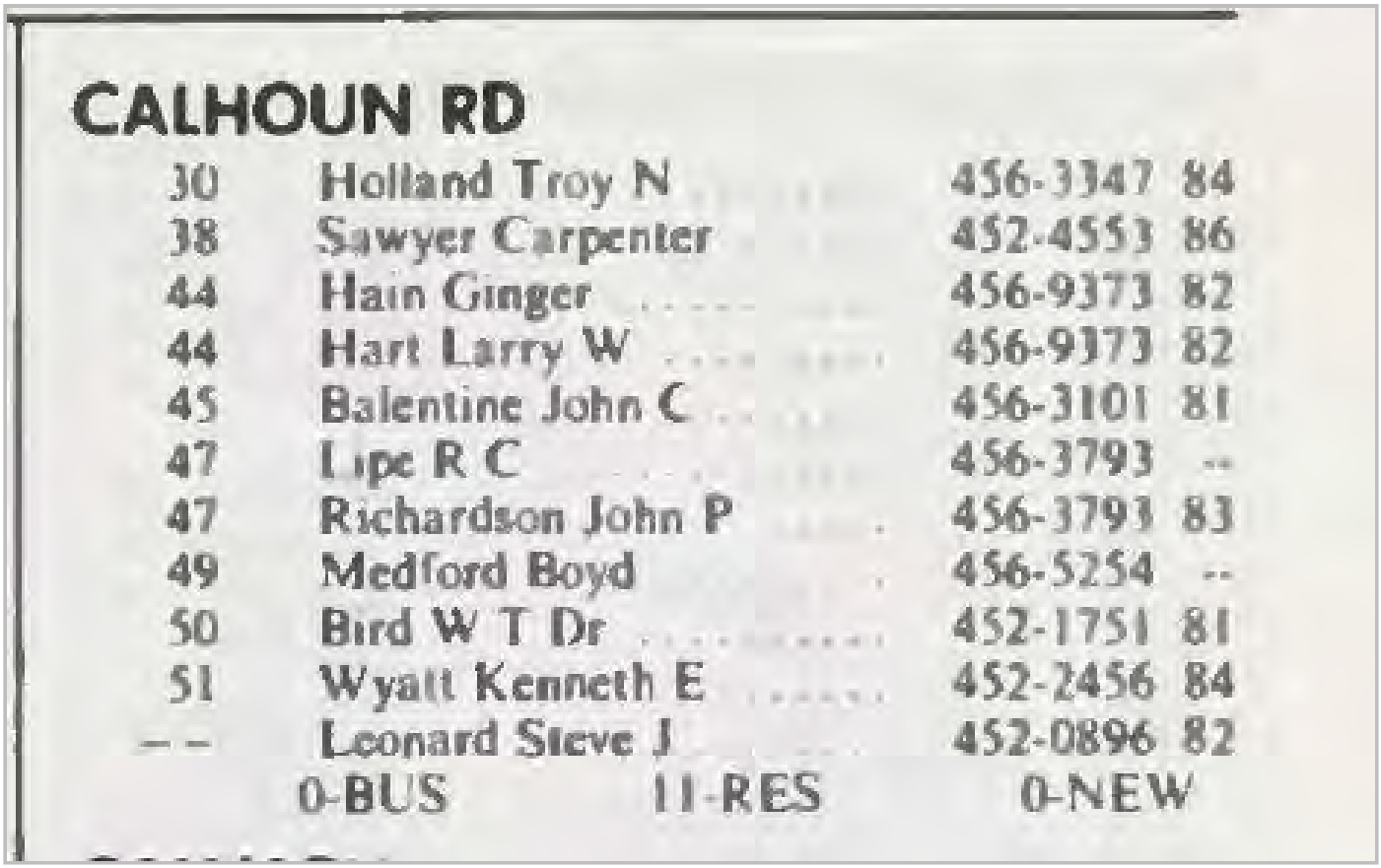
| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | EDR Digital Archive |

# HOWELL MILL RD 1992

| | |
|---|---|
| 200 | PALMER, JARVIS L |
| 201 | WHITMIRE, MILTON J JR |
| 205 | EFCOTT, RAYMOND P |
| 207 | ROBINSON, GROVER K |
| 209 | CATHEY, JOE |
| 210 | SHERMAN, ALBERT G |
| 300 | WYATT, KEITH |
| 307 | DAVIS, CHRIS |
| 310 | WALKER, CLAYTON |
| 312 | LEATHERWOOD, CHARLES |
| 313 | BALENTINE, CHARLES W |
| 314 | LEATHERWOOD, J W |
| 525 | SCHULHOFER'S INC |
| 601 | PHOENIX, PRESTON T |
| 701 | HENDRICKS, CURTIS F |
| 710 | CHAMPION INTRNTL CORP CANTON MILL |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | City Publishing Co |

## CALHOUN RD 1987



CALHOUN RD

| | | | |
|---|---|---|---|
| 30 | Holland Troy N | 456-3347 | 84 |
| 38 | Sawyer Carpenter | 452-4553 | 86 |
| 44 | Hain Ginger | 456-9373 | 82 |
| 44 | Hart Larry W | 456-9373 | 82 |
| 45 | Balentine John C | 456-3101 | 81 |
| 47 | Lipe R C | 456-3793 | -- |
| 47 | Richardson John P | 456-3793 | 83 |
| 49 | Medford Boyd | 456-5254 | -- |
| 50 | Bird W T Dr | 452-1751 | 81 |
| 51 | Wyatt Kenneth E | 452-2456 | 84 |
| -- | Leonard Steve J | 452-0896 | 82 |

0-BUS 11-RES 0-NEW

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | City Publishing Co |

**HOWELL MILL RD 1987**

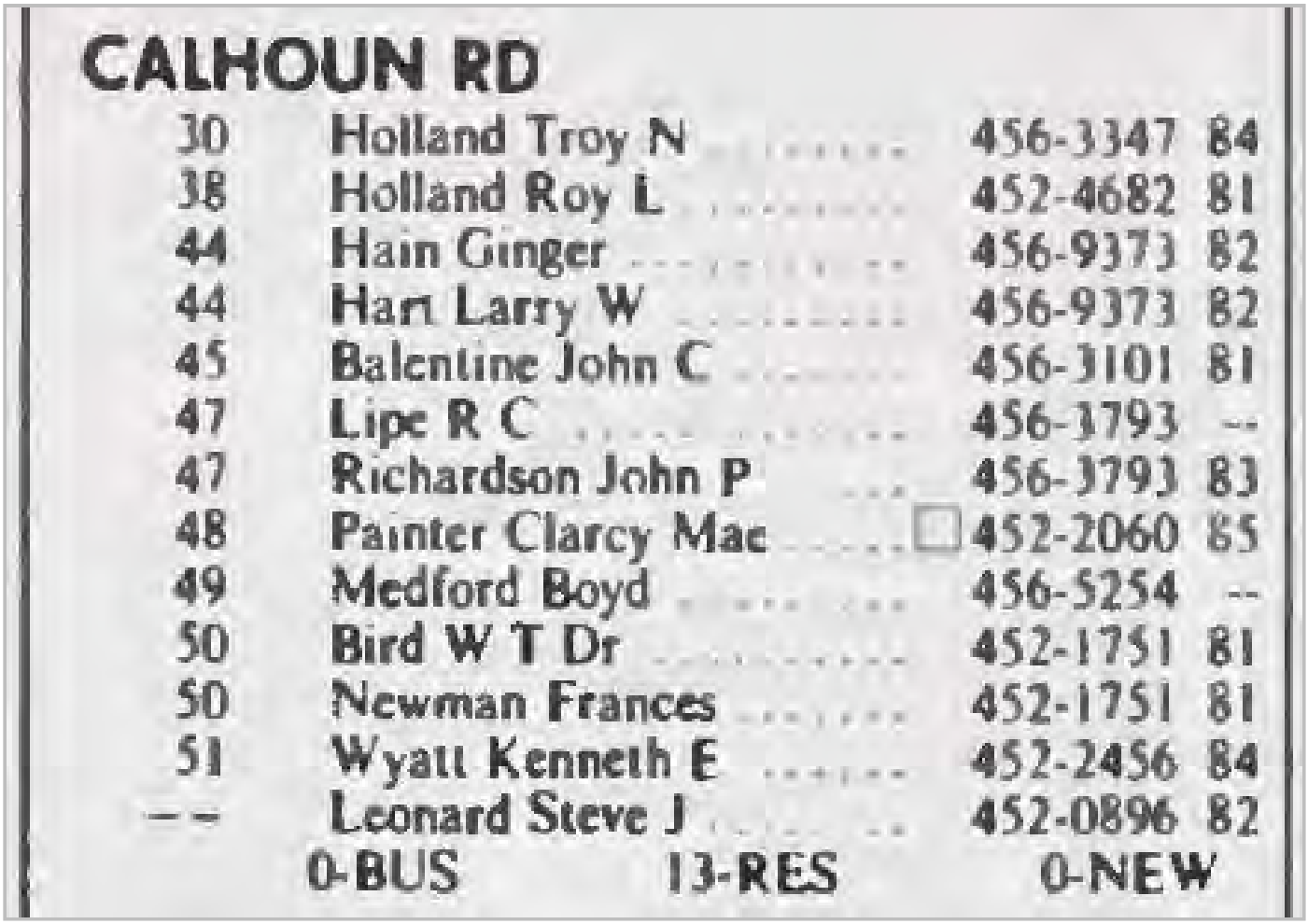
# HOWELL MILL RD

From 800 blk Dellwood Rd ne to Asheville Rd

| | | | |
|---|---|---|---|
| 105 | ★Lowe's Of Waynesville Store | 452-5135 | 86 |
| 110 | Shook Robt O | 456-8342 | -- |
| 110½ | Phillips I K | 456-3460 | 86 |
| 112 | Moody Bill | 456-5007 | -- |
| 200 | Palmer J Linton | 456-6320 | -- |
| 205 | Davis Woodrow W | + 452-1183 | 87 |
| 207 | Robinson Grover K | 452-1182 | 79 |
| 209 | Cathey Joe | 456-8993 | -- |
| 210 | Sherman A G | 456-7560 | -- |
| 300 | Wyatt Keith | 452-4236 | -- |
| 307 | Jones Mac | 452-2696 | 85 |
| 310 | Walker Clayton | 456-3085 | -- |
| 312 | Leatherwood Charles | + 456-9972 | 87 |
| 313 | Balentine Chas W | 456-6357 | -- |
| 313 | Brackett B K | 452-2724 | 84 |
| 314 | Leatherwood J W | 456-6802 | -- |
| 525 | Mitchell Everett | 452-1978 | 80 |
| 601 | Phoenix P T | 456-6537 | -- |
| 724 | Bryson Bill | 456-5009 | -- |
| 726 | Chambers Roger C | 452-9219 | 83 |
| 726 | Erwin-Smart Sharon | 456-3061 | 80 |
| 726 | Green Patricia C | 456-3470 | 86 |
| 726 | Kirkpatrick Chuck | 452-4008 | 86 |
| 726 | Medford Gene A | + 456-8986 | 87 |
| -- | Ammons W Roger | 456-6233 | -- |
| -- | ★Boyd's Auto Brite Car Wash | 452-0447 | 86 |
| -- | Carver J K | 456-5380 | -- |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | City Publishing Co |

## CALHOUN RD 1985



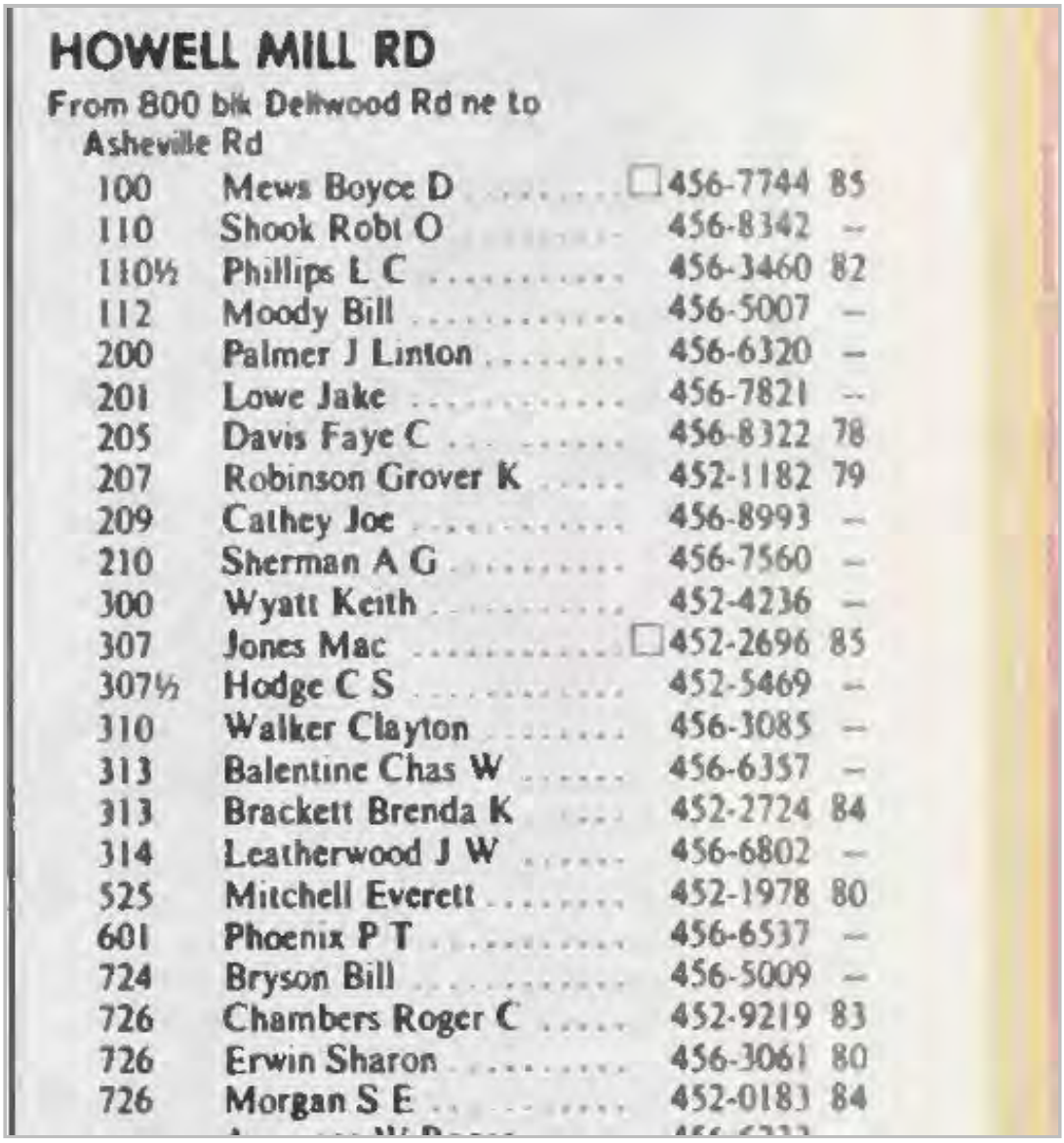
CALHOUN RD

| | | | |
|---|---|---|---|
| 30 | Holland Troy N | 456-3347 | 84 |
| 38 | Holland Roy L | 452-4682 | 81 |
| 44 | Hain Ginger | 456-9373 | 82 |
| 44 | Hart Larry W | 456-9373 | 82 |
| 45 | Balentine John C | 456-3101 | 81 |
| 47 | Lipe R C | 456-3793 | -- |
| 47 | Richardson John P | 456-3793 | 83 |
| 48 | Painter Clarcy Mac | 452-2060 | 85 |
| 49 | Medford Boyd | 456-5254 | -- |
| 50 | Bird W T Dr | 452-1751 | 81 |
| 50 | Newman Frances | 452-1751 | 81 |
| 51 | Wyatt Kenneth E | 452-2456 | 84 |
| -- | Leonard Steve J | 452-0896 | 82 |

0-BUS 13-RES 0-NEW

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | City Publishing Co |

# HOWELL MILL RD 1985



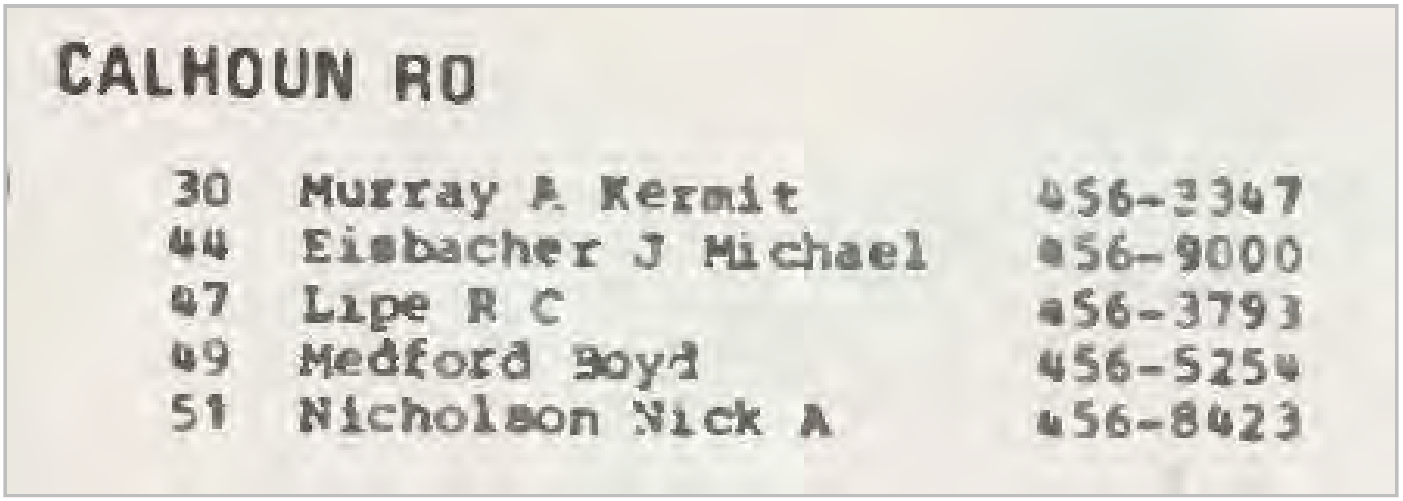
## HOWELL MILL RD

From 800 blk Dellwood Rd ne to Asheville Rd

| | | | |
|---|---|---|---|
| 100 | Mews Boyce D | 456-7744 | 85 |
| 110 | Shook Robt O | 456-8342 | – |
| 110½ | Phillips L C | 456-3460 | 82 |
| 112 | Moody Bill | 456-5007 | – |
| 200 | Palmer J Linton | 456-6320 | – |
| 201 | Lowe Jake | 456-7821 | – |
| 205 | Davis Faye C | 456-8322 | 78 |
| 207 | Robinson Grover K | 452-1182 | 79 |
| 209 | Cathey Joe | 456-8993 | – |
| 210 | Sherman A G | 456-7560 | – |
| 300 | Wyatt Keith | 452-4236 | – |
| 307 | Jones Mac | 452-2696 | 85 |
| 307½ | Hodge C S | 452-5469 | – |
| 310 | Walker Clayton | 456-3085 | – |
| 313 | Balentine Chas W | 456-6357 | – |
| 313 | Brackett Brenda K | 452-2724 | 84 |
| 314 | Leatherwood J W | 456-6802 | – |
| 525 | Mitchell Everett | 452-1978 | 80 |
| 601 | Phoenix P T | 456-6537 | – |
| 724 | Bryson Bill | 456-5009 | – |
| 726 | Chambers Roger C | 452-9219 | 83 |
| 726 | Erwin Sharon | 456-3061 | 80 |
| 726 | Morgan S E | 452-0183 | 84 |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | City Publishing Co |

## CALHOUN RD 1980

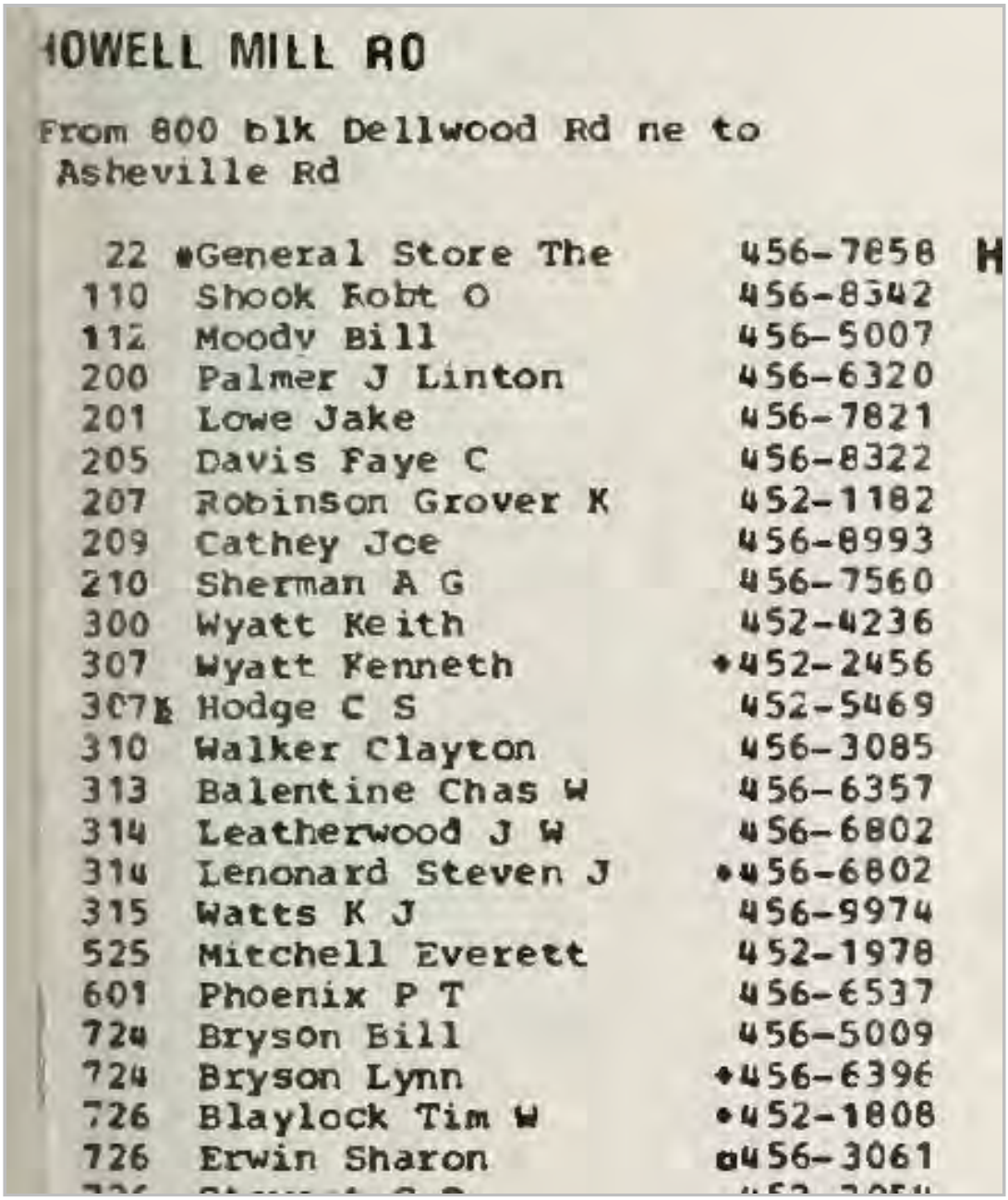


CALHOUN RD

| | | |
|---|---|---|
| 30 | Murray A Kermit | 456-3347 |
| 44 | Eisbacher J Michael | 456-9000 |
| 47 | Lipe R C | 456-3793 |
| 49 | Medford Boyd | 456-5254 |
| 51 | Nicholson Nick A | 456-8423 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | City Publishing Co |

## HOWELL MILL RD 1980



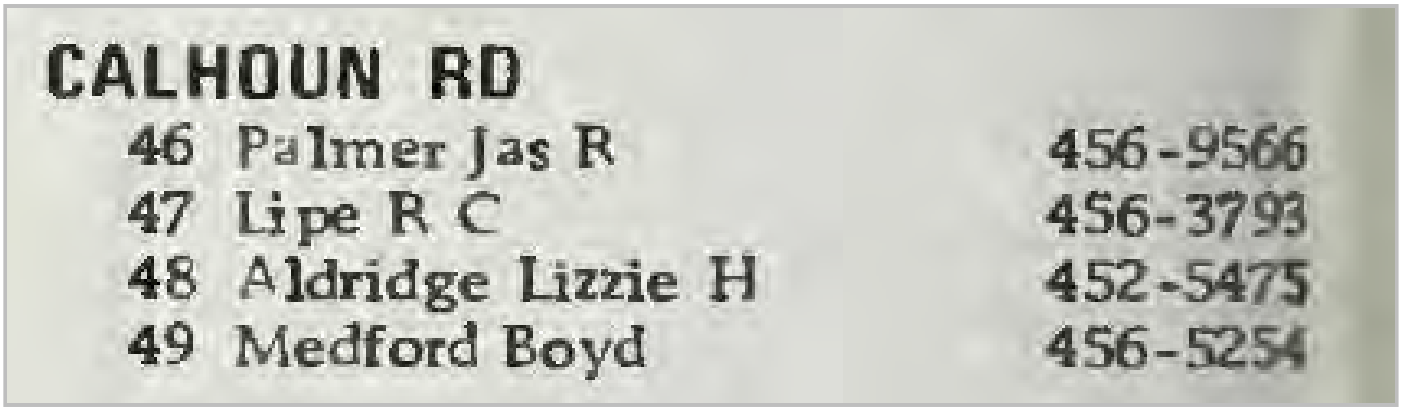
HOWELL MILL RD

From 800 blk Dellwood Rd ne to
Asheville Rd

| | | |
|---|---|---|
| 22 | *General Store The | 456-7858 H |
| 110 | Shook Robt O | 456-8342 |
| 112 | Moody Bill | 456-5007 |
| 200 | Palmer J Linton | 456-6320 |
| 201 | Lowe Jake | 456-7821 |
| 205 | Davis Faye C | 456-8322 |
| 207 | Robinson Grover K | 452-1182 |
| 209 | Cathey Joe | 456-8993 |
| 210 | Sherman A G | 456-7560 |
| 300 | Wyatt Keith | 452-4236 |
| 307 | Wyatt Kenneth | *452-2456 |
| 307½ | Hodge C S | 452-5469 |
| 310 | Walker Clayton | 456-3085 |
| 313 | Balentine Chas W | 456-6357 |
| 314 | Leatherwood J W | 456-6802 |
| 314 | Lenonard Steven J | *456-6802 |
| 315 | Watts K J | 456-9974 |
| 525 | Mitchell Everett | 452-1978 |
| 601 | Phoenix P T | 456-6537 |
| 724 | Bryson Bill | 456-5009 |
| 724 | Bryson Lynn | *456-6396 |
| 726 | Blaylock Tim W | *452-1808 |
| 726 | Erwin Sharon | *456-3061 |

| Target Street | Cross Street | Source |
|---|---|---|
| - | ✓ | City Publishing Co |

## CALHOUN RD 1974



CALHOUN RD

| | | |
|---|---|---|
| 46 | Palmer Jas R | 456-9566 |
| 47 | Lipe R C | 456-3793 |
| 48 | Aldridge Lizzie H | 452-5475 |
| 49 | Medford Boyd | 456-5254 |

| Target Street | Cross Street | Source |
|---|---|---|
| ✓ | - | City Publishing Co |

# HOWELL MILL RD 1974

## HOWELL MILL RD

From 800 blk Dellwood Rd ne to Asheville Rd

| | | |
|---|---|---|
| 22 | Mountain Furn Stripping Company | 456-7858 |
| 100 | Edwards Jerry V | 452-4123 |
| 110 | Shook Robt O | 456-8342 |
| 112 | Moody Bill | 456-5007 |
| 200 | Palmer J Linton | 456-6320 |
| 201 | Lowe Jake | 456 7821 |
| 205 | Davis Norman | 456 8322 |
| 207 | Ray Steve M | 456-9332 |
| 209 | Cathey Joe | 456-8993 |
| 300 | Wyatt Keith | 452-4236 |
| 301 | Jones Ray | 456-7888 |
| 301½ | Gregory W Ralph | 456-3251 |
| 307 | McEntire Roger | 452-4319 |
| 310 | Walker Clayton | 456-3085 |
| 313 | Balentine Chas W | 456-6357 |
| 313 | Smith Gary L | 452-5787 |
| 314 | Leatherwood J W | 456-6802 |
| 525 | Mitchell Everett | 456-5738 |
| 601 | Phoenix P T | 456 6537 |
| 703 | Cole John B | 456-7116 |
| 703 | Reid John P Mrs | 456-7300 |
| 724 | Bryson Bill | 456-5009 |
| 726 | Maglione Steve G | 452 4155 |

# Environmental Lien and AUL Search Report

**Mountain Housing Opportunities, Inc., a North Carolina non-profit Corporation**

For property at:
**333 Howell Mill Road**
**Waynesville, NC**

Prepared for:
**ECS Southeast LLP**
**4811 Koger Boulevard**
**Greensboro, NC 27407**
Attn: **Olivia Richard**

ATR Order Number: **230157**
**ECS Project Number: 49-18762-B**

**Thursday, May 18, 2023**


prepared by:

American Title Research, LLC.
7658 W. Irwin Ave.
Laveen, AZ 85339

https://americantitleresearchllc.com
(480) 277-9693

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# Declaration and Disclaimer

The ATR Environmental Lien Search Report provides results from the search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineeering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied property information to:

- search for parcel information and/or legal description
- search for ownership information
- research official land title documents recorded at jurisdictional agencies such as recorders' office, registries of deed, county clerks' offices, etc.
- access a copy of the deed
- search for environmental encumbering instrument(s) associated with the deed
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved and description)
- provide a copy of the deed or cite documents reviewed

**Thank you for your business**
Please contact ATR at (480) 277-9693
with any questions or comments

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# Property Information

The ATR Environmental Lien Search Report is intended to assist in the search for environmental liens filed in land title records.

TARGET PROPERTY INFORMATION

**333 Howell Mill Road**
**Waynesville, NC**

RESEARCH SOURCE

LEGAL DESCRIPTION

**Parcels 1 through 6 on the Survey For Mountain Housing Opportunities, Inc., recorded in CABD Page 2159, Haywood County, North Carolina**

Assessors Parcel Number(s): **8616-42-5414**

ENVIRONMENTAL LIEN

**Not Found**

OTHER ACTIVITY AND USE LIMITATIONS (AULS)

**Not Found**

DEED INFORMATION

| Article | Recorded | Grantor | Grantee | Instrument |
|---|---|---|---|---|
| Deed | 1947-01-13 | W.C. Phillips and wife Myrtle Phillips | Robert Shook and wife Ann Shook | Book: 133, Page: 179 |
| Deed | 1951-11-19 | D.J. Phillips and wife Louise Phillips | Kate Phillips | Book: 150, Page: 370 |
| Deed | 1953-11-20 | Kate Phillips | Myra Killian | Book: 159, Page: 83 |
| Deed | 1964-02-05 | Bill D. Maney, Jr., and wife Wilda C. Maney | Robert Shook and wife Ann Shook | Book: 202, Page: 318 |
| Estate | | The Estate of Lillian Catherine Shook | Robert Shook | 1997 E 3 |
| Deed | 2001-02-13 | Ann P. Shook | R. Timothy Shook and wife Patricia Shook | Book: 486, Page: 472 |
| Deed | 2001-02-13 | Ann P. Shook | R. Timothy Shook and wife Patricia Shook | Book: 486, Page: 478 |
| Deed | 2001-03-30 | Ann P. Shook | R. Timothy Shook and wife Patricia Shook | Book: 489, Page: 264 |
| Estate | | The Estate of Anna M. Shook | R. Timothy Shook | 2002 E 374 |
| North Carolina General Warranty Deed | 2021-12-07 | Robert Timothy Shook a/k/a R. Timothy Shook, and Particia Shook, married to each other | Mountain Housing Opportunities, Inc., a North Carolina non-profit Corporation | Book: 1050, Page: 24 |

# Environmental Liens

Environmental Lien Not Found

Instrument# 2021015082 Book 1050 Page 24

DATE 2021-12-07 BY daniel

**2021015082**
HAYWOOD COUNTY NC FEE $26.00
STATE OF NC REAL ESTATE EXTX
**$1930.00**
PRESENTED & RECORDED
12/07/2021 04:40:25 PM
**SHERRI C. ROGERS**
REGISTER OF DEEDS
BY: TARA E. REINHOLD
DEPUTY
**BK: RB 1050**
**PG: 24 - 31**

Excise Tax $1,930.00

Parcel Identifier No. 8616-42-3089; 8616-42-4173; 8616-42-5167; 8616-42-3466; 8616-42-5404; 8616-42-6329 and 8616-42-6671

Mail after recording to Roberts and Stevens, P.A. P.O. Box 7647, Asheville, NC 28801

This instrument was prepared by Carolyn S. Snipes of Roberts & Stevens, P.A., a licensed North Carolina attorney. Delinquent taxes, if any, to be paid by the Closing attorney to the county tax collector upon disbursement of closing proceeds.

# NORTH CAROLINA GENERAL WARRANTY DEED

THIS DEED made this 7th day of December 2021, by and between

| GRANTOR | GRANTEE |
|---|---|
| **Robert Timothy Shook a/k/a R. Timothy Shook, and Patricia Shook,** *married to each other*<br>Address: 333 Howell Mill Road<br>Waynesville, NC 28732 | **Mountain Housing Opportunities, Inc.,** *A North Carolina non-profit Corporation*<br>Address: 64 Clingman Ave, Suite 101<br>Asheville, NC 28801 |

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the Haywood County, North Carolina and more particularly described as follows:

See Exhibit A attached hereto and incorporated herein by the reference.

Submitted electronically by "Roberts & Stevens PA"
in compliance with North Carolina statutes governing recordable documents
and the terms of the submitter agreement with the Haywood County Register of Deeds.

The property hereinabove described was acquired by Grantor by instruments recorded in Deed Book 202 at page 318 and Deed Book 489 at page 264 and Deed Book 486 at page 478 and Deed Book 486 at page 472 and Deed Book 159 at page 83 and Deed Book 150 at page 370 and Deed Book 133 at Page 179, Haywood County Registry; Estate of Lillian Catherine Shook filed in 1997 E 3, Haywood County Clerk of Superior Court; and the Estate of Anna M. Shook filed in 2002 E 374, Haywood County Clerk of Superior Court.

A map showing a portion of the above described property is recorded in Plat Book 58 at page 403, Haywood County Registry.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is together with and subject to the following exceptions:

Easements, restrictions, rights of way of record, apparent or in use, and 2022 ad valorem taxes.

**The last use of the property by the Grantor was as Grantor's primary residence.**

[Signature and notary acknowledgment on following page.]

Instrument# 2021015082 Book 1050 Page 26

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

Robert Timothy Shook (SEAL)
Robert Timothy Shook a/k/a R. Timothy Shook

Patricia H. Shook (SEAL)
Patricia Shook

**NORTH CAROLINA**

**Buncombe County**

I, a Notary Public certify that Robert Timothy Shook a/k/a R. Timothy Shook and Patricia Shook, Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 7th day of December 2021.

Melanie Miller
Notary Public
My Commission Expires: October 13, 2022

R&S 2766631_1

Instrument# 2021015082 Book 1050 Page 27

## EXHIBIT A

**Parcel 1 (8616-42-3466)**

Beginning on a stake in the East margin of Old Howell Mill Road, Northwest corner of Shook Tract (Deed Book 202, Page 318, Haywood County Registry), and runs with the east margin of Old Howell Mill Road five calls as follows: N 12 degrees 15' W 112 feet to a stake, N 22 degrees 15' E 84 feet to a stake, N 16 degrees W 187 feet to a stake, N 2 degrees 30' W 113 feet to a stake, N 53 degrees E 365 feet to a stake; thence S 13 degrees 35' E 167 feet to a stake in the Southerly margin of a farm road; thence with said margin of said farm road S 85 degrees 20' W. 30 feet to a stake; thence S 5 degrees 15' E. 428.12 feet to a stake; thence S 60 degrees 35' W. 15.27 feet to a stake: thence S. 74 degrees W. 188 feet to a stake; thence S 73 degrees W. 57 feet to the BEGINNING, containing 2.65 acres, more or less, as per survey and plat of John W. Taylor, dated March, 1970.

EXCEPTING and RESERVING therefrom the following tracts referred to in a deed from Kate Phillips to Robert O. Shook and wife, Ann Shook, dated March 19, 1970 and recorded in Book 239 at Page 753 of the Haywood County Registry and described as follows:

BEGINNING on a stake, said stake being located N. 13 degrees 35' W 214 feet and N 68 degrees 10' W. 121.6 feet from a stake at the Northeast corner of lot conveyed to Shook by Phillips (Deed Book 142, page 571, Haywood County Registry), and runs S. 11 degrees 20 minutes E. 185 feet to a stake; thence S 78 degrees 40 minutes W. 75 feet to a stake; thence N. 11 degrees 20' W. 185 feet to a stake; thence N. 78 degrees 40' E. 75 feet to the BEGINNING, containing .32 acres as per plat and survey referred to above.

AND ALSO EXCEPTING and RESERVING a right of way 15 feet in width for a road along an existing farm road running from the East line of the tract herein conveyed and at a point in line between Shook and McRorie to the .32 acre tract excepted and reserved from the property herein conveyed; also EXCEPTING and RESERVING to the Grantor herein her heirs and assigns a right of way and easement for water and sewer lines and septic tank as the same are now located upon the tract conveyed herein leading to the tract excepted and reserved herein, together with the right and easement to go upon the tract herein conveyed for the purpose of inspecting, maintaining, repairing, and replacing the said water and sewer lines and septic tank.

AND BEING all of that property conveyed by Ann P. Shook to R. Timothy Shook and wife, Patricia Shook recorded in Book 486 at Page 478, Haywood County Registry.

**Parcel 2 (8616-42-5404)**

BEGINNING on a stake, said stake being located N. 13 degrees 35' W 214 feet and N 68 degrees 10' W. 121.6 feet from a stake at the Northeast corner of lot conveyed to Shook by Phillips (Deed Book 142, page 571, Haywood County Registry), and runs S. 11 degrees 20 minutes E. 185 feet to a stake; thence S 78 degrees 40 minutes W. 75 feet to a stake; thence N. 11 degrees 20' W. 185 feet to a stake; thence N. 78 degrees 40' E. 75 feet to the BEGINNING, containing .32 acres as per plat and survey referred to above in the description for Parcel 1.

Instrument# 2021015082 Book 1050 Page 28

AND ALSO EXCEPTING and RESERVING a right of way 15 feet in width for a road along an existing farm road running from the East line of the tract herein conveyed and at a point in line between Shook and McRorie to the .32 acre tract excepted and reserved from the property herein conveyed; also EXCEPTING and RESERVING to the Grantor herein her heirs and assigns a right of way and easement for water and sewer lines and septic tank as the same are now located upon the tract conveyed herein leading to the tract excepted and reserved herein, together with the right and easement to go upon the tract herein conveyed for the purpose of inspecting, maintaining, repairing, and replacing the said water and sewer lines and septic tank.

Being the same property reserved from Parcel 1 in a deed from Kate Phillips to Robert O. Shook and wife, Ann Shook, dated March 19, 1970 and recorded in Book 239 at Page 753 of the Haywood County Registry. See the Estate of Lillian Catherine Shook filed in 1997 E 3, Haywood County Clerk of Superior Court.

**Parcel 3 8616-42-6671**

BEGINNING on a stake, Earl Gribble's Northwest corner, on the South said of a road and runs thence North 12-30 West 370 feet to a stake the East side of a road; thence with the East side of Road South 52.05 West 105 feet to a stake; thence 12-30 East 355 feet to a stake; thence North 62-20 East 105 feet to the beginning. Containing one acre, more or less, as per survey of Nathan Roger, Nov. 1946, and being part of the lots as conveyed to W.C. Phillips by D.V. Phillips and wife as recorded in Book 58, Page 403, record of deeds for Haywood County, N.C.

Being the same property described in a Deed recorded in Deed Book 133 at Page 179, Haywood County Registry. See also Deed recorded in Book 58 at Page 403.

LESS AND EXCEPT that portion of the property conveyed to Kate Phillips by Deed recorded in Book 164 at Page 189, Haywood County Registry, together with a non-exclusive easement for use of a private road along the southern boundary of the property and subject to the rights and easements to install and maintain underwater pipes, and rights and easements associated therewith, as set for in the Deed recorded in Book 164 at Page 89, Haywood County Registry.

See the Estate of Anna M. Shook filed in 2002 E 374, Haywood County Clerk of Superior Court.

**Parcel 4 (8616-42-6329)**

BEGINNING at a stake on the North edge of the Howell Mill Road, now or formerly William L. Moody's Southwest corner, thence with William L. Moody's line North 13 degrees 35 minutes West 150 feet to a stake; thence North 13 degrees 35 minutes West 393 feet to a stake now or formerly in the Southerly margin of a farm road; thence with the said margin of the farm road South 85 degrees 20 minutes West 30.0 feet to a stake in the aforesaid margin of said road; thence South 5 degrees 15 minutes East 428.12 feet to a stake in the Northerly boundary of the Shook lot at Deed Book 142, Page 571; thence with the boundary of said Shook lot south 60 degrees 35 minutes West 15.23 feet to a stake; thence South 20

Instrument# 2021015082 Book 1050 Page 29

degrees 10 minutes East 150 feet to a stake in the North edge of the Howell Mill Road; thence North 59 degrees East 94 feet to the Beginning.

This is a combination of the two lots found at Book 152 Page 571 and Book 219 Page 105 of the Haywood County Registry and is containing .91 acre, more or less.

AND BEING all of that property conveyed by Ann P. Shook to R. Timothy Shook and wife, Patricia Shook recorded in Book 489 at Page 264, Haywood County Registry.

**Parcel 5 (8616-42-5167)**

BEGINNING on an iron stake in the northwest margin of the Howell Mill Road the same being the southwest corner of the Robert Shook house lot and running thence with the line of the Robert Shook Lot N. 20 degrees 10' W. 150 feet to an iron stake the northwest corner of the Robert Shook lot; thence S 74. degrees W 94 feet to a stake; thence S 20 degrees 15' E. 169 feet to a stake in the margin of the Howell Mill Road; thence N 60 degrees 35' E. 94 feet with the margin of Howell Mill Road to the BEGINNING corner, containing 0.34 acres; more or less and being part of the tract or parcel of land conveyed by D.J. Phillips to Kate Phillips by deed dated the 6th day of June, 1950 as appears of record in Deed Book 150 at page 370, Haywood County Registry, also being the same property conveyed by Kate Phillips to Myra P. Killian by Deed dated the 17th day of November, 1953, as appears of record in Deed Book 159 at page 83 Haywood County Registry.

This being the same property described in a deed from Myra Phillips Harrell to Robert O. Shook and wife, Ann P. Shook dated the 10th day of December, 1954 and recorded in Book 163 at page 18 of the Haywood County Registry,

AND BEING all of that property conveyed by Ann P. Shook to R. Timothy Shook and wife, Patricia Shook recorded in Book 486 at Page 481, Haywood County Registry.

**Parcel 6 (8616-42-4173)**

BEGINNING at a point in the center of a branch at the point where the same intersects with the northern margin of Howell Mill Road at a bridge, being also the Southeast corner of the John Hall property; thence running with the margin of Howell Mill Road N 60 degrees 35' East 125 feet to a stake in the margin of said Road, the Southwest corner of a lot conveyed by Kate Phillips heretofore to Myra P. Killian as appears of record in Deed Book 159 on page 83, Haywood County Registry; thence North 20 degrees 15' West 169 feet with the line of the Myra P. Killian lot to a stake; thence South 74 degrees W 94 feet to a fence post, corner of the John Hall lot: thence South 13 degrees 15' East with the line of John Hall and the meanders of the branch 204 feet to the BEGINNING corner, being a part of the land conveyed by D.J. Phillips to Kate Phillips by Deed date 5th June, 1950 as appears of record in Deed Book 150, Page 170, Haywood County Registry.

EXCEPTING and RESERVING a right of way and easement for a water line and a sewer line over this lot herein conveyed to the remaining property belonging to the granter herein named following the course

Instrument# 2021015082 Book 1050 Page 30

of the present waterline as laid, together with the right to enter upon said lot for the purpose of maintenance and repair of said water and sewer lines.

AND BEING all of that property conveyed by Ann P. Shook to R. Timothy Shook and wife, Patricia Shook recorded in Book 486 at Page 472, Haywood County Registry.

**Parcel 7 (8616-42-3089)**

BEGINNING on a stake in the fork of the old and new Howell Mill Road, and runs with the Northern margin of the New Howell Mill Road N. 60 degrees 35' E. 178 feet to the center of a branch: thence running N. 13 degrees 15' W. with the center of said branch 203 feet to a stake in the center of said branch; thence S 73 degrees W. 57 feet to a stake in the East margin of the old Howell Mill Road: thence 3 calls as follows. S. 12 degrees 15' W. 53 feet to a stake; S. 2 degrees 10' W. 100 feet to a stake; S. 28 degrees W. 127 feet to the BEGINNING, containing 7/8 of an acre, more or less.

COMPREHENDING and INCLUDING the identical property conveyed to Bill D. Maney, Jr. et ux, Wilda C. Maney by John Hall et ux. by deed dated May 13, 1954, recorded in Deed Book 159, page 574, Haywood County Registry.

THIS ALSO BEING the same property described in a deed by Bill D. Maney and wife Wilda C. Maney to Robert Shook and wife Ann Shook, dated February 5, 1964 and recorded in Book 202 at page 318 of the Haywood County Registry.

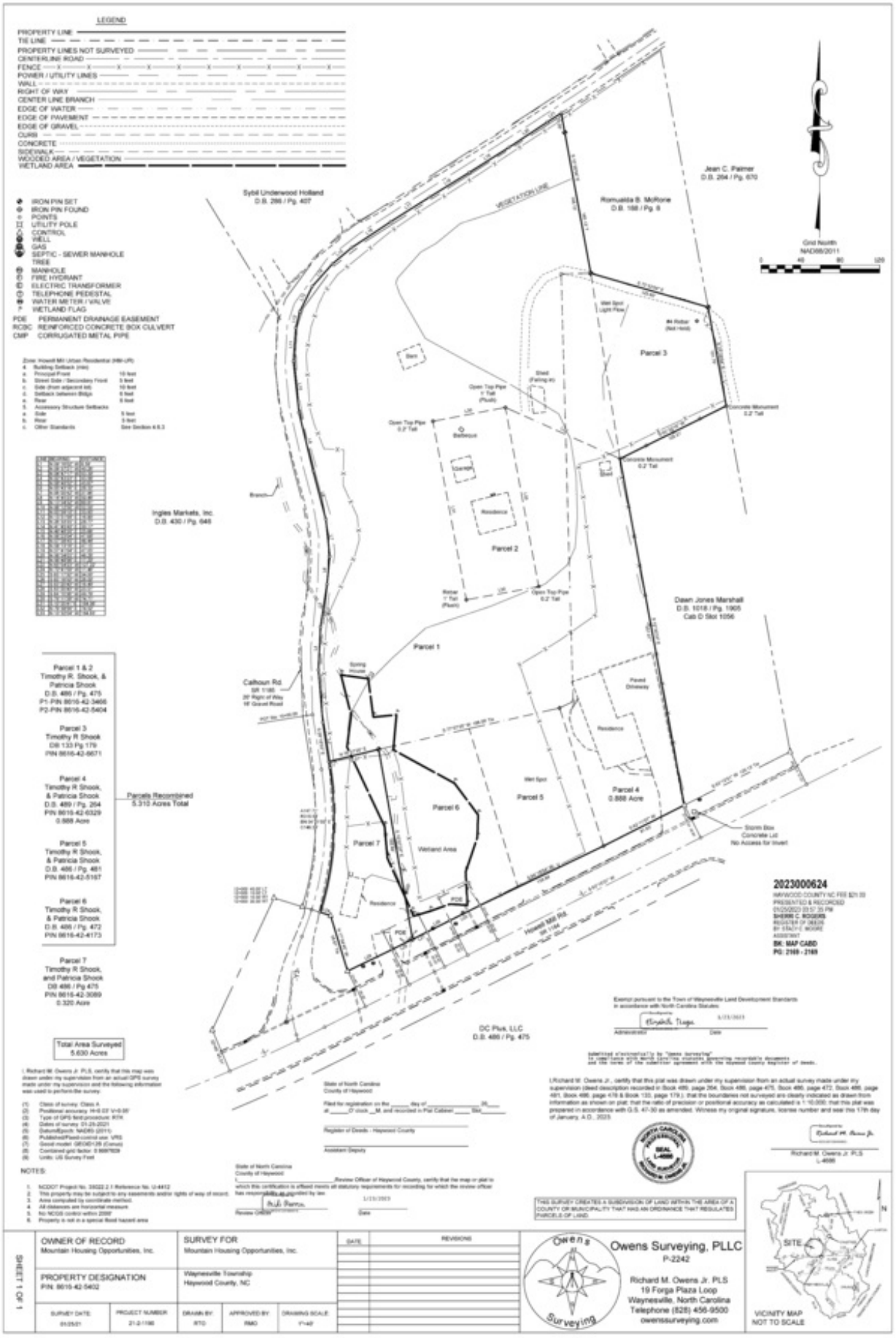
AND BEING all of that property conveyed by Ann P. Shook to R. Timothy Shook and wife, Patricia Shook recorded in Book 486 at Page 475, Haywood County Registry.

**The above described Parcels being further described as follows.**

Beginning at a point in the northern boundary of Howell Mill Road (SR 1184), said point being the southwest corner of the property of Dawn Jones Marshall, now or formerly, as shown on the plat recorded in Map Cabinet D at Page 1056, Haywood County Registry; and from the Beginning Point thus established, with the northern boundary of Howell Mill Road (SR 1184) the following seven (7) courses and distances: (1) South 63°11'07 West 91.63 feet to an iron pin found, (2) South 64°18'54" West 138.84 feet to a point, (3) South 63°17'32" West 34.00' to a point, (4) South 63°16'50" West 26.00' to a point, (5) South 63°20'40" West 16.49' to an iron pin set, (6) South 63°20'40" West 23.51' to a point, and (7) South 64°10'36" West 49.79' to a point; thence North 17° 04'45" West 58.87 feet to a point; thence North 72°41'58" West 11.46' to a point in the eastern boundary of Calhoun Road (SR 1185); thence with the eastern and southern boundaries of Calhoun Road (SR 1185) the following twenty-two (22) courses and distances: (1) along a curve to the left having a radius of 318.54, arc length of 147.71 feet, North 04°01'00" East 146.39 feet to a point; (2) North 09°16'02" West 6.58' to a point, (3) North 08°37'21" West 40.26' to a point, (4) North 04°47'17" West 53.39' to a point, (5) North 02°43'23" East 43.56' to a point, (6) North 08°40'32" East 43.67' to a point, (7) North 05°43'16" East 28.32' to a point, (8) North 06°00'42" West 37.96' to a point, (9) North 14°45'23" West 50.48' to a point, (10) North 13°34'32" West 60.81' to a point, (11) North 06°12'58"

West 52.50' to a point, (12) North 03°59'10" East 33.93' to a point, (13) North 13°51'58" East 16.90' to a point, (14) North 26°33'35" East 28.77' to a point, (15) North 41°45'40" East 30.17' to a point, (16) North 49°48'30" East 25.66' to a point, (17) North 56°23'04" East 47.68' to a point, (18) North 57°38'45" East 46.44' to a point, (19) North 58°13'16" East 47.15' to a point, (20) North 57°41'04" East 47.55' to a point, (21) North 56°34'03" East 46.28', and (22) North 56°48'56" East 17.20' to a point; thence leaving the boundary of Calhoun Road (SR 1185) and with the western boundary of the property of Romualda B. McRorie, now or formerly, by Deed recoded in Book 188 at Page 8, Haywood County Registry, South 10°28'04" East, passing an iron pin set at 20.00 feet, 165.13 feet to an iron pin set; thence with the southern line of the Romualda B. McRorie property South 73°53'04" East 123.60 feet to an iron pin set in the western boundary of the First Tract of the property of Jean C. Palmer, now or formerly, by Deed recorded in Book 264 at Page 670, Haywood County Registry; thence with the western boundary of the Jean C. Palmer property South 10°28'04" East 101.70 feet to a concrete monument in the northeast corner of the property of Dawn Jones Marshall, now or formerly, as shown on the plat recorded in Map Cabinet D at Page 1056, Haywood County Registry; thence with the northern boundary of the Dawn Jones Marshall property South 63°33'16" West 120.21 feet to a concrete monument; thence with the western boundary of the Dawn Jones Marshall property South 10°30'33" East 357.01 feet to the Beginning Point.

Being that 5.630 acres shown on the Survey for Mountain Housing Opportunities, Inc. dated January 25, 2021, by Richard M. Owens Jr., PLS of Owens Surveying, PLLC, Project No. 21-2-1190.


LEGEND
PROPERTY LINE
TIE LINE
PROPERTY LINES NOT SURVEYED
CENTERLINE ROAD
FENCE
POWER / UTILITY LINES
WALL
RIGHT OF WAY
CENTER LINE BRANCH
EDGE OF WATER
EDGE OF PAVEMENT
EDGE OF GRAVEL
CURB
CONCRETE
SIDEWALK
WOODED AREA / VEGETATION
WETLAND AREA
IRON PIN SET
IRON PIN FOUND
POINTS
UTILITY POLE
CONTROL
WELL
GAS
SEPTIC - SEWER MANHOLE
TREE
MANHOLE
FIRE HYDRANT
ELECTRIC TRANSFORMER
TELEPHONE PEDESTAL
WATER METER / VALVE
WETLAND FLAG
PDE PERMANENT DRAINAGE EASEMENT
RCBC REINFORCED CONCRETE BOX CULVERT
CMP CORRUGATED METAL PIPE
Sybil Underwood Holland
D.B. 286 / Pg. 407
Romualda B. McRorie
D.B. 188 / Pg. 8
Jean C. Palmer
D.B. 264 / Pg. 670
Grid North
NAD88/2011
Parcel 3
Parcel 2
Parcel 1
Parcel 4
0.888 Acre
Parcel 5
Parcel 6
Parcel 7
Wetland Area
Ingles Markets, Inc.
D.B. 430 / Pg. 646
Dawn Jones Marshall
D.B. 1018 / Pg. 1906
Cab D Slot 1056
DC Pivk, LLC
D.B. 486 / Pg. 475
Calhoun Rd.
SR 1180
20' Right of Way
16' Gravel Road
Parcel 1 & 2
Timothy R. Shook, &
Patricia Shook
D.B. 486 / Pg. 475
P1-PIN 8616-42-3466
P2-PIN 8616-42-5404
Parcel 3
Timothy R Shook
DB 133 Pg 179
PIN 8616-42-5671
Parcel 4
Timothy R Shook,
& Patricia Shook
D.B. 489 / Pg. 264
PIN 8616-42-6329
0.888 Acre
Parcel 5
Timothy R Shook,
& Patricia Shook
D.B. 486 / Pg. 481
PIN 8616-42-5167
Parcel 6
Timothy R Shook,
& Patricia Shook
D.B. 486 / Pg. 472
PIN 8616-42-4173
Parcel 7
Timothy R Shook,
and Patricia Shook
DB 486 / Pg.475
PIN 8616-42-3089
0.320 Acre
Parcels Recombined
5.310 Acres Total
Total Area Surveyed
5.630 Acres
2023000624
HAYWOOD COUNTY NC FEE $21.00
PRESENTED & RECORDED
01/25/2023 03:57:35 PM
BK: MAP CABD
PG: 2169 - 2169
NOTES:
OWNER OF RECORD
Mountain Housing Opportunities, Inc.
SURVEY FOR
Mountain Housing Opportunities, Inc.
PROPERTY DESIGNATION
PIN: 8616-42-5402
Waynesville Township
Haywood County, NC
REVISIONS
SURVEY DATE
01/25/21
PROJECT NUMBER
21-2-1166
DRAWN BY
RTO
APPROVED BY
RMO
DRAWING SCALE
1"=40'
SHEET 1 OF 1
Owens Surveying, PLLC
P-2242
Richard M. Owens Jr. PLS
19 Forga Plaza Loop
Waynesville, North Carolina
Telephone (828) 456-9500
owenssurveying.com
SITE
VICINITY MAP
NOT TO SCALE

# Appendix V: Site Photographs

1 - View of residence.

2 - View of southern grass-covered land.

3 - KIMG9870

4 - View of garage interior.

5 - View of soil mound with blocks and land clearing debris.

6 - View of paint cans along the retaining wall.

7 - View of eastern dilapidated outbuilding.

8 - View of logged trees in the central portion of the property.

9 - View of western grass-covered land.

10 - View of western grass-covered and wooded land.

11 - View of discarded wires in the central portion of the property.

12 - View of eastern grass-covered land.

13 - View of northern adjoining residence.

14 - View of eastern adjoining residence.

15 - View of eastern adjoining residence with AST.

16 - View of southern adjoining Howell Mill Road followed by Sunoco Plastics.

17 - View of western adjoining residence.

18 - View of AST at the western adjoining residence.

19 - View of western adjoining Calhoun Road followed by wooded land.

# Appendix VI: Additional Documents

Hazardous Waste Section

# File Room Document Transmittal Sheet



| | |
|---|---|
| Your Name: | Scott Ross |
| EPA ID: | N C P 0 9 0 3 1 4 0 3 6 |
| Facility Name: | North Carolina Dept of Transportation |
| Document Group: | General (G) |
| Document Type: | Other (O) |
| Description: | Provisional ID number assigned |
| Date of Doc: | 9/2/2014 |
| Author of Doc: | Gordon Box |

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NCP090314036

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| | SEP 24 2014 | |
| | SEP 24 2014 | |

Scanner's Initials:

NCDENR
North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

September 09, 2014

GORDON BOX
NORTH CAROLINA DEPT OF TRANSPORTATION
1020 BIRCH RIDGE DR
RALEIGH, NC 27610

RE: PROVISIONAL EPA ID: # NCP090314036
NORTH CAROLINA DEPT OF TRANSPORTATION

Dear Facility Contact:

The above Provisional EPA ID Number has been assigned to your facility as a handler of hazardous waste. This number is to be used for the hazardous waste activity as described on the application. Specifically, please note that the Provisional EPA ID Number is for the shipment of hazardous waste from none other than the facility and site identified on the application. This number is effective for a period of ninety (90) days only.

All handlers of hazardous waste are required to pay an annual fee. N.C.G. S. 130A-294.1 (f) requires that a person who generates greater than 1,000 kilograms (2,200 lbs.) of hazardous waste in any calendar month during the year shall pay an annual fee of one thousand four hundred dollars ($1,400.00). Effective July 1, 2010, Hazardous Waste fees increased pursuant to the North Carolina General Statute 130A-294.1. The new hazardous waste fees may be found on page two of the attached Invoice. N.C.G.S. 25-3-506 states that a processing fee of $25.00 will be charged for a returned check.

If you have any questions, please contact Ray Strawbridge at (919)-707-8231.

Sincerely,

Patricia Davalos
Business Officer/Supervisor,
HW Financial and Information Management Unit

cc: Central Files (General)

# IBEAM - RCRA Site Detail

Report run on: September 04, 2014

**NCP090314036 NORTH CAROLINA DEPT OF TRANSPORTAION**

**County:** HAYWOOD **Source Type:** P **Seq. Number:** 3 **Receive Date:** 03-Sep-2014

**Location Address:** 90 HOWELL MILL RD
WAYNESVILLE, NC 28786

**Mailing Address:** 90 HOWELL MILL RD
WAYNESVILLE, NC 28786

**Contact Person** For Source Information: GORDON BOX (919) 707-6859
1020 BIRCH RIDGE DR
RALEIGH, NC 27610
US

**Owner (current)**
W. R. BOYD INVESTMENTS
44 ACADEMY STREET
WAYNESVILLE, NC 28786
Type: P
From: 01/01/1601 To: Phone:

**Operator (current)**
Type:
From: To: Phone:

Land Type: P | Non Notifier : E | Commercial Availability: | Tsd Date:
Accessibility: | No. Employees : | State District:

**Regulated Waste Activities**

Hazardous Waste Generator Status - Federal: Large Quantity Generator; State: Large Quantity Generator

Transfer Facility:

Other Hazardous Waste Generator Activities
- Importer Activity: No
- Mixed Waste Generator: No
- Transporter Activity: No
- TSD Activity: No
- Recycler Activity: No

Exempt Boiler and/or Industrial Furnace
- Small Quantity Onsite Burner Exemption: No
- Smelting, melting, Refining Furnace Exemption: No

**Used Oil Activities**

Used Oil Transport Activity
- Transporter: No
- Transfer Facility: No

Used Oil Processor and/or Re-refiner Activity
- Processor: No
- Refiner No

Underground Injection Control: No

Off-Specification Used Oil Burner: No

Used Oil Fuel Marketer Activity
- Marketer who direct shipment off-specification used oil to off-specification used oil burner: No
- Marketer who first claims the used oil meets the specifications: No

Destination Facility for Universal Waste: No

**Certification Information**

First Name : GORDON
Last Name : BOX
Title ENV PROJ MGR
Date Signed 09/02/2014

**NAICS Codes**

**Comments**

CREATED PER PROVISIONAL APPLICATION DATED 9/2/2014 FOR REMOVAL OF SOIL IMPACTED BY AUTOMOTIVE DEBRIS. SRP 09/03/2014

Waste Codes

| Code D | Code F | Code K | Code P | Code R | Code U | Code X |
|---|---|---|---|---|---|---|

*Emailed EPA Prov. ID# & 11150 as req'd. SP

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Hazardous Waste Section

RECD 9/3/14

# 2014 INVOICE

CK # 37425 (Hartman & Hickman)
$1400.00

ATTENTION: ACCOUNTS PAYABLE
NORTH CAROLINA DEPT OF TRANSPORTAION
1020 BIRCH RIDGE DR
RALEIGH, NC 27610

## FACILITY LOCATION ADDRESS:

GORDON BOX
NORTH CAROLINA DEPT OF TRANSPORTAION
90 HOWELL MILL RD
WAYNESVILLE NC 28786

| FACILITY EPA ID # | INVOICE # | INVOICE DATE | AMOUNT DUE | DUE DATE | ENTER AMOUNT PAID |
|---|---|---|---|---|---|
| NCP090314036 | HW63565 | 09/03/2014 | | 10/03/2014 | |

A. Fee Requirements: Pursuant to North Carolina General Statute 130A-294.1, a Facility must pay fee(s) based on its hazardous waste management activities. The fees are used to support government programs that ensure the safe management of hazardous waste. Failure to pay the required fees could result in an enforcement action with a penalty.

B. Invoice amount is based on the registered status as of the invoice date and includes any past-due balances. A 10% late-payment penalty has been assessed for Fiscal Year 2013 if the annual fee was not paid by June 30, 2014.

C. If Fiscal Year 2014 annual fees are not paid by June 30 2015, the facility must pay a late-payment penalty of 10% of the total amount due.

D. In accordance with N.C.G.S. § 147-86.23, a facility may petition for waiver of any late-payment penalty but the Hazardous Waste Section will only grant a waiver for good cause shown.

| FACILITY STATUS | FEE | TONNAGE | AMOUNT DUE |
|---|---|---|---|
| LARGE QUANTITY GENERATOR | $1400.00 | --------- | $1,400.00 |
| | | PAST DUE | $0.00 |
| | | CREDIT | $-1400.00 |
| | | TOTAL AMOUNT DUE | $0.00 |

**E. Remit Payment (including copy of this invoice):**

Make checks payable to **N.C. Hazardous Waste Section**, include *EPA ID#* and *Invoice #* on check. If you are paying by electronic transfer, include the invoice number with your electronic transfer. Please note per NC General Statute (G.S. 25-3-506), a $25.00 processing fee will be charged on all returned checks. Please return a copy of this invoice with your payment to:

ATTN: PATRICIA DAVALOS
NC HAZARDOUS WASTE SECTION
1646 MAIL SERVICE CENTER
RALEIGH, NC 27699-1646

**F. Hazardous Waste Contacts:**

| | | |
|---|---|---|
| 1. BILLING: | Sherry Prince | (919) 707-8232 |
| 2. SITE ID 8700-12 NOTIFICATIONS: | Melodi Deaver | (919) 707-8204 |
| 3. TECHNICAL ASSISTANCE: | Ray Strawbridge | (919) 707-8231 |
| 4. SUPERVISOR: | Patricia Davalos | (919) 707-8233 |

# North Carolina
## Application for Provisional Identification Number

NC Department of Environment and Natural Resources
Division of Waste Management
Hazardous Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Please Refer to the instructions for Filing Notification before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation and Recovery Act)

| | | |
|---|---|---|
| 1. Reason for Submittal | Provisional EPA ID Number | N C P 0 9 0 3 1 4 0 3 6 |
| 2. Generator | Name of Company or Site: North Carolina Departm ent of Transportation (Generator Name) | N/A (NAICS Code Number) |
| 3. Site Location | Physical Address (Not P.O. Box or Route Number): 90 Howell Mill Road (Street Name) | |
| | Waynesville (City) | Haywood (County) |
| | | NC (State) 28786 (Zip Code) |
| 4. Site Mailing Address | P.O. Box or Route Number: 90 Howell Mill Road (property is vacant) (Street) | |
| | Waynesville (City) | NC (State) 28786 (Zip Code) |
| 5. Site Contact Information | Gordon Box (First and Last Name) | GeoEnvironmental Project Manager (Title) |
| | ghbox@ncdot.gov (Email Address) | 919-707-6859 (Phone Number) |
| | 1020 Birch Ridge Drive (Mailing Address) | |
| | Raleigh (City) | NC (State) 27610 (Zip Code) |
| 6. Legal Owner of the site | W.R. Boyd Investments (Name of Legal Owner) | |
| | 44 Academy Street (Street Address) | |
| | Waynesville (City) | NC (State) 28786 (Zip Code) |
| | Not available (Phone Number) | |

| | | | | |
|---|---|---|---|---|
| 7. Operator Type | ☐ Private<br>☐ Indian | ☐ District<br>☐ Municipal | ☐ County<br>☐ State | ☐ Federal<br>☒ Other |
| 8. Owner Type | ☒ Private<br>☐ Indian | ☐ District<br>☐ Municipal | ☐ County<br>☐ State | ☐ Federal<br>☐ Other |

| | | |
|---|---|---|
| 9. Transporter | EVO Corporation (Company Name) | N C D 9 8 2 1 1 4 8 0 3 (EPA ID Number) |
| | 1703 Vargrave Street (Site Address) | |
| | Winston-Salem (City) | NC (State) 27107 (Zip Code) |

| | | |
|---|---|---|
| | Tony Disher<br>**Contact Name** | 336-725-5844<br>**Tel. Number** |
| 10. Disposer | EQ-Wayne Disposal<br>**Company Name** | M I D 0 4 8 0 9 0 6 3 3<br>**EPA ID Number** |
| | 49350 N. I-94 Service Road<br>**Site Address** | |
| | Belleville<br>**City** | MI / 48111<br>**State** / **Zip Code** |
| | Kristine Singleton<br>**Contact Name** | 800-592-5489<br>**Tel. Number** |
| 11. Description of Hazardous Waste | (Check ALL that Apply)<br>☐ Ignitable ☐ Corrosive ☐ Reactive X Toxic<br>List Any Additional Specific EPA Hazardous Waste Number(s) | |
| 12. Waste Specifics | ~ 700,000<br>**Quantities of Waste Disposed** | pounds<br>**(Gallons / Pounds / Kilograms)** |
| | Soil w/ automotive debris<br>**Name of Waste** | Removal of impacted soil while constructing a stream diversion ditch<br>**How was this waste generated?** |
| 13. Non-Hazardous Waste | Was there Non-Hazardous Waste Generated? X Yes ___No<br>Description of Non-Hazardous Waste Generated: Soil with automotive debris | |
| 14. Past Generation | Have you Generated other Hazardous Wastes in the Past? ___Yes X No | |
| 15. Certification | I Certify that the information supplied is accurate and correct to the best of my knowledge and belief; and that this is a one-time handling of any kind of hazardous waste. I do not and will not generate any hazardous waste of any quantity. I have personally examined and am familiar with the information submitted in this and attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fines and imprisonment. | |
| 16. Signature | Gordon Box<br>**Sign** | 9-2-2014<br>**Date** |
| | GORDON BOX<br>**Print Name** | GeoEnvironmental Project Manager.<br>**Title of Official** |

hart hickman

SMARTER ENVIRONMENTAL SOLUTIONS

**Via Federal Express**

September 2, 2014

NC DENR
Division of Waste Management
Hazardous Waste Section
217 W. Jones Street
Raleigh, North Carolina 27603

Fed Ex
9/3 delivery
9:35

Attention: Ms. Patricia Davalos

Re: Application for Provisional Identification Number
NC DOT State Project U-4412
WBS Element 35022.1.1
90 Howell Mill Road
Waynesville, Haywood County, NC
H&H Job No. ROW-502

Dear Patricia:

On behalf of the North Carolina Department of Transportation, Hart & Hickman PC (H&H) is submitting the attached Application for Provisional Identification Number for 90 Howell Mill Road in Waynesville, Haywood County, North Carolina. The $1,400.00 application fee for a provisional large quantity generator is also attached. We request that you forward the EPA ID number to David Graham of H&H via email at dgraham@harthickman.com. If you have any questions or need additional information, please contact us at (704) 586-0007.

Sincerely,

***Hart & Hickman, PC***

David Graham
Senior Project Geologist

Matt Bramblett, PE
Principal

Attachments

2923 South Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007 main

3334 Hillsborough Street
Raleigh, NC 27607
919.847.4241 main

www.harthickman.com

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

**Via 2nd Day Federal Express**

February 4, 2015

NC DOT Geotechnical Engineering Unit
1020 Birch Ridge Drive
Raleigh, North Carolina 27610

Attention: Mr. Gordon Box, LG

Re: Impacted Soil Excavation - Parcel 006
Waynesville, Haywood County, NC
State Project U-4412
WBS Element #35022.1.1
H&H Job No. ROW-502

Dear Gordon:

Please find enclosed three copies of the Soil Excavation Report for Parcel 006 located in Waynesville, Haywood County, North Carolina. An electronic copy is provided on compact disc (CD) in one hard copy of the report. An electronic copy of the report will also be provided via DOT's File Transfer System (FTS). If you have any questions or need additional information, please contact us at (704) 586-0007.

Sincerely,

***Hart & Hickman, PC***

David Graham
Senior Project Geologist

Matt Bramblett, PE
Principal

Attachments

# Soil Excavation Report
# W.R. Boyd Investments Property
# Parcel 006

## Waynesville
## Haywood County, North Carolina

**H&H Job No. ROW-502**
**State Project U-4412**
**WBS Element #35022.1.1**
**February 4, 2015**

hart hickman

SMARTER ENVIRONMENTAL SOLUTIONS

**#C-1269 Engineering**
**#-245 Geology**

2923 South Tryon Street, Suite 100
Charlotte, NC 28203
704.586.0007 main

3334 Hillsborough Street
Raleigh, NC 27607
919.847.4241 main

www.harthickman.com

**Soil Excavation Report**
**W.R. Boyd Investments Property - Parcel 006**
**Waynesville, Haywood County, North Carolina**
**H&H Project ROW-502**

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**Soil Excavation Report**
**W.R. Boyd Investments Property - Parcel 006**
**Waynesville, Haywood County, North Carolina**
**H&H Project ROW-502**

## 1.0 Introduction and Background

Hart & Hickman, PC (H&H) has prepared this report documenting impacted soil assessment and excavation activities conducted on the W.R. Boyd Investments property (Parcel 006) located at 90 Howell Mill Road in Waynesville, Haywood County, North Carolina. A site location map is included as Figure 1 and a site map is included as Figure 2. Soil assessment and excavation oversight activities were conducted on behalf of the North Carolina Department of Transportation (NC DOT) in accordance with H&H proposals dated August 13, 2014 and September 26, 2014. A brief background of this project is discussed below.

The Parcel 006 property is currently vacant undeveloped land. The property was formerly used as a junkyard and automotive recycling facility. As part of road improvement activities, NC DOT is diverting a stream onto Parcel 006. During stream excavation activities, black soil mixed with broken glass and car parts was encountered in the stream diversion ditch by NC DOT's road construction contractor. Soil from the ditch including some black soil mixed with car parts was stockpiled near the excavation area. The downgradient portion of the ditch and a small upgradient portion of the ditch were excavated to the proposed ditch grade level by NC DOT's road construction contractor. The contractor stopped excavating the stream diversion ditch prior to removing the central portion of the ditch. Most of the black soil was encountered in and near the downgradient portion of the ditch. The NC DOT preliminary plan for the stream diversion area is included in Appendix A.

Soil assessment activities were conducted by H&H to determine the extent of potential impacted soil in the stream diversion ditch prior to completion of the ditch construction activities and to characterize the soil stockpile for proper disposal. Analytical results of soil samples collected by H&H indicated that the black soil is impacted with polychlorinated biphenyls (PCBs), petroleum constituents, oil & grease, and heavy metals above DENR target levels. Based on TCLP RCRA

metals analytical results, lead concentrations exceeded the RCRA regulatory threshold for characteristically hazardous waste in the soil located in the sidewalls of the downgradient portion of the ditch and in surface soil in the central portion of the ditch. The impacted stockpiled soil was determined to be non-hazardous.

At NC DOT's request, only impacted soil that was hindering and disturbed the DOT road project was removed. Impacted soil outside of DOT work areas was left in place. H&H oversaw excavation and removal of black stained soil identified in the stream diversion ditch area and removal of the non-hazardous stockpiled soil. H&H contracted with EVO Corporation (EVO) to conduct the excavation activities and for transportation of the material for off-site disposal. The soil sampling and excavation activities are described below.

## 2.0 Pre-Excavation Soil Sampling Activities

### 2.1 Soil Sampling

H&H mobilized to the site on August 11, 2014 through August 13, 2014 and on August 27, 2014 and advanced 12 soil borings (B-1 through B-12) using a stainless steel hand auger. Prior to conducting soil borings, underground utilities were marked by the NC 811 public utility locator. The soil boring locations are shown on Figure 2.

Soil borings were advanced to total depths ranging from 4 ft below ground surface (bgs) to 8 ft bgs. To facilitate the selection of soil samples for laboratory analysis, soil from each boring was screened continuously for the presence of volatile organic compounds (VOCs) with an organic vapor analyzer (OVA). Additionally, H&H observed the soil for visual and olfactory indications of impacts. During soil screening, there were low level indications of potential impacts in soil borings B-3 and B-10 based on OVA readings. Black stained soil mixed with automotive debris including metal, glass, etc. was observed between 0 and 2.5 ft in borings B-3 and B-6 through B-10. There were no significant indications of potential impacts in the remaining soil borings based on field screening. Soil samples were collected at depth intervals ranging from 0 to 1 ft bgs to 6 ft to 7 ft bgs. Soil boring logs are included in Appendix B.

Soil borings B-1 through B-3 were advanced along the centerline of the ditch where no soil had been removed for construction of the ditch. Soil borings B-4 and B-5 were advanced along the centerline of the downgradient portion of the ditch where excavation activities had already been completed. Soil borings B-6 through B-10 were advanced along the sidewalls of the ditch in areas where black soil and metal were evident. Soil boring B-11 was advanced near the outfall of the existing culvert for the stream (87" x 63" CAMP) and soil boring B-12 was advanced near the drainage feature located to the north of the stream diversion ditch.

H&H submitted a total of 18 soil samples from borings B-1 through B-12 for laboratory analysis. The soil samples were placed into laboratory supplied sample containers using nitrile glove-covered hands. The containers were then labeled as to content, analyses requested, sample date and time, and sampler's name. The samples were placed in an iced cooler upon collection and were subsequently submitted to Pace Analytical Services, Inc. under standard chain-of-custody protocol. Laboratory analytical data sheets and chain-of-custody documentation are provided in Appendix C.

Soil samples were submitted for analysis of VOCs by EPA Method 8260, semi-VOCs (SVOCs) by EPA Method 8270, PCBs by EPA Method 8082, RCRA Metals by EPA Method 6010/7471 (for mercury), total petroleum hydrocarbons (TPH) as diesel range organics (DRO) and gasoline range organics (GRO) by EPA Method 8015, and oil & grease (O&G) by EPA Method 9071. Based on metals analytical results (discussed below), select samples were also analyzed for TCLP RCRA metals by 6010/7470. Sample depths and analytical results are summarized in Table 1.

One composite soil sample was collected from the existing soil stockpile for analysis of the above analytes with the exception of VOCs. The composite sample consisted of aliquots collected from the mid-point of four soil borings advanced in the stockpile using a hand auger. Equal amounts of each of the aliquots were placed in a zip-lock baggie and mixed with a nitrile gloved hand until homogenized. A separate grab sample was advanced in the center of the stockpile for VOC analysis to prevent volatilization of potential VOCs during compositing.

## 2.2 Soil Analytical Results

Detected TPH concentrations and O&G were compared to NC DENR Action Levels. Concentrations of TPH DRO (up to 239 mg/kg) were detected. TPH-DRO concentrations exceeded the DENR Action Level of 10 mg/kg in 5 of the 18 samples analyzed. TPH DRO was detected in shallow soil samples in the central and downgradient portions of the stream diversion ditch and near the existing culvert for the stream. Concentrations of O&G (up to 6,750 mg/kg) were detected. O&G concentrations exceeded the DENR Action Level of 250 mg/kg in 3 of the 15 samples analyzed. O&G was detected in shallow soil samples in the central and downgradient portions of the stream diversion ditch and near the outfall of the existing stream culvert. No TPH GRO was detected. TPH DRO and O&G data are depicted on Figure 3.

Compound specific concentrations were compared to NC DENR IHSB Residential Health-Based Soil Remediation Goals (SRGs) and the IHSB Protection of Groundwater SRGs. PCBs were detected in shallow soil samples near the center and downgradient portions of the stream diversion ditch. The highest PCB concentration of 1.939 mg/kg was detected in the sample from boring B-6. This concentration exceeds the Residential SRG of 1 mg/kg, but it is below the Toxic Substances Control Act (TSCA) regulatory level of 50 mg/kg. Total PCB concentrations in soil are shown on Figure 4.

Elevated metal concentrations, which were considered to be detections above twice the average background levels, were also detected. Metal background levels were taken from literature values as noted on Table 1. Elevated metals above the SRGs were detected near the downgradient portion of the stream diversion ditch. Lead concentrations were detected at the highest levels (up to 1,330 mg/kg). The Residential SRG for lead is 400 mg/kg. Analytical results for the lead impacts are shown on Figure 5.

Three samples (B-6, B-8, and B-10) with elevated lead concentrations and four samples from boring B-3 were analyzed for TCLP RCRA metals. The three samples from borings B-6, B-8, and B-10 and the shallow sample from boring B-3 (0-1 ft) contained TCLP lead above the characteristically hazardous waste threshold. The highest TCLP lead concentration from soil sample B-3 (0-1 ft) was

14.7 mg/L which exceeds the hazardous waste threshold of 5 mg/L. The lead impacted soil above the hazardous waste threshold is depicted on Figure 5.

There were scattered low level detections of VOCs and SVOCs. No VOC or SVOC concentrations exceeded the SRGs.

Concentrations of TPH DRO (348 mg/kg) and O&G (1,180 mg/kg) above the DENR Action Levels were detected in the composite sample SPC/SPVOC collected from the soil stockpile. PCBs (6.99 mg/kg) were detected in SPC/SPVOC above the SRGs. Elevated metals were also detected in SPC/SPVOC above the SRGs. No TCLP metals were detected above the characteristically hazardous waste thresholds in the composite soil stockpile sample SPC/SPVOC.

## 3.0 Soil Excavation Activities

### 3.1 Soil Excavation

H&H mobilized to the site on October 13, 2014 through October 20, 2014 to oversee hazardous waste soil excavation and non-hazardous waste soil stock pile removal activities in the vicinity of the stream diversion ditch on Parcel 006. Prior to the removal of hazardous soil from the site, H&H obtained a Provisional EPA ID number (NCP090314036) from NC DENR. The NC DENR Provisional EPA ID Number letter and RCRA Detail are included in Appendix D.

H&H contracted with EVO of Winston-Salem, North Carolina for transportation and disposal of the impacted soil. The non-hazardous stockpiled soil was removed from the site prior to excavation of hazardous soil from the stream diversion ditch. The stockpiled soil was loaded directly onto dump trucks using a trackhoe. Approximately 252.39 tons of non-hazardous impacted stockpiled soil was transported for disposal at Waste Management's Subtitle D landfill in Johnson City, Tennessee. The non-hazardous soil disposal manifests are included in Appendix E.

Based on the depth of impacted soil identified during soil assessment activities, hazardous soil from the sidewalls of the downgradient portion of the ditch excavation area were excavated to a

depth of approximately 3 ft below grade in a 2 ft wide swath using a trackhoe. This soil was removed to be backfilled with clean soil as a buffer so that impacted soil would not be left on the stream bank structure. Shallow hazardous soil located near the center portion of the ditch (near soil boring B-3) was excavated up to a depth of approximately 1 ft. During excavation activities, soil was field screened for impacts using an OVA. Additionally, H&H observed the soil for visual and olfactory indications of impacts. In general, black stained soil with metal and glass debris and soil with elevated OVA readings was removed from the stream diversion ditch area. Approximately 111.57 tons of hazardous waste soil was directly loaded into dump trucks and transported for disposal at EQ's Subtitle C disposal facility in Belleville, Michigan. The hazardous soil disposal manifests are included in Appendix F. The impacted soil excavation area is depicted on Figure 6.

No attempt was made to remove all of the impacted soil from the site. Only enough soil was removed to prevent worker contact with impacted soil during ditch completion and to provide clean sidewalls for the new streambed.

Upon completion of excavation activities, orange safety fencing was placed over the downgradient portion of the ditch excavation area as a visual indicator to demark the location of the remaining impacted soil. The downgradient portion of the ditch was then backfilled to the proposed ditch grade level with clean imported fill provided by NC DOT. The excavation area was backfilled in approximate 6-inch lifts and compacted with a trackhoe bucket. No geotechnical testing was conducted. Because additional excavation activities were subsequently conducted by NC DOT's road construction contractor to complete construction of the central portion of the ditch, no fill material was placed in this area.

Prior to backfilling, four post excavation confirmation samples (SW-1 through SW-4) were collected from the sidewalls of the downgradient portion of the ditch excavation area to document remaining impacted soil prior to placement of clean fill. The confirmation samples were analyzed for VOCs, SVOCs, PCBs, RCRA Metals, TPH DRO and GRO, and O&G. Because previous analytical data indicate that soil is not impacted below one ft near the center

portion of the ditch excavation area (near soil boring B-3), no confirmation samples were collected from this area.

### 3.2 Post-Excavation Soil Analytical Results

Concentrations of TPH DRO (up to 757 mg/kg) and O&G (up to 2,650 mg/kg) above the DENR Action Levels were detected in each of the post excavation samples. PCBs (up to 28.3 mg/kg) were detected each post excavation sample above the SRGs. Low level VOCs were also detected in samples SW-1, SW-3, and SW-4. A low level concentration of chloromethane detected in SW-3 exceeded the POG SRG. Elevated metals including arsenic, barium, cadmium, lead, mercury and/or selenium were also detected in samples SW-1 through SW-4 above the SRGs. Lead concentrations were detected at the highest levels (up to 7,750 mg/kg) in post-excavation sidewall sample SW-4. The analytical results are presented in Table 2 and depicted on Figure 6.

## 4.0 Summary

H&H has completed assessment and excavation of impacted soil near a stream diversion ditch on Parcel 006 in Waynesville, North Carolina. Black soil mixed with broken glass and car parts was encountered in the stream diversion ditch by NC DOT's road construction contractor during excavation of the ditch. Soil assessment activities conducted by H&H indicated that the black soil is impacted with PCBs, petroleum constituents, oil & grease, and heavy metals above DENR target levels. TCLP analytical results indicated lead concentrations above the RCRA regulatory threshold for characteristically hazardous waste in the soil samples collected from the ditch. Analytical results of a composite sample from soil stockpiled by NC DOT indicated that stockpiled soil was non-hazardous impacted soil.

Approximately 252 tons of impacted stockpiled soil were removed and transported for disposal at a Subtitle D landfill as non-hazardous waste. To allow for completion of DOT work, approximately 112 tons of hazardous waste impacted soil was removed from the stream diversion ditch and transported for disposal at a Subtitle C disposal facility. No attempt was made to remove all of the impacted soil. After soil removal, samples were collected from the sidewalls prior to backfilling. Analytical results of post-excavation sidewall samples indicate

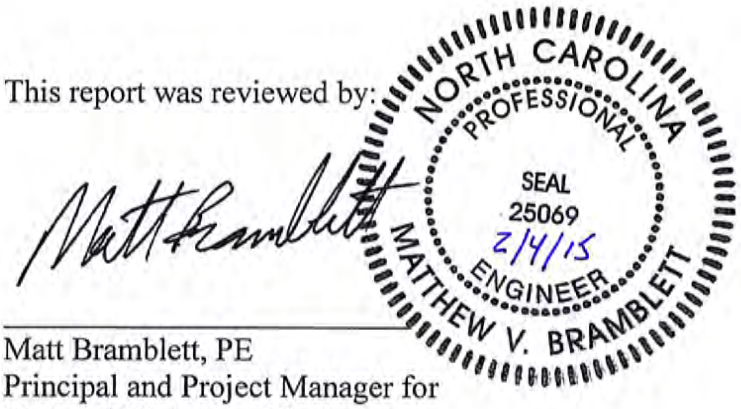
concentrations of PCBs, petroleum constituents, oil and grease, and heavy metals above DENR target levels. Black soil mixed with broken glass and car parts was still present in downgradient sidewalls of the ditch. Orange safety fencing was placed over the downgradient portion of the ditch excavation area as a visual indicator to demark the location of the remaining impacted soil. The downgradient portion of the ditch was then partially backfilled as a buffer to prevent worker contact with impacted soil during ditch completion and to provide clean sidewalls for the new streambed.

## 5.0 Signature Page

This report was prepared by:

David Graham
Senior Project Geologist for
Hart and Hickman, PC

This report was reviewed by:




Matt Bramblett, PE
Principal and Project Manager for
Hart and Hickman, PC

**Table 1 (Page 1 of 1)**
**Soil Analytical Results**
**W.R. Boyd Investments Property - Parcel 006**
**Waynesville, North Carolina**
**H&H Job No. ROW-502**

| Sample ID | B-1 | | B-2 | | B-3 | | | | | B-4 | B-5 | B-6 | B-7 | B-8 | B-9 | B-10 | B-11 | B-12 | SPC/SPVOC* | Regulatory Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Depth (ft) | 3-4 | 5-6.5 | 2-3 | 5-6 | 0-1 | 1-2 | 2-3 | 3-4 | 6-7 | 6-7 | 6-7 | 1-2 | 4-5 | 0-1 | 3-4 | 0-1 | 3-4 | 1-2 | Composite | | |
| Sample Date | 8/13/2014 | 8/13/2014 | 8/11/2014 | 8/12/2014 | 8/12/2014 | 8/27/2014 | 8/27/2014 | 8/27/2014 | 8/12/2014 | 8/13/2014 | 8/13/2014 | 8/12/2014 | 8/12/2014 | 8/12/2014 | 8/12/2014 | 8/12/2014 | 8/13/2014 | 8/11/2014 | 8/11/2014 | | |
| ***TCLP (mg/L)*** | | | | | | | | | | | | | | | | | | | | **RCRA Characteristic Level (mg/L)** | |
| *RCRA Metals (7470/6010)* | | | | | | | | | | | | | | | | | | | | | |
| Barium | NA | NA | NA | NA | 4.6 | 4.2 | 1.5 | 3.0 | NA | NA | NA | 2.3 | NA | 2.7 | NA | 2.9 | NA | NA | 2.5 | 100.0 | |
| Cadmium | NA | NA | NA | NA | 0.13 | <0.0050 | <0.0050 | 0.015 | NA | NA | NA | 0.22 | NA | 0.12 | NA | 0.39 | NA | NA | 0.26 | 1.0 | |
| Chromium | NA | NA | NA | NA | <0.025 | 0.62 | 0.15 | 0.15 | NA | NA | NA | <0.025 | NA | <0.025 | NA | <0.025 | NA | NA | <0.025 | 5.0 | |
| Lead | NA | NA | NA | NA | **14.7** | 0.16 | 0.03 | 0.28 | NA | NA | NA | **6.7** | NA | **9.2** | NA | **8.7** | NA | NA | 3.7 | 5.0 | |
| Mercury | NA | NA | NA | NA | <0.00020 | 0.00072 | <0.00020 | 0.00058 | NA | NA | NA | <0.00020 | NA | <0.00020 | NA | <0.00020 | NA | NA | <0.00020 | 0.2 | |
| ***PCBs (8082) (mg/kg)*** | | | | | | | | | | | | | | | | | | | | **IHSB SRG[1] (mg/kg)** | **IHSB POG[2] (mg/kg)** |
| Aroclor 1016 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | <0.429 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | <0.204 | <0.0424 | <0.217 | <0.0439 | <0.168 | <0.198 | <0.215 | <0.874 | -- | -- |
| Aroclor 1221 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | <0.429 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | <0.204 | <0.0424 | <0.217 | <0.0439 | <0.168 | <0.198 | <0.215 | <0.874 | -- | -- |
| Aroclor 1232 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | <0.429 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | <0.204 | <0.0424 | <0.217 | <0.0439 | <0.168 | <0.198 | <0.215 | <0.874 | -- | -- |
| Aroclor 1242 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | <0.429 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | <0.204 | <0.0424 | <0.217 | <0.0439 | <0.168 | <0.198 | <0.215 | <0.874 | -- | -- |
| Aroclor 1248 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | <0.429 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | <0.204 | <0.0424 | <0.217 | <0.0439 | <0.168 | <0.198 | <0.215 | <0.874 | -- | -- |
| Aroclor 1254 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | 0.736 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | 0.879 | <0.0424 | 0.890 | <0.0439 | 0.518 | <0.198 | <0.215 | 3.75 | -- | -- |
| Aroclor 1260 | <0.0413 | <0.0422 | <0.0448 | <0.0437 | 1.14 | <0.0421 | <0.0403 | <0.0459 | <0.0449 | <0.0448 | <0.0437 | 1.06 | <0.0424 | <0.217 | <0.0439 | 0.897 | <0.198 | <0.215 | 3.24 | -- | -- |
| **Total PCBs** | -- | -- | -- | -- | **1.876** | **--** | **--** | **--** | -- | -- | -- | **1.939** | -- | **0.890** | -- | **1.415** | -- | -- | **6.99** | 1 | 0.14 |
| ***VOCs (8260) (mg/kg)*** | | | | | | | | | | | | | | | | | | | | **IHSB SRG (mg/kg)** | **IHSB POG (mg/kg)** |
| Acetone | <0.0916 | <0.0830 | <0.109 | <0.100 | 1.77 | NA | NA | NA | <0.101 | <0.109 | <0.109 | <0.112 | <0.104 | <0.124 | <0.0997 | <0.123 | <0.115 | <0.124 | <0.106 | 12,000 | 24 |
| 2-Butanone (MEK) | <0.0916 | <0.0830 | <0.109 | <0.100 | 0.108 | NA | NA | NA | <0.101 | <0.109 | <0.109 | <0.112 | <0.104 | <0.124 | <0.0997 | <0.123 | <0.115 | <0.124 | <0.106 | 5,400 | 16 |
| p-Isopropyltoluene | <0.0046 | <0.0041 | <0.0055 | <0.0050 | 0.0061 | NA | NA | NA | <0.0050 | <0.0055 | <0.0055 | <0.0056 | <0.0052 | <0.0062 | <0.0050 | <0.0061 | <0.0058 | <0.0062 | <0.0053 | NE | NE |
| ***SVOCs (8270)(mg/kg)*** | | | | | | | | | | | | | | | | | | | | **IHSB SRG (mg/kg)** | **IHSB POG (mg/kg)** |
| bis(2-ethylhexyl)phthalate | <0.413 | <0.422 | <0.448 | <0.437 | <0.429 | NA | NA | NA | <0.449 | <0.448 | <0.437 | 0.468 | <0.424 | 0.628 | <0.439 | <0.419 | <0.397 | <0.430 | <0.437 | 38 | 7.2 |
| ***RCRA Metals (6010/7471) (mg/kg)*** | | | | | | | | | | | | | | | | | | | | **IHSB SRG (mg/kg)** | **IHSB POG (mg/kg)** | **Range[3] (mg/kg)** | **Mean[3] (mg/kg)** |
| Arsenic | <1.2 | <1.3 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <0.87 | <0.91 | <1.0 | <0.84 | **4.9** | <0.97 | **5.9** | <1.0 | **11.1** | <1.0 | <0.94 | **3.1** | 0.67 | 5.8 | 1.0-18 | 4.8 |
| Barium | 54.6 | 65.7 | 197 | 98.6 | **621** | 233 | 106 | 234 | 81.8 | 204 | 185 | **1,420** | 193 | **837** | 152 | **947** | 204 | 257 | 493 | 3,000 | 580 | 50-1,000 | 356 |
| Cadmium | <0.12 | <0.13 | <0.10 | 0.25 | 2.7 | 0.56 | <0.11 | 0.65 | <0.091 | <0.10 | <0.084 | **51.7** | 0.99 | **11.4** | <0.10 | **20.9** | <0.10 | <0.094 | **5.6** | 14 | 3 | 1.0-10 | 4.3 |
| Chromium | 14.5 | 17.9 | 43.2 | 21.9 | 61.2 | 38.8 | 20.6 | 30.6 | 22.4 | 49.1 | 37.5 | 66.5 | 26.6 | 52.3 | 31.5 | 33.4 | 31.7 | 44.3 | 37.7 | 24,000 | 360,000 | 7.0-300 | 65 |
| Lead | 2.5 | 3.9 | 9.2 | 17.4 | 94.7 | 28.8 | 5.1 | 35.7 | 5.0 | 7.1 | 10.1 | **1,330** | 70.2 | **1,000** | 10.4 | **736** | 17.8 | 13.6 | **312** | 400 | 270 | ND - 50 | 16 |
| Mercury | 0.0096 | 0.0062 | 0.024 | 0.031 | 0.16 | 0.017 | 0.016 | 0.096 | 0.021 | 0.048 | 0.071 | 0.20 | 0.016 | 0.49 | 0.057 | 0.44 | 0.018 | 0.024 | 0.19 | 1.9 | 1 | 0.03-0.52 | 0.121 |
| Selenium | <1.2 | <1.3 | 1.2 | <1.1 | <1.1 | <1.1 | <1.1 | <0.87 | <0.91 | <1.0 | <0.84 | 1.1 | <0.97 | 1.2 | <1.0 | <1.2 | <1.0 | <0.94 | 1.2 | 78 | 2.1 | <0.1-0.8 | 0.42 |
| Silver | <0.61 | <0.63 | <0.50 | <0.53 | <0.55 | <0.57 | <0.53 | <0.43 | <0.45 | <0.52 | <0.42 | 1.6 | <0.49 | 0.61 | <0.51 | 0.94 | <0.50 | <0.47 | <0.47 | 78 | 3.4 | ND-5.0 | -- |
| ***TPH-DRO/GRO (8015) (mg/kg)*** | | | | | | | | | | | | | | | | | | | | **NCDENR Action Level (mg/kg)** | |
| Diesel-Range Organics (DRO) | <6.3 | <6.4 | <6.8 | <6.6 | **142** | <6.4 | <6.1 | <7.0 | <6.8 | <6.8 | <6.6 | **239** | <6.4 | **176** | <6.7 | **149** | **12.3** | <6.5 | **348** | 10 | |
| Gasoline-Range Organics (GRO) | <5.4 | <5.0 | <3.3 | <5.5 | <6.7 | NA | NA | NA | <6.2 | <7.0 | <6.1 | <6.7 | <6.9 | <8.2 | <5.9 | <6.2 | <6.1 | <6.0 | <9.0 | 10 | |
| ***Oil & Grease (9071) (mg/kg)*** | <87.7 | <89.4 | <95.0 | <92.6 | 95.3 | NA | NA | NA | <95.2 | <95.0 | <92.7 | **6,750** | <90.0 | **1,100** | <93.1 | **343** | 124 | <91.1 | **1,180** | **NCDENR Action Level (mg/kg)** | |
| | | | | | | | | | | | | | | | | | | | | 250 | |

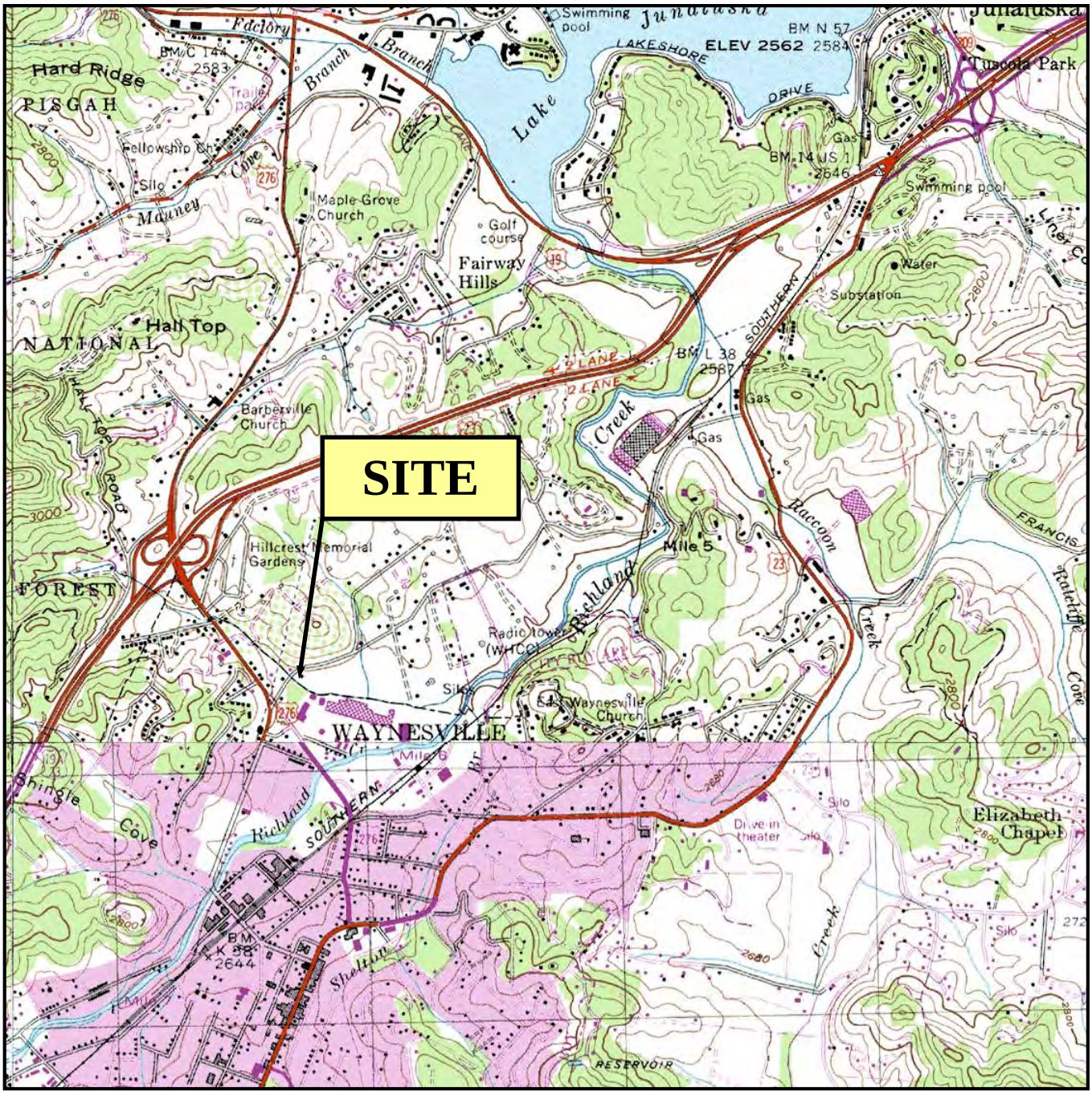
**Notes:**
1. NC DENR Inactive Hazardous Sites Branch (IHSB) Health-Based Soil Remediation Goals (SRGs) - September 2014
2. NC DENR IHSB Protection of Groundwater (POG) Soil Remediation Goals - September 2014
3. Range and Mean background values for North Carolina soils taken from *Elements in North American Soils* by Dragun and Chekiri, 2005
* = Stockpile composite sample.
EPA Method follows parameter in parenthesis; NA= Not analyzed
PCBs=Polychlorinated biphenyls; VOCs=volatile organic compounds
SVOCs=semi-volatile organic compounds; TPH=total petroleum hydrocarbons
**Bold** indicates above potential target level (and background levels in the case of metals).

**Table 2 (Page 1 of 1)**
**Post-Excavation Soil Analytical Results**
**W.R. Boyd Investments Property - Parcel 006**
**Waynesville, North Carolina**
**H&H Job No. ROW-502**

| Sample ID | SW-1 | SW-2 | SW-3 | SW-4 | Regulatory Standard | |
|---|---|---|---|---|---|---|
| Sample Depth (ft) | 2 | 2 | 2 | 2 | | |
| Sample Date | 10/20/2014 | 10/20/2014 | 10/20/2014 | 10/20/2014 | | |
| ***PCBs (8082) (mg/kg)*** | | | | | **IHSB SRG[1] (mg/kg)** | **IHSB POG[2] (mg/kg)** |
| Aroclor 1016 | <0.397 | <0.196 | <3.870 | <2.100 | -- | -- |
| Aroclor 1221 | <0.397 | <0.196 | <3.870 | <2.100 | -- | -- |
| Aroclor 1232 | <0.397 | <0.196 | <3.870 | <2.100 | -- | -- |
| Aroclor 1242 | <0.397 | <0.196 | <3.870 | <2.100 | -- | -- |
| Aroclor 1248 | <0.397 | <0.196 | <3.870 | <2.100 | -- | -- |
| Aroclor 1254 | 2.19 | 1.70 | 28.3 | <2.100 | -- | -- |
| Aroclor 1260 | 2.44 | 1.53 | <3.870 | 8.91 | -- | -- |
| **Total PCBs** | **4.63** | **3.23** | **28.3** | **8.91** | 1 | 0.14 |
| ***VOCs (8260) (mg/kg)*** | | | | | **IHSB SRG (mg/kg)** | **IHSB POG (mg/kg)** |
| Acetone | 0.125 | <0.117 | 0.249 | 0.164 | 12,000 | 24 |
| Bromomethane | <0.0124 | <0.0117 | 0.0189 | <0.0128 | 1.4 | 0.048 |
| Chloromethane | <0.0124 | <0.0117 | **0.0479** | <0.0128 | 22 | 0.015 |
| ***SVOCs (8270)(mg/kg)*** | BRL | BRL | BRL | BRL | **IHSB SRG (mg/kg)** | **IHSB POG (mg/kg)** |
| ***RCRA Metals (6010/7471) (mg/kg)*** | | | | | **IHSB SRG (mg/kg)** | **IHSB POG (mg/kg)** | **Range[3] (mg/kg)** | **Mean[3] (mg/kg)** |
| Arsenic | **8.4** | **7.0** | **27.6** | **30.7** | 0.67 | 5.8 | 1.0-18 | 4.8 |
| Barium | **940** | **782** | **826** | **1,430** | 3,000 | 580 | 50-1,000 | 356 |
| Cadmium | **17.4** | **15.4** | **18.6** | **25.2** | 14 | 3 | 1.0-10 | 4.3 |
| Chromium | 51.0 | 38.3 | 65.0 | 47.9 | 24,000 | 360,000 | 7.0-300 | 65 |
| Lead | **1,010** | **905** | **1,710** | **7,750** | 400 | 270 | ND - 50 | 16 |
| Mercury | **21.1** | 0.33 | **1.4** | 0.37 | 1.9 | 1 | 0.03-0.52 | 0.121 |
| Selenium | **3.0** | **3.0** | **6.0** | **5.1** | 78 | 2.1 | <0.1-0.8 | 0.42 |
| Silver | <0.57 | <0.56 | <0.54 | 2.2 | 78 | 3.4 | ND-5.0 | -- |
| ***TPH-DRO/GRO (8015) (mg/kg)*** | | | | | **NCDENR Action Level (mg/kg)** | |
| Diesel-Range Organics (DRO) | **593** | **381** | **443** | **757** | 10 | |
| Gasoline-Range Organics (GRO) | <7.0 | <7.2 | <7.5 | <5.5 | 10 | |
| ***Oil & Grease (9071) (mg/kg)*** | **1,330** | **1,240** | **1,710** | **2,650** | **NCDENR Action Level (mg/kg)** | |
| | | | | | 250 | |

**Notes:**
1. NC DENR Inactive Hazardous Sites Branch (IHSB) Health-Based Soil Remediation Goals (SRGs) - September 2014
2. NC DENR IHSB Protection of Groundwater (POG) Soil Remediation Goals - September 2014
3. Range and Mean background values for North Carolina soils taken from *Elements in North American Soils* by Dragun and Chekiri, 2005

EPA Method follows parameter in parenthesis; NA= Not analyzed
BRL=Below laboratory reporting limit; VOCs=volatile organic compounds
PCBs=Polychlorinated biphenyls
SVOCs=semi-volatile organic compounds; TPH=total petroleum hydrocarbons
**Bold** indicates above potential target level (and background levels in the case of metals).




N

APPROXIMATE

0 2000 4000

SCALE IN FEET

U.S.G.S. QUADRANGLE MAP

**CLYDE, NC 1967 (PHOTOREVISED 1978)**

QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

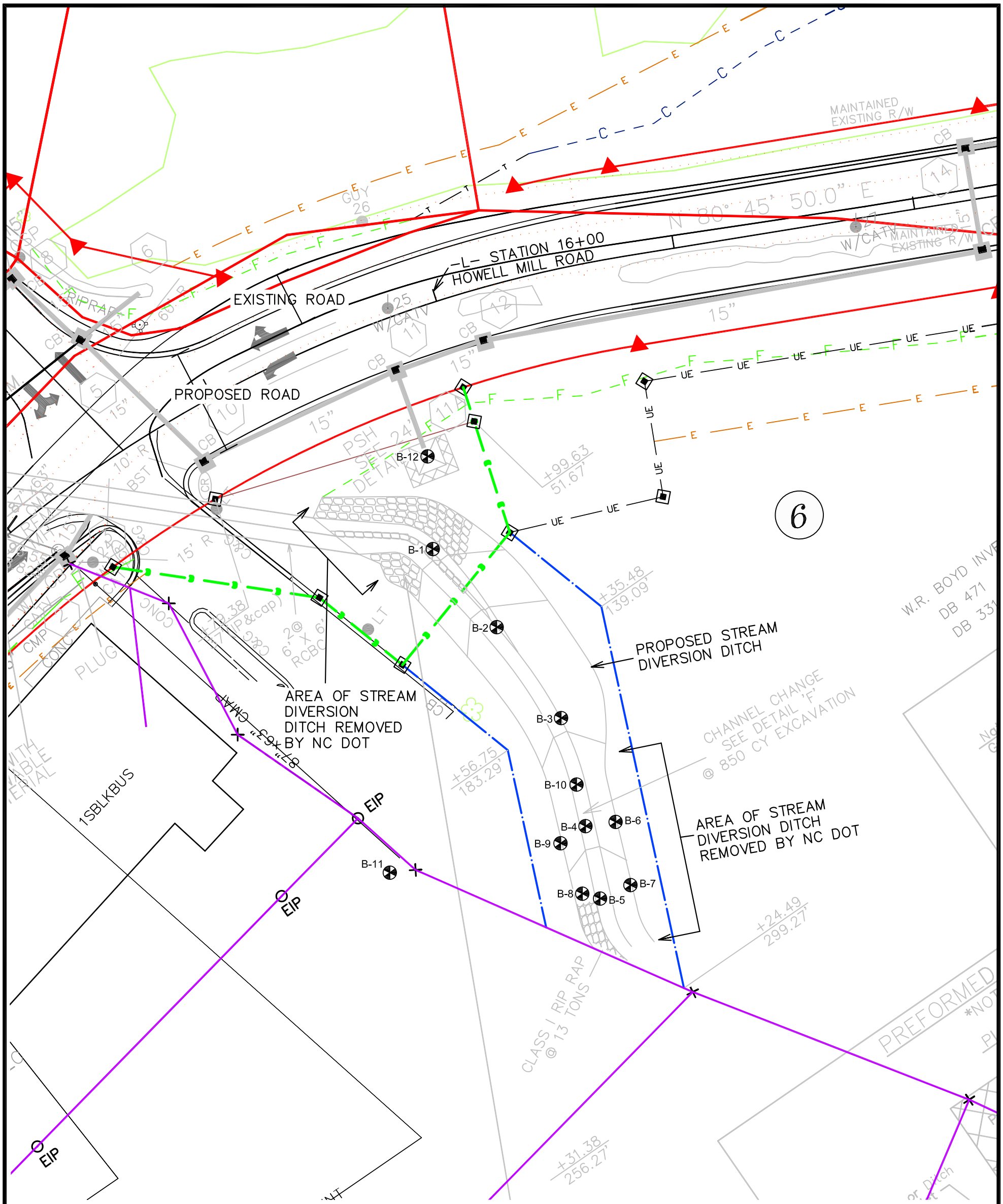
TITLE

SITE LOCATION MAP

PROJECT W.R. BOYD INVESTMENTS PROPERTY
PARCEL 006
90 HOWELL MILL ROAD
HAYWOOD COUNTY, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007 (p) 704-586-0373 (f)

| | | | |
|---|---|---|---|
| DATE: | 12-31-14 | REVISION NO: | 0 |
| JOB NO: | ROW-502 | FIGURE NO: | 1 |




LEGEND

- SITE PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED DRAINAGE PIPING
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE EASEMENT
- TEMPORARY DRAINAGE EASEMENT
- PROPOSED CONSTRUCTION EASEMENT
- PROPOSED UTILITY EASEMENT
- PROPOSED FILL LINE
- PROPOSED CUT LINE
- SOIL BORING
- (6) PARCEL NUMBER

N

APPROXIMATE
0 40 80
SCALE IN FEET

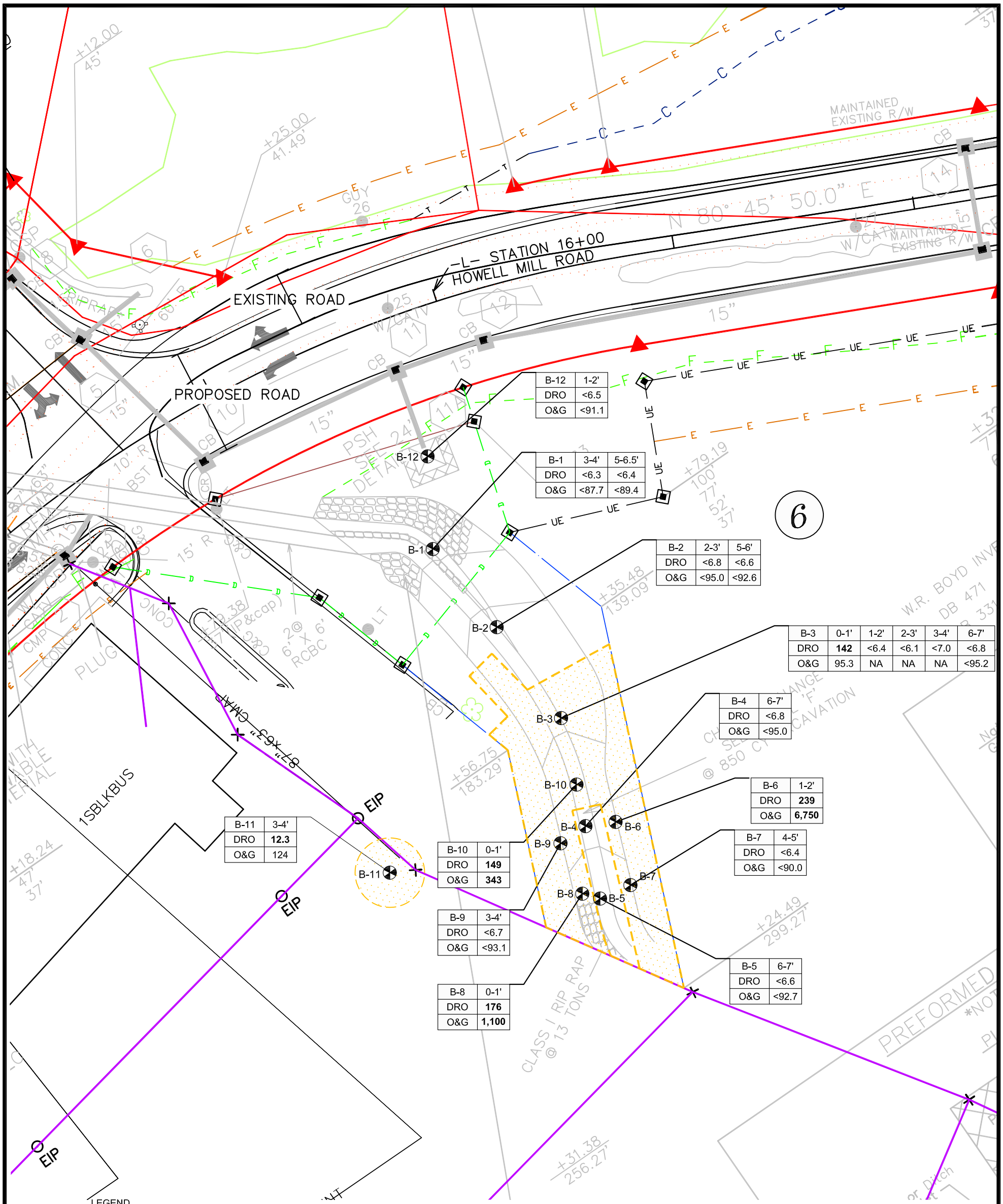
TITLE
SITE MAP

PROJECT
W.R. BOYD INVESTMENTS PROPERTY
PARCEL 006
90 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

| | |
|---|---|
| DATE: 1-14-15 | REVISION NO. 0 |
| JOB NO. ROW-502 | FIGURE NO. 2 |

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-500s\ROW-502 U-4412 Parcel 6 Stream\DOT Files\Proj\ROW-502.dwg, Figure 2, 2/4/2015 1:36:19 PM,




LEGEND

- SITE PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED DRAINAGE PIPING
- PROPOSED CATCH BASIN
- D — PROPOSED DRAINAGE EASEMENT
- TEMPORARY DRAINAGE EASEMENT
- E — PROPOSED CONSTRUCTION EASEMENT
- UE — PROPOSED UTILITY EASEMENT
- F — PROPOSED FILL LINE
- C — PROPOSED CUT LINE
- SOIL BORING
- (6) PARCEL NUMBER
- DRO = DIESEL-RANGE TPH
- O&G = OIL AND GREASE
- AREA OF DRO AND O&G IMPACTED SOIL

| B-8 | 0-1' |
|---|---|
| DRO | **176** |
| O&G | **1,100** |

SAMPLE ID; SAMPLE DEPTH; CONCENTRATION (*mg/kg*); CONSTITUENT

NOTE:

1. **BOLD** VALUE EXCEEDS DENR ACTION LEVEL

N

APPROXIMATE
0 40 80
SCALE IN FEET

TITLE: DRO AND O&G IN SOIL

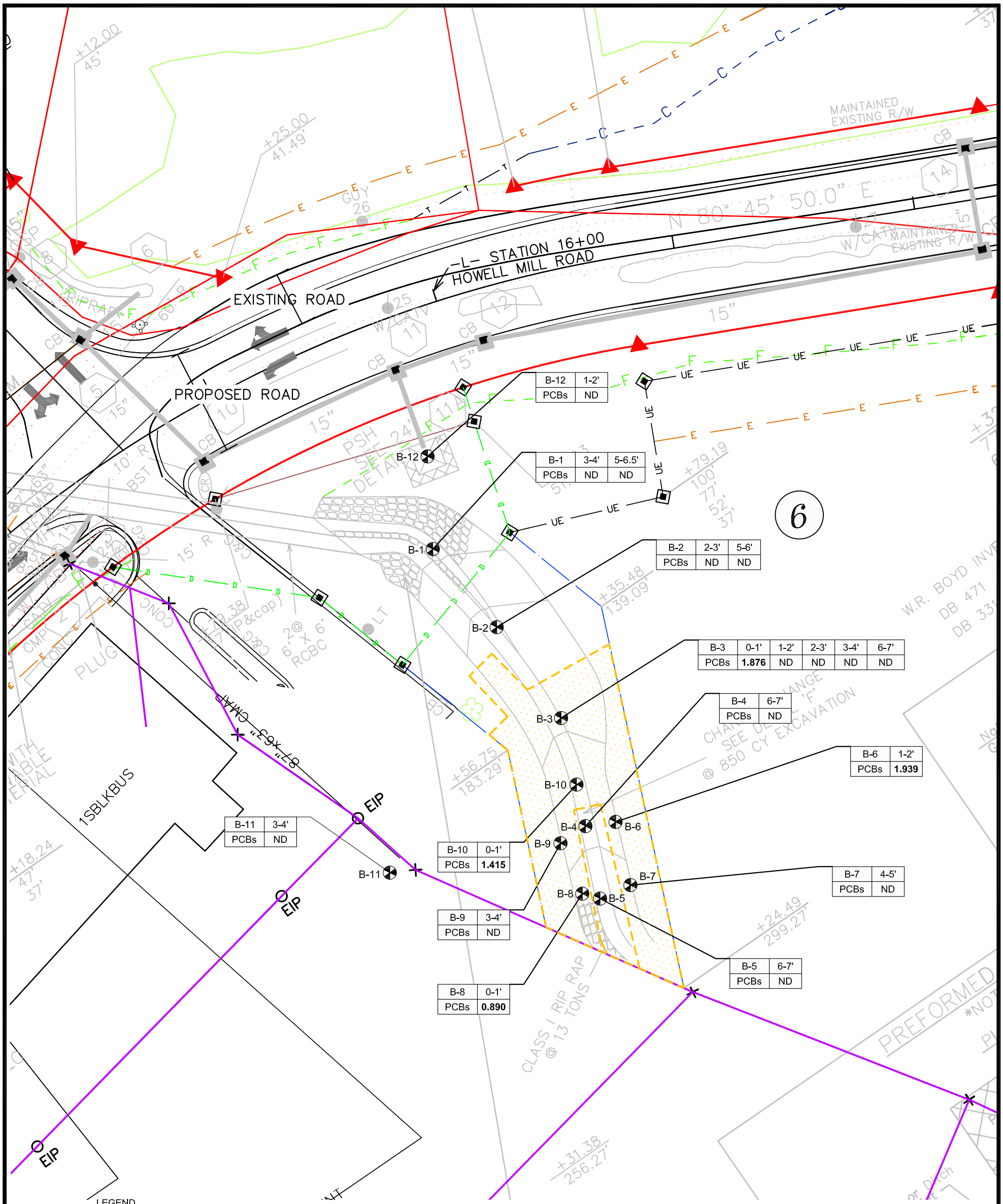
PROJECT:
W.R. BOYD INVESTMENTS PROPERTY
PARCEL 006
90 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 1-14-15 | REVISION NO. 0

JOB NO. ROW-502 | FIGURE NO. 3

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-500s\ROW-502 U-4412 Parcel 6 Stream\DOT Files\Proj\ROW-502.dwg, Figure 3, 2/4/2015 1:36:41 PM,




LEGEND

- SITE PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED DRAINAGE PIPING
- PROPOSED CATCH BASIN
- D — PROPOSED DRAINAGE EASEMENT
- TEMPORARY DRAINAGE EASEMENT
- E — PROPOSED CONSTRUCTION EASEMENT
- UE — PROPOSED UTILITY EASEMENT
- F — PROPOSED FILL LINE
- C — PROPOSED CUT LINE
- SOIL BORING
- (6) PARCEL NUMBER
- PCBs = TOTAL POLYCHLORINATED BIPHENYLS (mg/kg)
- ND = NOT DETECTED
- AREA OF PCB IMPACTED SOIL

| SAMPLE ID | |
|---|---|
| B-8 | 0-1' ← SAMPLE DEPTH |
| PCBs | **0.890** ← CONCENTRATION (*mg/kg*) |
| CONSTITUENT | |

APPROXIMATE
0 40 80
SCALE IN FEET

NOTE:

1. **BOLD** VALUE EXCEEDS REGULATORY STANDARD

TITLE: TOTAL PCBs IN SOIL

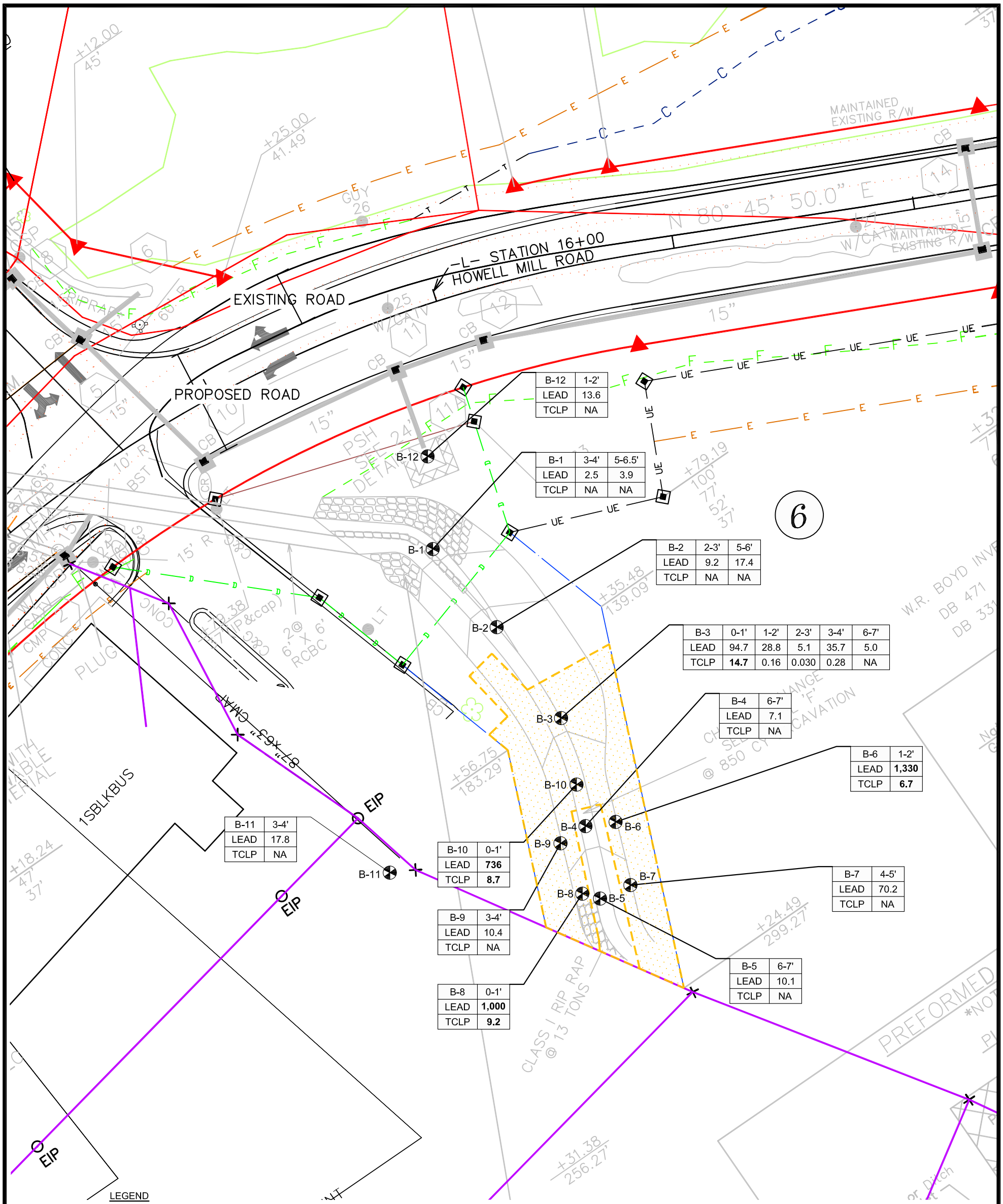
PROJECT:
W.R. BOYD INVESTMENTS PROPERTY
PARCEL 006
90 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
License # C-1269 / #C-245 Geology

DATE: 1-14-15 | REVISION NO. 0

JOB NO. ROW-502 | FIGURE NO. 4

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-500s\ROW-502 U-4412 Parcel 6 Stream\DOT Files\Proj\ROW-502.dwg, Figure 4, 2/4/2015 1:37:00 PM,




LEGEND

- SITE PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY
- PROPOSED DRAINAGE PIPING
- PROPOSED CATCH BASIN
- D — PROPOSED DRAINAGE EASEMENT
- TEMPORARY DRAINAGE EASEMENT
- E — PROPOSED CONSTRUCTION EASEMENT
- UE — PROPOSED UTILITY EASEMENT
- F — PROPOSED FILL LINE
- C — PROPOSED CUT LINE
- SOIL BORING
- (6) PARCEL NUMBER

LEAD = TOTAL LEAD (mg/kg)

TCLP = TOXICITY CHARACTERISTIC LEACHING PROCEDURE FOR LEAD (mg/L)

NA = NOT ANALYZED

AREA OF CHARACTERISTICALLY HAZARDOUS LEAD IN SOIL

| B-8 | 0-1' | ← SAMPLE ID / SAMPLE DEPTH |
|---|---|---|
| LEAD | 1,000 | ← CONCENTRATION |
| TCLP | 9.2 | ← CONSTITUENT |

NOTE:

1. **BOLD** VALUE EXCEEDS REGULATORY STANDARD

N

APPROXIMATE
0 40 80
SCALE IN FEET

TITLE: LEAD IN SOIL

PROJECT:
W.R. BOYD INVESTMENTS PROPERTY
PARCEL 006
90 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
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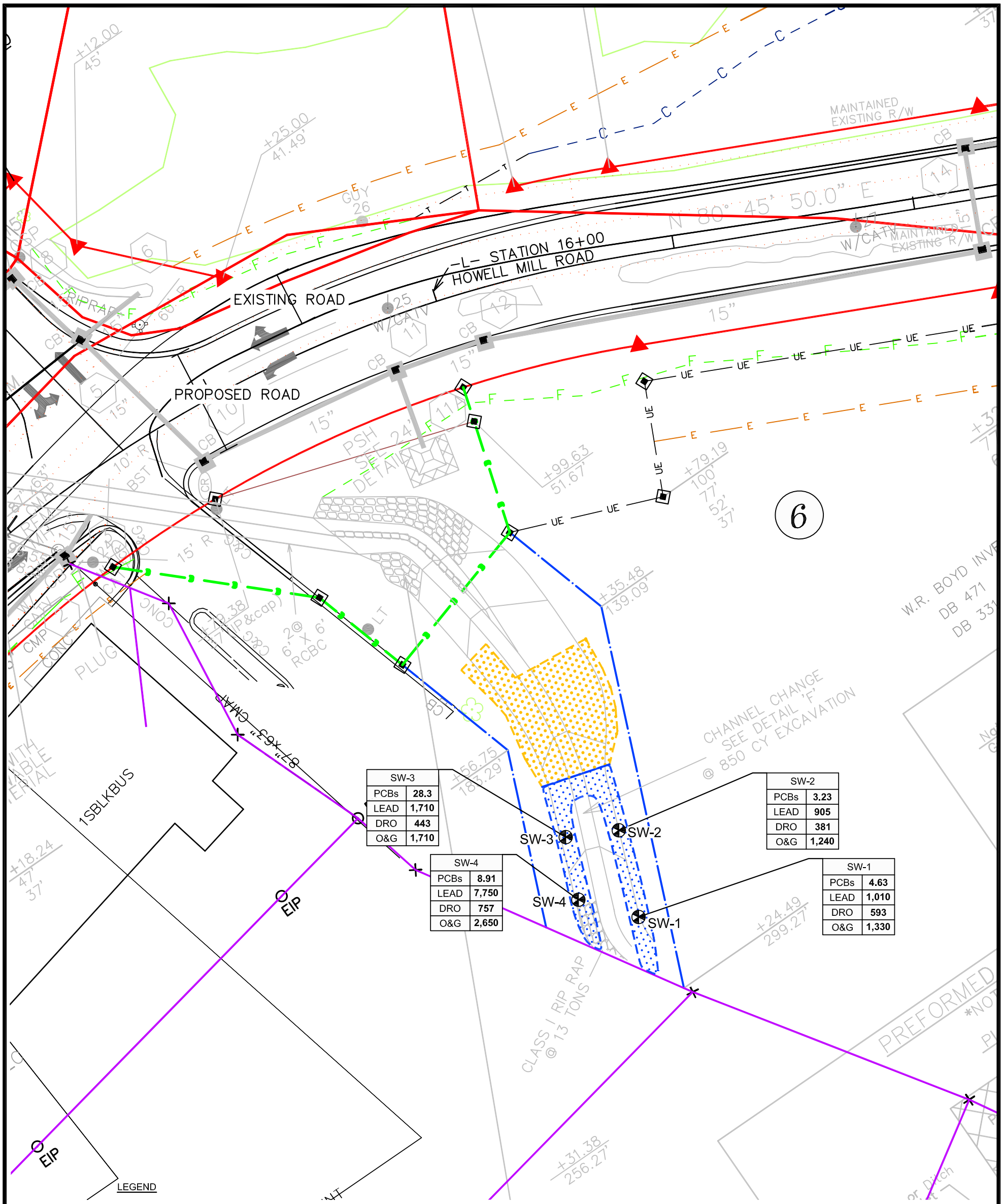
License # C-1269 / #C-245 Geology

DATE: 12-10-14 | REVISION NO. 0

JOB NO. ROW-502 | FIGURE NO. 5

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-500s\ROW-502 U-4412 Parcel 6 Stream\DOT Files\Proj\ROW-502.dwg, Figure 5, 2/4/2015 1:37:18 PM,




| SW-1 | |
|---|---|
| PCBs | 4.63 |
| LEAD | 1,010 |
| DRO | 593 |
| O&G | 1,330 |

NOTE:

1. **BOLD** VALUE EXCEEDS REGULATORY STANDARD

TITLE
# POST-EXCAVATION ANALYTICAL RESULTS

PROJECT
W.R. BOYD INVESTMENTS PROPERTY
PARCEL 006
90 HOWELL MILL ROAD
WAYNESVILLE, NORTH CAROLINA


hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS
2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)
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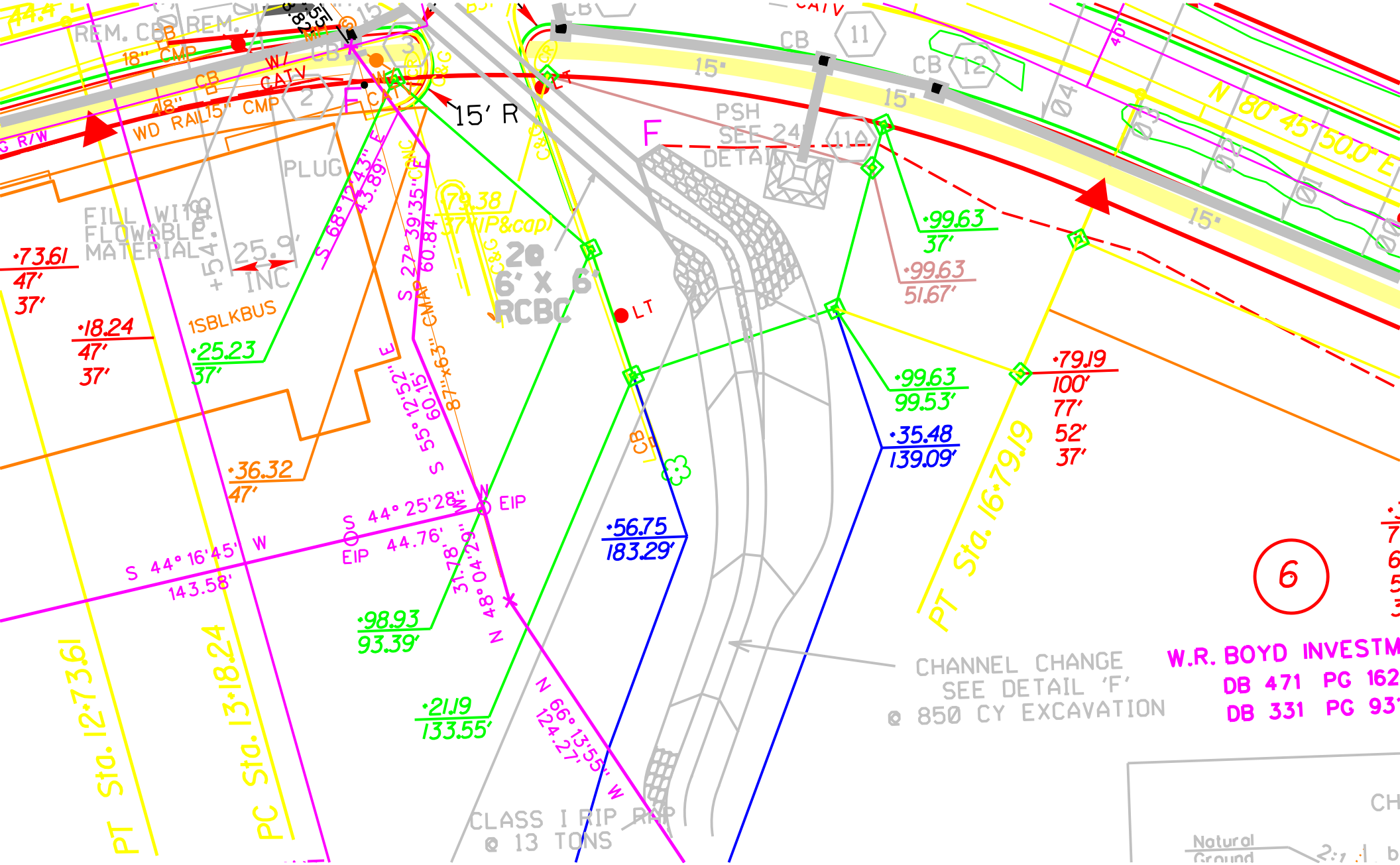
| | |
|---|---|
| DATE: 1-14-15 | REVISION NO. 0 |
| JOB NO. ROW-502 | FIGURE NO. 6 |

S:\AAA-Master Projects\NC DOT Right-of-Way - ROW\ROW-500s\ROW-502 U-4412 Parcel 6 Stream\DOT Files\Proj\ROW-502.dwg, Figure 6, 2/4/2015 1:37:35 PM,

**Appendix A**

**NC DOT Preliminary Plan**


REM. CBB
18" CMP
48" CMP
15" CMP
WD RAIL
W/ CATV
CB 2
CB 3
15' R
PLUG
FILL WITH FLOWABLE MATERIAL
5 + 25.9' INC
1SBLKBUS
•73.61
47'
37'
•18.24
47'
37'
•25.23
37'
•36.32
47'
S 68° 12'43" E
43.86'
S 27° 39'35" E
60.84'
S 55° 12'52" E
60.15'
87"x63" CMP
79.38
37' (IP&cap)
20
6' x 6'
RCBC
LT
S 44° 25'28" W
EIP
44.76'
S 44° 16'45" W
143.58'
•98.93
93.39'
•21.19
133.55'
31.78'
N 48° 04'29" W
N 66° 13'55" W
124.27'
•56.75
183.29'
CB 1
CB 11
CB 12
CB 11A
PSH
SEE 24
DETAIL
15"
•99.63
37'
•99.63
51.67'
•99.63
99.53'
•35.48
139.09'
•79.19
100'
77'
52'
37'
PT Sta. 16+79.19
N 80° 45' 50.0" E
6
CHANNEL CHANGE
SEE DETAIL 'F'
@ 850 CY EXCAVATION
CLASS I RIP RAP
@ 13 TONS
PT Sta. 12+73.61
PC Sta. 13+18.24
W.R. BOYD INVESTM
DB 471 PG 162
DB 331 PG 93
Natural Ground

**Appendix B**

**Soil Boring Logs**

hart hickman
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Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)



# BORING NUMBER B-1

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | 0 | 0.8 | | Slightly moist, slightly soft, brown, sandy SILT with gravel | | 0.0 |
| | | | 0 | 0.4 | | Very moist, soft, brown, sandy SILT with mica | | |
| 2.5 | | | 0 | 0.5 | | | | 2.5 |
| | | | 0 | 0.4 | | Saturated, soft, brown, sandy SILT with gravel | | |
| | | | 0 | 0.6 | | Saturated, soft, brown, silty SAND with gravel | | |
| 5.0 | | | 0 | 0.3 | | Saturated, soft, brown, sandy SILT with gravel | | 5.0 |
| | | | 0 | 0.5 | | | | |
| 7.5 | | | | | | Bottom of borehole at 7.0 feet. | | 7.5 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/13/14
**BORING COMPLETED:** 8/13/14
**TOTAL DEPTH:** 7 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil samples collected from 3 to 4 ft bgs and 5 to 6.5 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 1/19/15 14:45 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
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# BORING NUMBER B-2

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | 0 | 1.1 | | Moist, medium soft, brown, sandy SILT | | 0.0 |
| | | | 0 | 1.1 | | Moist, stiff, grey-brown, clayey SILT with mica | | |
| 2.5 | | | 0 | 1.3 | | | | 2.5 |
| | | | 0 | 1.4 | | Saturated, slightly soft, brown-grey, SILT with mica | | |
| | | | 0 | 0.3 | | Saturated, slightly soft, grey to brown, silty GRAVEL | | |
| 5.0 | | | 0 | 0.4 | | Saturated, stiff, grey to brown, SILT with mica | | 5.0 |
| 7.5 | | | | | | Bottom of borehole at 7.0 feet. | | 7.5 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/11/14
**BORING COMPLETED:** 8/12/14
**TOTAL DEPTH:** 7 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil samples collected from 2 to 3 ft bgs and 5 to 6 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
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# BORING NUMBER B-3

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | Moist, brown, soft, organic rich SILT with trace sand | | 0.0 |
| | | | 0 | 27.1 | | Moist, black, soft, SILT with trace sand and small glass fragments | | |
| | | | 0 | 0.5 | | Moist, slightly stiff, grey and brown, SILT with trace clay | | |
| 2.5 | | | 0 | 2.1 | | Moist, soft, grey brown, coarse sandy SILT with gravel | | 2.5 |
| | | | 0 | 1.3 | | Moist, loose, brown and yellow-brown, silty GRAVEL | | |
| | | | 0 | 0.7 | | Saturated, loose, brown and yellow-brown, silty GRAVEL | | |
| 5.0 | | | 0 | 0.9 | | Saturtaed, slightly soft, grey-brown, sandy SILT with gravel | | 5.0 |
| | | | 0 | 0.8 | | | | |
| | | | | | | Bottom of borehole at 7.0 feet. | | |
| 7.5 | | | | | | | | 7.5 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/12/14
**BORING COMPLETED:** 8/27/14
**TOTAL DEPTH:** 7 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil samples collected from 0 to 1 ft, 1 to 2 ft, 2 to 3 ft, 3 to 4 ft, and 6 to 7 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
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704-586-0007(p) 704-586-0373(f)

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# BORING NUMBER B-4

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | Excavated stream channel | | 0.0 |
| 2.5 | | | | | | | | 2.5 |
| 5.0 | | | | | | | | 5.0 |
| | | | 0 | 1.2 | | Very moist, soft, brown-grey, SILT with mica and trace sand | | |
| 7.5 | | | 0 | 1.7 | | Saturated, soft, brown-grey, fine sandy SILT with mica | | 7.5 |
| | | | | | | Bottom of borehole at 8.0 feet. | | |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/13/14
**BORING COMPLETED:** 8/13/14
**TOTAL DEPTH:** 8 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 6 to 7 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
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# BORING NUMBER B-5

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | Excavated stream channel | | 0.0 |
| 2.5 | | | | | | | | 2.5 |
| 5.0 | | | | | | Moist, soft, brown-grey, SILT with mica | | 5.0 |
| | | | 0 | 1.3 | | | | |
| 7.5 | | | 0 | 2.1 | | Very moist to saturated, soft, brown-grey, coarse sandy SILT with gravel | | 7.5 |
| | | | | | | Bottom of borehole at 8.0 feet. | | |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/13/14
**BORING COMPLETED:** 8/13/14
**TOTAL DEPTH:** 8 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 6 to 7 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

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# BORING NUMBER B-6

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | Excavated stream channel | | 0 |
| 1 | | | 0 | 0.9 | | Moist, soft, grey-brown to black, sandy SILT with gravel, metal, and glass pieces | | 1 |
| 2 | | | 0 | 1.2 | | Moist, slightly soft, dark grey-brown, SILT with mica | | 2 |
| 3 | | | 0 | 0.9 | | Moist, slightly soft, dark grey-brown, fine sandy SILT with mica | | 3 |
| 4 | | | | | | Bottom of borehole at 4.0 feet. | | 4 |
| 5 | | | | | | | | 5 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/12/14
**BORING COMPLETED:** 8/12/14
**TOTAL DEPTH:** 4 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 1 to 2 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 1/19/15 14:45 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
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# BORING NUMBER B-7

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM |
|---|---|---|---|---|---|---|---|
| 0 | | | | | | Excavated stream channel | |
| 1 | | | 0 | 2 | | Moist, soft, dark brown to black, silty SAND with gravel, metal, and glass pieces | |
| 2 | | | 0 | 2.8 | | Moist, soft, brown to grey, SILT with mica | |
| 3 | | | 0 | 0.4 | | Very moist, soft, brown grey, SILT with mica | |
| 4 | | | 0 | 0.5 | | Very moist, slightly loose, brown grey, silty SAND with gravel | |
| 5 | | | | | | Bottom of borehole at 5.0 feet. | |
| 6 | | | | | | | |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/12/14
**BORING COMPLETED:** 8/12/14
**TOTAL DEPTH:** 5 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 4 to 5 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

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Raleigh, North Carolina 27607
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# BORING NUMBER B-8

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | 0 | 2.1 | | Slightly moist, slightly soft, light grey to black, sandy SILT with gravel, metal, and glass pieces | | 0 |
| 1 | | | 0 | 0.9 | | Slightly moist, brown to grey, SILT with mica | | 1 |
| 2 | | | 0 | 0.6 | | | | 2 |
| 3 | | | 0 | 1.1 | | Slightly moist, soft, grey, SILT with mica | | 3 |
| 4 | | | | | | Bottom of borehole at 4.0 feet. | | 4 |
| 5 | | | | | | | | 5 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/12/14
**BORING COMPLETED:** 8/12/14
**TOTAL DEPTH:** 4 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 0 to 1 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

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# BORING NUMBER B-9

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | Excavated stream channel | | 0 |
| 1 | | | 0 | 1.5 | | Moist, medium, grey and black, SILT with mica, metal, and glass pieces | | 1 |
| 2 | | | 0 | 0.8 | | Very moist, grey, SILT with mica and trace sand | | 2 |
| 3 | | | 0 | 0.5 | | Very moist, slightly stiff, grey and brown, SILT with mica | | 3 |
| 4 | | | 0 | 0.4 | | Very moist, grey and brown, fine sandy SILT with gravel | | 4 |
| 5 | | | | | | Bottom of borehole at 5.0 feet. | | 5 |
| 6 | | | | | | | | 6 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/12/14
**BORING COMPLETED:** 8/12/14
**TOTAL DEPTH:** 5 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 3 to 4 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

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Raleigh, North Carolina 27607
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# BORING NUMBER B-10

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | Moist, soft, brown, sandy SILT with organic material and mica | | 0.0 |
| | | | 0 | 10.2 | | Moist, soft, black, sandy SILT, with gravel, metal, and glass pieces | | |
| | | | 0 | 1.2 | | | | |
| 2.5 | | | 0 | 0.8 | | Moist, soft, brown-grey, SILT with mica | | 2.5 |
| | | | | | | Saturated, soft, brown-grey, SILT with mica and trace gravel | | |
| | | | 0 | 0.4 | | | | |
| | | | | | | Saturated, soft, brown-grey, fine sandy SILT with mica | | |
| | | | 0 | 0.8 | | | | |
| 5.0 | | | | | | Saturated, loose, brown, silty GRAVEL trace sand | | 5.0 |
| | | | 0 | 0.9 | | | | |
| | | | | | | Bottom of borehole at 6.0 feet. | | |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/12/14
**BORING COMPLETED:** 8/12/14
**TOTAL DEPTH:** 6 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 0 to 1 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

2923 South Tryon Street-Suite 100
Charlotte, North Carolina 28203
704-586-0007(p) 704-586-0373(f)

3334 Hillsborough Street
Raleigh, North Carolina 27607
919-847-4241(p) 919-847-4261(f)



# BORING NUMBER B-11

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0.0 | | | | | | Moist, soft, brown, SILT with organic material | | 0.0 |
| | | | 0 | 0.3 | | | | |
| | | | | | | Moist, soft, brown, SILT with trace sand | | |
| | | | 0 | 0.6 | | | | |
| | | | | | | Moist, soft, brown, SILT with mica and trace sand, few rubber pieces | | |
| 2.5 | | | 0 | 0.3 | | | | 2.5 |
| | | | | | | Very moist, soft, brown, SILT with mica and trace sand, few rubber pieces | | |
| | | | 0 | 0.9 | | | | |
| | | | | | | Very moist, soft, brown, fine sandy SILT with mica, few rubber pieces | | |
| | | | 0 | 0.9 | | | | |
| 5.0 | | | | | | Saturated, soft, brown, fine sandy SILT with mica and gravel | | 5.0 |
| | | | 0 | 0.6 | | | | |
| | | | | | | Bottom of borehole at 6.0 feet. | | |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/13/14
**BORING COMPLETED:** 8/13/14
**TOTAL DEPTH:** 6 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 3 to 4 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

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# BORING NUMBER B-12

**PROJECT:** NC DOT State Project U-4412 Parcel 006
**JOB NUMBER:** ROW-502
**LOCATION:** Waynesville, NC

| DEPTH (ft) | RECOVERY (%) | SAMPLE TYPE NUMBER | OVA (ppm) BKG. | OVA (ppm) SAMP. | LITHOLOGY | MATERIAL DESCRIPTION | BORING DIAGRAM | DEPTH (ft) |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | Moist, medium stiff, red, fine sandy SILT | | 0 |
| | | | 0 | 0 | | | | |
| 1 | | | | | | | | 1 |
| | | | 0 | 0.3 | | Very moist, slightly soft, brown, SILT with mica and trace sand | | |
| 2 | | | | | | | | 2 |
| | | | 0 | 0.3 | | | | |
| 3 | | | | | | Very moist, slightly soft, brown, SILT with mica and trace sand, and asphalt pieces | | 3 |
| | | | 0 | 0.7 | | | | |
| 4 | | | | | | Bottom of borehole at 4.0 feet. | | 4 |
| 5 | | | | | | | | 5 |

**DRILLING CONTRACTOR:** Hart & Hickman, PC
**DRILL RIG/ METHOD:** Hand Auger
**SAMPLING METHOD:** Hand Auger
**LOGGED BY:** BRK
**DRAWN BY:** BRK

**BORING STARTED:** 8/11/14
**BORING COMPLETED:** 8/11/14
**TOTAL DEPTH:** 4 ft.
**TOP OF CASING ELEV:**
**DEPTH TO WATER:**

**Remarks:**

Soil sample collected from 1 to 2 ft bgs and submitted for lab analysis

BORING LOG - HART HICKMAN.GDT - 12/3/14 10:54 - S:\AAA-MASTER GINT PROJECTS\ROW-502.GPJ

# Appendix C

# Laboratory Analytical Reports

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

August 22, 2014

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: David Graham, Hart & Hickman



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## CERTIFICATIONS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Charlotte Certification IDs**
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

**Asheville Certification IDs**
2225 Riverside Dr., Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222



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## SAMPLE SUMMARY

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92213006001** | **SPVOC** | Solid | 08/11/14 15:25 | 08/12/14 14:00 |
| **92213006002** | **SPC** | Solid | 08/11/14 15:30 | 08/12/14 14:00 |
| **92213006003** | **B-12 (1-2)** | Solid | 08/11/14 16:20 | 08/12/14 14:00 |
| **92213006004** | **B-2 (2-3)** | Solid | 08/11/14 19:00 | 08/12/14 14:00 |
| **92213006005** | **B-3 (0-1)** | Solid | 08/12/14 10:55 | 08/12/14 14:00 |



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## SAMPLE ANALYTE COUNT

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92213006001** | **SPVOC** | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213006002** | **SPC** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213006003** | **B-12 (1-2)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213006004** | **B-2 (2-3)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213006005** | **B-3 (0-1)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |



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## SAMPLE ANALYTE COUNT

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |



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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: SPVOC** **Lab ID: 92213006001** Collected: 08/11/14 15:25 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 106 | 1 | | 08/13/14 23:04 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 106 | 1 | | 08/13/14 23:04 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 53.1 | 1 | | 08/13/14 23:04 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 21.3 | 1 | | 08/13/14 23:04 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 53.1 | 1 | | 08/13/14 23:04 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 1634-04-4 | |

## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: SPVOC** **Lab ID: 92213006001** Collected: 08/11/14 15:25 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Naphthalene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 53.1 | 1 | | 08/13/14 23:04 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.6 | 1 | | 08/13/14 23:04 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.3 | 1 | | 08/13/14 23:04 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 101 | % | 70-130 | 1 | | 08/13/14 23:04 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 82 | % | 70-130 | 1 | | 08/13/14 23:04 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 110 | % | 70-132 | 1 | | 08/13/14 23:04 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **20.9** | % | 0.10 | 1 | | 08/14/14 15:24 | | |

## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: SPC** **Lab ID: 92213006002** Collected: 08/11/14 15:30 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | **348** | mg/kg | 6.6 | 1 | 08/13/14 10:48 | 08/14/14 10:58 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 199 | % | 41-119 | 1 | 08/13/14 10:48 | 08/14/14 10:58 | 629-99-2 | S5 |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **3750** | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **3240** | ug/kg | 874 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 20 | 08/13/14 08:36 | 08/13/14 21:06 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **1180** | mg/kg | 92.7 | 1 | 08/13/14 14:40 | 08/13/14 15:18 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 9.0 | 1 | 08/13/14 13:24 | 08/13/14 15:46 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-167 | 1 | 08/13/14 13:24 | 08/13/14 15:46 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **3.1** | mg/kg | 0.95 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7440-38-2 | |
| Barium | **493** | mg/kg | 0.47 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7440-39-3 | M1 |
| Cadmium | **5.6** | mg/kg | 0.095 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7440-43-9 | |
| Chromium | **37.7** | mg/kg | 0.47 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7440-47-3 | |
| Lead | **312** | mg/kg | 0.47 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7439-92-1 | M1,R1 |
| Selenium | **1.2** | mg/kg | 0.95 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.47 | 1 | 08/15/14 16:50 | 08/16/14 05:29 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/21/14 14:35 | 08/22/14 03:43 | 7440-38-2 | |
| Barium | **2.5** | mg/L | 0.25 | 1 | 08/21/14 14:35 | 08/22/14 14:30 | 7440-39-3 | |
| Cadmium | **0.26** | mg/L | 0.0050 | 1 | 08/21/14 14:35 | 08/22/14 03:43 | 7440-43-9 | |
| Chromium | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 03:43 | 7440-47-3 | |
| Lead | **3.7** | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 14:30 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/21/14 14:35 | 08/22/14 03:43 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 03:43 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 1 | 08/21/14 15:00 | 08/22/14 11:22 | 7439-97-6 | |

## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: SPC** **Lab ID: 92213006002** Collected: 08/11/14 15:30 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.19** | mg/kg | 0.026 | 5 | 08/15/14 16:15 | 08/15/14 18:03 | 7439-97-6 | M1 |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 208-96-8 | |
| Aniline | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 62-53-3 | |
| Anthracene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 874 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 874 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 874 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 206-44-0 | |
| Fluorene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 118-74-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: SPC** **Lab ID: 92213006002** Collected: 08/11/14 15:30 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Hexachlorocyclopentadiene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 193-39-5 | |
| Isophorone | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | | |
| Naphthalene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 874 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2190 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 85-01-8 | |
| Phenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 108-95-2 | |
| Pyrene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 437 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 49 | % | 23-110 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 52 | % | 30-110 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 321-60-8 | |
| Terphenyl-d14 (S) | 52 | % | 28-110 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 1718-51-0 | |
| Phenol-d6 (S) | 42 | % | 22-110 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 13127-88-3 | |
| 2-Fluorophenol (S) | 40 | % | 13-110 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 58 | % | 27-110 | 1 | 08/13/14 09:15 | 08/14/14 11:13 | 118-79-6 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **24.5** | % | 0.10 | 1 | | 08/14/14 15:25 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-12 (1-2)** **Lab ID: 92213006003** Collected: 08/11/14 16:20 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.5 | 1 | 08/13/14 10:48 | 08/14/14 10:58 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 80 | % | 41-119 | 1 | 08/13/14 10:48 | 08/14/14 10:58 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 215 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 5 | 08/13/14 08:36 | 08/13/14 21:26 | 2051-24-3 | D3,S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 91.1 | 1 | 08/13/14 14:40 | 08/13/14 15:18 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.0 | 1 | 08/13/14 13:24 | 08/13/14 16:09 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 95 | % | 70-167 | 1 | 08/13/14 13:24 | 08/13/14 16:09 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 0.94 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7440-38-2 | |
| Barium | **257** | mg/kg | 0.47 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.094 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7440-43-9 | |
| Chromium | **44.3** | mg/kg | 0.47 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7440-47-3 | |
| Lead | **13.6** | mg/kg | 0.47 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7439-92-1 | |
| Selenium | ND | mg/kg | 0.94 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.47 | 1 | 08/13/14 16:50 | 08/14/14 18:45 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.024** | mg/kg | 0.0046 | 1 | 08/13/14 16:10 | 08/14/14 16:02 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 208-96-8 | |
| Aniline | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 62-53-3 | |
| Anthracene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-12 (1-2)** **Lab ID: 92213006003** Collected: 08/11/14 16:20 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 859 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 859 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 859 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 206-44-0 | |
| Fluorene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 193-39-5 | |
| Isophorone | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | | |
| Naphthalene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 859 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 100-01-6 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-12 (1-2)** **Lab ID: 92213006003** Collected: 08/11/14 16:20 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2150 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 85-01-8 | |
| Phenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 108-95-2 | |
| Pyrene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 430 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 65 | % | 23-110 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 61 | % | 30-110 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 321-60-8 | |
| Terphenyl-d14 (S) | 61 | % | 28-110 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 1718-51-0 | |
| Phenol-d6 (S) | 51 | % | 22-110 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 13127-88-3 | |
| 2-Fluorophenol (S) | 48 | % | 13-110 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 65 | % | 27-110 | 1 | 08/13/14 09:15 | 08/14/14 11:44 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 124 | 1 | | 08/13/14 23:23 | 67-64-1 | |
| Benzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 75-27-4 | |
| Bromoform | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 124 | 1 | | 08/13/14 23:23 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 75-00-3 | |
| Chloroform | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-12 (1-2)** **Lab ID: 92213006003** Collected: 08/11/14 16:20 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 61.9 | 1 | | 08/13/14 23:23 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 24.7 | 1 | | 08/13/14 23:23 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 61.9 | 1 | | 08/13/14 23:23 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 103-65-1 | |
| Styrene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 127-18-4 | |
| Toluene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 61.9 | 1 | | 08/13/14 23:23 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 12.4 | 1 | | 08/13/14 23:23 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 6.2 | 1 | | 08/13/14 23:23 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 104 | % | 70-130 | 1 | | 08/13/14 23:23 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | 1 | | 08/13/14 23:23 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-12 (1-2)** **Lab ID: 92213006003** Collected: 08/11/14 16:20 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 98 | % | 70-132 | 1 | | 08/13/14 23:23 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **23.2** | % | 0.10 | 1 | | 08/14/14 15:25 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-2 (2-3)** **Lab ID: 92213006004** Collected: 08/11/14 19:00 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.8 | 1 | 08/13/14 10:48 | 08/14/14 11:21 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 79 | % | 41-119 | 1 | 08/13/14 10:48 | 08/14/14 11:21 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 44.8 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 59 | % | 21-132 | 1 | 08/13/14 08:36 | 08/13/14 21:47 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 95.0 | 1 | 08/13/14 14:40 | 08/13/14 15:18 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 3.3 | 1 | 08/13/14 13:24 | 08/13/14 16:39 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-167 | 1 | 08/13/14 13:24 | 08/13/14 16:39 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.0 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7440-38-2 | |
| Barium | **197** | mg/kg | 0.50 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.10 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7440-43-9 | |
| Chromium | **43.2** | mg/kg | 0.50 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7440-47-3 | |
| Lead | **9.2** | mg/kg | 0.50 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7439-92-1 | |
| Selenium | **1.2** | mg/kg | 1.0 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.50 | 1 | 08/13/14 16:50 | 08/14/14 18:58 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.024** | mg/kg | 0.0066 | 1 | 08/13/14 16:10 | 08/14/14 16:10 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 208-96-8 | |
| Aniline | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 62-53-3 | |
| Anthracene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 207-08-9 | |



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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-2 (2-3)** **Lab ID: 92213006004** Collected: 08/11/14 19:00 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 896 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 896 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 896 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 206-44-0 | |
| Fluorene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 193-39-5 | |
| Isophorone | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | | |
| Naphthalene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 896 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 100-01-6 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-2 (2-3)** **Lab ID: 92213006004** Collected: 08/11/14 19:00 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2240 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 85-01-8 | |
| Phenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 108-95-2 | |
| Pyrene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 448 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 56 | % | 23-110 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 54 | % | 30-110 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 321-60-8 | |
| Terphenyl-d14 (S) | 57 | % | 28-110 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 1718-51-0 | |
| Phenol-d6 (S) | 57 | % | 22-110 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 13127-88-3 | |
| 2-Fluorophenol (S) | 54 | % | 13-110 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 67 | % | 27-110 | 1 | 08/13/14 09:15 | 08/14/14 12:16 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 109 | 1 | | 08/13/14 23:43 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 109 | 1 | | 08/13/14 23:43 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-2 (2-3)** **Lab ID: 92213006004** Collected: 08/11/14 19:00 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 54.6 | 1 | | 08/13/14 23:43 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 21.8 | 1 | | 08/13/14 23:43 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 54.6 | 1 | | 08/13/14 23:43 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 54.6 | 1 | | 08/13/14 23:43 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.9 | 1 | | 08/13/14 23:43 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.5 | 1 | | 08/13/14 23:43 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | 1 | | 08/13/14 23:43 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 86 | % | 70-130 | 1 | | 08/13/14 23:43 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-2 (2-3)** **Lab ID: 92213006004** Collected: 08/11/14 19:00 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-132 | 1 | | 08/13/14 23:43 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **26.4** | % | 0.10 | 1 | | 08/14/14 15:25 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-3 (0-1)** **Lab ID: 92213006005** Collected: 08/12/14 10:55 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | **142** | mg/kg | 6.5 | 1 | 08/13/14 10:48 | 08/14/14 11:21 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 99 | % | 41-119 | 1 | 08/13/14 10:48 | 08/14/14 11:21 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **736** | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **1140** | ug/kg | 429 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 10 | 08/13/14 08:36 | 08/13/14 22:08 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **95.3** | mg/kg | 91.0 | 1 | 08/13/14 14:41 | 08/13/14 15:18 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.7 | 1 | 08/13/14 13:24 | 08/13/14 17:02 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 92 | % | 70-167 | 1 | 08/13/14 13:24 | 08/13/14 17:02 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.1 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7440-38-2 | |
| Barium | **621** | mg/kg | 0.55 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7440-39-3 | |
| Cadmium | **2.7** | mg/kg | 0.11 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7440-43-9 | |
| Chromium | **61.2** | mg/kg | 0.55 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7440-47-3 | |
| Lead | **94.7** | mg/kg | 0.55 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.1 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.55 | 1 | 08/13/14 16:50 | 08/14/14 19:01 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7440-38-2 | |
| Barium | **4.6** | mg/L | 0.25 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7440-39-3 | |
| Cadmium | **0.13** | mg/L | 0.0050 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7440-43-9 | |
| Chromium | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7440-47-3 | |
| Lead | **14.7** | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:02 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 1 | 08/21/14 15:00 | 08/22/14 11:30 | 7439-97-6 | |

## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-3 (0-1)** **Lab ID: 92213006005** Collected: 08/12/14 10:55 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.16** | mg/kg | 0.043 | 10 | 08/13/14 16:10 | 08/14/14 16:51 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 208-96-8 | |
| Aniline | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 62-53-3 | |
| Anthracene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 858 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 858 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 858 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 206-44-0 | |
| Fluorene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 118-74-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-3 (0-1)** **Lab ID: 92213006005** Collected: 08/12/14 10:55 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Hexachlorocyclopentadiene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 193-39-5 | |
| Isophorone | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | | |
| Naphthalene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 858 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2140 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 85-01-8 | |
| Phenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 108-95-2 | |
| Pyrene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 429 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 48 | % | 23-110 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 48 | % | 30-110 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 321-60-8 | |
| Terphenyl-d14 (S) | 41 | % | 28-110 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 1718-51-0 | |
| Phenol-d6 (S) | 43 | % | 22-110 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 13127-88-3 | |
| 2-Fluorophenol (S) | 39 | % | 13-110 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 52 | % | 27-110 | 1 | 08/13/14 09:15 | 08/14/14 12:47 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | **1770** | ug/kg | 105 | 1 | | 08/14/14 03:21 | 67-64-1 | E |
| Benzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 74-83-9 | |
| 2-Butanone (MEK) | **108** | ug/kg | 105 | 1 | | 08/14/14 03:21 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 56-23-5 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-3 (0-1)** **Lab ID: 92213006005** Collected: 08/12/14 10:55 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Chlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 52.7 | 1 | | 08/14/14 03:21 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 98-82-8 | |
| p-Isopropyltoluene | **6.1** | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 21.1 | 1 | | 08/14/14 03:21 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 52.7 | 1 | | 08/14/14 03:21 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 79-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

**Sample: B-3 (0-1)** **Lab ID: 92213006005** Collected: 08/12/14 10:55 Received: 08/12/14 14:00 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Trichlorofluoromethane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 52.7 | 1 | | 08/14/14 03:21 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.5 | 1 | | 08/14/14 03:21 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.3 | 1 | | 08/14/14 03:21 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 98 | % | 70-130 | 1 | | 08/14/14 03:21 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 87 | % | 70-130 | 1 | | 08/14/14 03:21 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | 70-132 | 1 | | 08/14/14 03:21 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **23.1** | % | 0.10 | 1 | | 08/14/14 15:25 | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: GCSV/18541 Analysis Method: 9071B
QC Batch Method: 9071B Analysis Description: 9071 Oil and Grease
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

METHOD BLANK: 1262853 Matrix: Solid
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Oil and Grease | mg/kg | ND | 70.0 | 08/13/14 15:18 | |

LABORATORY CONTROL SAMPLE & LCSD: 1262854 1262855

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Grease | mg/kg | 1330 | 1290 | 1280 | 97 | 96 | 78-114 | 1 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: GCV/8441 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

METHOD BLANK: 1262790 Matrix: Solid
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Gasoline Range Organics | mg/kg | ND | 6.0 | 08/13/14 15:23 | |
| 4-Bromofluorobenzene (S) | % | 92 | 70-167 | 08/13/14 15:23 | |

LABORATORY CONTROL SAMPLE: 1262791

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Gasoline Range Organics | mg/kg | 49.8 | 45.7 | 92 | 70-165 | |
| 4-Bromofluorobenzene (S) | % | | | 95 | 70-167 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1262793 1262794

| Parameter | Units | 92212621001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | mg/kg | ND | 54.3 | 54.3 | 62.0 | 67.0 | 114 | 123 | 47-187 | 8 | 30 | |
| 4-Bromofluorobenzene (S) | % | | | | | | 97 | 101 | 70-167 | | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MERP/6991
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 92213006002, 92213006005

METHOD BLANK: 1269187
Matrix: Water
Associated Lab Samples: 92213006002, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | ug/L | ND | 0.20 | 08/22/14 11:17 | |

LABORATORY CONTROL SAMPLE: 1269188

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | ug/L | 2.5 | 2.4 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1269189 1269190

| Parameter | Units | 92213006002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | ND | 2.5 | 2.5 | 2.2 | 2.2 | 90 | 90 | 75-125 | 0 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MERP/6968 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92213006003, 92213006004, 92213006005

METHOD BLANK: 1263125 Matrix: Solid
Associated Lab Samples: 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | mg/kg | ND | 0.0050 | 08/14/14 15:56 | |

LABORATORY CONTROL SAMPLE: 1263126

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | mg/kg | .067 | 0.060 | 90 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1263127 1263128

| Parameter | Units | 92213006003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.024 | .053 | .053 | 0.083 | 0.074 | 110 | 94 | 75-125 | 11 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MERP/6975
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Associated Lab Samples: 92213006002

METHOD BLANK: 1265479 Matrix: Solid
Associated Lab Samples: 92213006002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | mg/kg | ND | 0.0050 | 08/15/14 17:42 | |

LABORATORY CONTROL SAMPLE: 1265480

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | mg/kg | .067 | 0.070 | 104 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1265481 1265482

| Parameter | Units | 92213006002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.19 | .064 | .056 | 0.20 | 0.23 | 13 | 59 | 75-125 | 12 | 20 | M1 |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MPRP/16666 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92213006003, 92213006004, 92213006005

METHOD BLANK: 1263162 Matrix: Solid
Associated Lab Samples: 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 1.0 | 08/14/14 15:20 | |
| Barium | mg/kg | ND | 0.50 | 08/14/14 15:20 | |
| Cadmium | mg/kg | ND | 0.10 | 08/14/14 15:20 | |
| Chromium | mg/kg | ND | 0.50 | 08/14/14 15:20 | |
| Lead | mg/kg | ND | 0.50 | 08/14/14 15:20 | |
| Selenium | mg/kg | ND | 1.0 | 08/14/14 15:20 | |
| Silver | mg/kg | ND | 0.50 | 08/14/14 15:20 | |

LABORATORY CONTROL SAMPLE: 1263163

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 50 | 50.4 | 101 | 80-120 | |
| Barium | mg/kg | 50 | 51.1 | 102 | 80-120 | |
| Cadmium | mg/kg | 50 | 50.7 | 101 | 80-120 | |
| Chromium | mg/kg | 50 | 51.2 | 102 | 80-120 | |
| Lead | mg/kg | 50 | 51.5 | 103 | 80-120 | |
| Selenium | mg/kg | 50 | 51.6 | 103 | 80-120 | |
| Silver | mg/kg | 25 | 25.0 | 100 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1263164 1263165

| Parameter | Units | 92213038001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 70.6 | 90.6 | 72.1 | 92.4 | 102 | 102 | 75-125 | 25 | 20 | R1 |
| Barium | mg/kg | 54.4 | 70.6 | 90.6 | 128 | 141 | 104 | 96 | 75-125 | 10 | 20 | |
| Cadmium | mg/kg | ND | 70.6 | 90.6 | 72.1 | 93.0 | 102 | 103 | 75-125 | 25 | 20 | R1 |
| Chromium | mg/kg | 0.71 | 70.6 | 90.6 | 73.7 | 92.9 | 104 | 102 | 75-125 | 23 | 20 | R1 |
| Lead | mg/kg | 1.0 | 70.6 | 90.6 | 72.3 | 93.3 | 101 | 102 | 75-125 | 25 | 20 | R1 |
| Selenium | mg/kg | ND | 70.6 | 90.6 | 75.1 | 97.4 | 106 | 107 | 75-125 | 26 | 20 | R1 |
| Silver | mg/kg | ND | 35.3 | 45.3 | 35.3 | 45.4 | 100 | 100 | 75-125 | 25 | 20 | R1 |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MPRP/16689
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 92213006002

METHOD BLANK: 1265569 Matrix: Solid
Associated Lab Samples: 92213006002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 1.0 | 08/16/14 05:23 | |
| Barium | mg/kg | ND | 0.50 | 08/16/14 05:23 | |
| Cadmium | mg/kg | ND | 0.10 | 08/16/14 05:23 | |
| Chromium | mg/kg | ND | 0.50 | 08/16/14 05:23 | |
| Lead | mg/kg | ND | 0.50 | 08/16/14 05:23 | |
| Selenium | mg/kg | ND | 1.0 | 08/16/14 05:23 | |
| Silver | mg/kg | ND | 0.50 | 08/16/14 05:23 | |

LABORATORY CONTROL SAMPLE: 1265570

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 50 | 50.3 | 101 | 80-120 | |
| Barium | mg/kg | 50 | 50.4 | 101 | 80-120 | |
| Cadmium | mg/kg | 50 | 52.2 | 104 | 80-120 | |
| Chromium | mg/kg | 50 | 50.0 | 100 | 80-120 | |
| Lead | mg/kg | 50 | 50.1 | 100 | 80-120 | |
| Selenium | mg/kg | 50 | 51.3 | 103 | 80-120 | |
| Silver | mg/kg | 25 | 25.9 | 103 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1265571 1265572

| Parameter | Units | 92213006002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 3.1 | 43.6 | 44.8 | 37.1 | 40.6 | 78 | 84 | 75-125 | 9 | 20 | |
| Barium | mg/kg | 493 | 43.6 | 44.8 | 759 | 734 | 612 | 539 | 75-125 | 3 | 20 | M1 |
| Cadmium | mg/kg | 5.6 | 43.6 | 44.8 | 52.0 | 49.6 | 106 | 98 | 75-125 | 5 | 20 | |
| Chromium | mg/kg | 37.7 | 43.6 | 44.8 | 89.0 | 93.4 | 118 | 124 | 75-125 | 5 | 20 | |
| Lead | mg/kg | 312 | 43.6 | 44.8 | 922 | 547 | 1401 | 526 | 75-125 | 51 | 20 | M1,R1 |
| Selenium | mg/kg | 1.2 | 43.6 | 44.8 | 34.0 | 34.8 | 75 | 75 | 75-125 | 3 | 20 | |
| Silver | mg/kg | ND | 21.7 | 22.4 | 20.5 | 20.9 | 93 | 92 | 75-125 | 2 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MPRP/16723
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92213006002, 92213006005

METHOD BLANK: 1269180 Matrix: Water
Associated Lab Samples: 92213006002, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/L | ND | 0.050 | 08/22/14 03:37 | |
| Barium | mg/L | ND | 0.25 | 08/22/14 03:37 | |
| Cadmium | mg/L | ND | 0.0050 | 08/22/14 03:37 | |
| Chromium | mg/L | ND | 0.025 | 08/22/14 03:37 | |
| Lead | mg/L | ND | 0.025 | 08/22/14 03:37 | |
| Selenium | mg/L | ND | 0.10 | 08/22/14 03:37 | |
| Silver | mg/L | ND | 0.025 | 08/22/14 03:37 | |

LABORATORY CONTROL SAMPLE: 1269181

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/L | 2.5 | 2.7 | 109 | 80-120 | |
| Barium | mg/L | 2.5 | 2.8 | 110 | 80-120 | |
| Cadmium | mg/L | 2.5 | 2.5 | 101 | 80-120 | |
| Chromium | mg/L | 2.5 | 2.7 | 108 | 80-120 | |
| Lead | mg/L | 2.5 | 2.6 | 104 | 80-120 | |
| Selenium | mg/L | 2.5 | 2.8 | 111 | 80-120 | |
| Silver | mg/L | 1.2 | 1.3 | 100 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1269182 1269183

| Parameter | Units | 92213006002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/L | ND | 2.5 | 2.5 | 2.7 | 2.8 | 110 | 112 | 75-125 | 2 | 20 | |
| Barium | mg/L | 2.5 | 2.5 | 2.5 | 5.3 | 5.5 | 114 | 119 | 75-125 | 2 | 20 | |
| Cadmium | mg/L | 0.26 | 2.5 | 2.5 | 2.8 | 2.9 | 103 | 105 | 75-125 | 2 | 20 | |
| Chromium | mg/L | ND | 2.5 | 2.5 | 2.8 | 2.8 | 110 | 112 | 75-125 | 2 | 20 | |
| Lead | mg/L | 3.7 | 2.5 | 2.5 | 6.4 | 6.5 | 107 | 112 | 75-125 | 2 | 20 | |
| Selenium | mg/L | ND | 2.5 | 2.5 | 2.8 | 2.8 | 111 | 113 | 75-125 | 2 | 20 | |
| Silver | mg/L | ND | 1.2 | 1.2 | 1.3 | 1.3 | 103 | 105 | 75-125 | 2 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: MSV/27941 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92213006001, 92213006003, 92213006004, 92213006005

METHOD BLANK: 1263325 Matrix: Solid
Associated Lab Samples: 92213006001, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,1-Dichloroethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,1-Dichloroethene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,1-Dichloropropene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2-Dichloroethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,2-Dichloropropane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,3-Dichloropropane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 2,2-Dichloropropane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 2-Butanone (MEK) | ug/kg | ND | 88.0 | 08/13/14 17:08 | |
| 2-Chlorotoluene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 2-Hexanone | ug/kg | ND | 44.0 | 08/13/14 17:08 | |
| 4-Chlorotoluene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 44.0 | 08/13/14 17:08 | |
| Acetone | ug/kg | ND | 88.0 | 08/13/14 17:08 | |
| Benzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Bromobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Bromochloromethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Bromodichloromethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Bromoform | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Bromomethane | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| Carbon tetrachloride | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Chlorobenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Chloroethane | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| Chloroform | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Chloromethane | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Dibromochloromethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

METHOD BLANK: 1263325 Matrix: Solid
Associated Lab Samples: 92213006001, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromomethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Dichlorodifluoromethane | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| Diisopropyl ether | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Ethylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| m&p-Xylene | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| Methyl-tert-butyl ether | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Methylene Chloride | ug/kg | ND | 17.6 | 08/13/14 17:08 | |
| n-Butylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| n-Propylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Naphthalene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| o-Xylene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| p-Isopropyltoluene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| sec-Butylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Styrene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| tert-Butylbenzene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Tetrachloroethene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Toluene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Trichloroethene | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Trichlorofluoromethane | ug/kg | ND | 4.4 | 08/13/14 17:08 | |
| Vinyl acetate | ug/kg | ND | 44.0 | 08/13/14 17:08 | |
| Vinyl chloride | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| Xylene (Total) | ug/kg | ND | 8.8 | 08/13/14 17:08 | |
| 1,2-Dichloroethane-d4 (S) | % | 97 | 70-132 | 08/13/14 17:08 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 08/13/14 17:08 | |
| Toluene-d8 (S) | % | 100 | 70-130 | 08/13/14 17:08 | |

LABORATORY CONTROL SAMPLE: 1263326

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | 40.1 | 40.3 | 100 | 74-137 | |
| 1,1,1-Trichloroethane | ug/kg | 40.1 | 39.0 | 97 | 67-140 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 40.1 | 38.6 | 96 | 72-141 | |
| 1,1,2-Trichloroethane | ug/kg | 40.1 | 41.9 | 104 | 78-138 | |
| 1,1-Dichloroethane | ug/kg | 40.1 | 37.4 | 93 | 69-134 | |
| 1,1-Dichloroethene | ug/kg | 40.1 | 42.3 | 105 | 67-138 | |
| 1,1-Dichloropropene | ug/kg | 40.1 | 41.5 | 103 | 69-139 | |
| 1,2,3-Trichlorobenzene | ug/kg | 40.1 | 46.3 | 115 | 70-146 | |
| 1,2,3-Trichloropropane | ug/kg | 40.1 | 41.3 | 103 | 69-144 | |
| 1,2,4-Trichlorobenzene | ug/kg | 40.1 | 41.0 | 102 | 68-148 | |
| 1,2,4-Trimethylbenzene | ug/kg | 40.1 | 42.8 | 107 | 74-137 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

LABORATORY CONTROL SAMPLE: 1263326

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | ug/kg | 40.1 | 47.0 | 117 | 65-140 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 40.1 | 42.3 | 106 | 77-135 | |
| 1,2-Dichlorobenzene | ug/kg | 40.1 | 42.4 | 106 | 77-141 | |
| 1,2-Dichloroethane | ug/kg | 40.1 | 42.6 | 106 | 65-137 | |
| 1,2-Dichloropropane | ug/kg | 40.1 | 42.4 | 106 | 72-136 | |
| 1,3,5-Trimethylbenzene | ug/kg | 40.1 | 42.0 | 105 | 76-133 | |
| 1,3-Dichlorobenzene | ug/kg | 40.1 | 41.2 | 103 | 74-138 | |
| 1,3-Dichloropropane | ug/kg | 40.1 | 42.6 | 106 | 71-139 | |
| 1,4-Dichlorobenzene | ug/kg | 40.1 | 40.2 | 100 | 76-138 | |
| 2,2-Dichloropropane | ug/kg | 40.1 | 40.2 | 100 | 68-137 | |
| 2-Butanone (MEK) | ug/kg | 80.3 | 82.5 | 103 | 58-147 | |
| 2-Chlorotoluene | ug/kg | 40.1 | 43.0 | 107 | 73-139 | |
| 2-Hexanone | ug/kg | 80.3 | 93.7 | 117 | 62-145 | |
| 4-Chlorotoluene | ug/kg | 40.1 | 42.0 | 105 | 76-141 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | 80.3 | 96.4 | 120 | 64-149 | |
| Acetone | ug/kg | 80.3 | 83.7 | 104 | 53-153 | |
| Benzene | ug/kg | 40.1 | 41.8 | 104 | 73-135 | |
| Bromobenzene | ug/kg | 40.1 | 43.2 | 108 | 75-133 | |
| Bromochloromethane | ug/kg | 40.1 | 42.3 | 105 | 73-134 | |
| Bromodichloromethane | ug/kg | 40.1 | 43.1 | 107 | 71-135 | |
| Bromoform | ug/kg | 40.1 | 43.2 | 108 | 66-141 | |
| Bromomethane | ug/kg | 40.1 | 37.7 | 94 | 53-160 | |
| Carbon tetrachloride | ug/kg | 40.1 | 40.2 | 100 | 60-145 | |
| Chlorobenzene | ug/kg | 40.1 | 40.9 | 102 | 78-130 | |
| Chloroethane | ug/kg | 40.1 | 35.1 | 87 | 64-149 | |
| Chloroform | ug/kg | 40.1 | 42.7 | 106 | 70-134 | |
| Chloromethane | ug/kg | 40.1 | 42.8 | 107 | 52-150 | |
| cis-1,2-Dichloroethene | ug/kg | 40.1 | 44.6 | 111 | 70-133 | |
| cis-1,3-Dichloropropene | ug/kg | 40.1 | 43.5 | 108 | 68-134 | |
| Dibromochloromethane | ug/kg | 40.1 | 44.4 | 111 | 71-138 | |
| Dibromomethane | ug/kg | 40.1 | 41.9 | 104 | 74-130 | |
| Dichlorodifluoromethane | ug/kg | 40.1 | 36.4 | 91 | 40-160 | |
| Diisopropyl ether | ug/kg | 40.1 | 42.8 | 107 | 69-141 | |
| Ethylbenzene | ug/kg | 40.1 | 40.3 | 101 | 75-133 | |
| Hexachloro-1,3-butadiene | ug/kg | 40.1 | 41.6 | 104 | 68-143 | |
| Isopropylbenzene (Cumene) | ug/kg | 40.1 | 42.0 | 105 | 76-143 | |
| m&p-Xylene | ug/kg | 80.3 | 83.2 | 104 | 75-136 | |
| Methyl-tert-butyl ether | ug/kg | 40.1 | 42.3 | 105 | 68-144 | |
| Methylene Chloride | ug/kg | 40.1 | 43.1 | 108 | 45-154 | |
| n-Butylbenzene | ug/kg | 40.1 | 42.1 | 105 | 72-137 | |
| n-Propylbenzene | ug/kg | 40.1 | 39.1 | 97 | 76-136 | |
| Naphthalene | ug/kg | 40.1 | 47.7 | 119 | 68-151 | |
| o-Xylene | ug/kg | 40.1 | 41.8 | 104 | 76-141 | |
| p-Isopropyltoluene | ug/kg | 40.1 | 40.6 | 101 | 76-140 | |
| sec-Butylbenzene | ug/kg | 40.1 | 39.0 | 97 | 79-139 | |
| Styrene | ug/kg | 40.1 | 43.7 | 109 | 79-137 | |
| tert-Butylbenzene | ug/kg | 40.1 | 41.2 | 103 | 74-143 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

LABORATORY CONTROL SAMPLE: 1263326

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Tetrachloroethene | ug/kg | 40.1 | 39.3 | 98 | 71-138 | |
| Toluene | ug/kg | 40.1 | 40.5 | 101 | 74-131 | |
| trans-1,2-Dichloroethene | ug/kg | 40.1 | 41.7 | 104 | 67-135 | |
| trans-1,3-Dichloropropene | ug/kg | 40.1 | 43.2 | 108 | 65-146 | |
| Trichloroethene | ug/kg | 40.1 | 40.4 | 101 | 67-135 | |
| Trichlorofluoromethane | ug/kg | 40.1 | 38.6 | 96 | 59-144 | |
| Vinyl acetate | ug/kg | 80.3 | 89.2 | 111 | 40-160 | F3 |
| Vinyl chloride | ug/kg | 40.1 | 38.2 | 95 | 56-141 | |
| Xylene (Total) | ug/kg | 120 | 125 | 104 | 76-137 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 103 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | 100 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE SAMPLE: 1263771

| Parameter | Units | 92212923005 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ug/kg | ND | 45.6 | 45.0 | 99 | 49-180 | |
| Benzene | ug/kg | 84.3 | 45.6 | 109 | 55 | 50-166 | |
| Chlorobenzene | ug/kg | ND | 45.6 | 45.3 | 99 | 43-169 | |
| Toluene | ug/kg | ND | 45.6 | 43.9 | 94 | 52-163 | |
| Trichloroethene | ug/kg | ND | 45.6 | 44.0 | 97 | 49-167 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 106 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | | 90 | 70-130 | |
| Toluene-d8 (S) | % | | | | 98 | 70-130 | |

SAMPLE DUPLICATE: 1263770

| Parameter | Units | 92212835002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,1-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethene | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloropropene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichloropropane | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloropropane | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

SAMPLE DUPLICATE: 1263770

| Parameter | Units | 92212835002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 2,2-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 2-Butanone (MEK) | ug/kg | ND | ND | | 30 | |
| 2-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 2-Hexanone | ug/kg | ND | ND | | 30 | |
| 4-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | ND | | 30 | |
| Acetone | ug/kg | ND | ND | | 30 | |
| Benzene | ug/kg | ND | ND | | 30 | |
| Bromobenzene | ug/kg | ND | ND | | 30 | |
| Bromochloromethane | ug/kg | ND | ND | | 30 | |
| Bromodichloromethane | ug/kg | ND | ND | | 30 | |
| Bromoform | ug/kg | ND | ND | | 30 | |
| Bromomethane | ug/kg | ND | ND | | 30 | |
| Carbon tetrachloride | ug/kg | ND | ND | | 30 | |
| Chlorobenzene | ug/kg | ND | ND | | 30 | |
| Chloroethane | ug/kg | ND | ND | | 30 | |
| Chloroform | ug/kg | ND | ND | | 30 | |
| Chloromethane | ug/kg | ND | ND | | 30 | |
| cis-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| cis-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Dibromochloromethane | ug/kg | ND | ND | | 30 | |
| Dibromomethane | ug/kg | ND | ND | | 30 | |
| Dichlorodifluoromethane | ug/kg | ND | ND | | 30 | |
| Diisopropyl ether | ug/kg | ND | ND | | 30 | |
| Ethylbenzene | ug/kg | ND | ND | | 30 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | 30 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | ND | | 30 | |
| m&p-Xylene | ug/kg | ND | ND | | 30 | |
| Methyl-tert-butyl ether | ug/kg | ND | ND | | 30 | |
| Methylene Chloride | ug/kg | ND | 3.9J | | 30 | |
| n-Butylbenzene | ug/kg | ND | ND | | 30 | |
| n-Propylbenzene | ug/kg | ND | ND | | 30 | |
| Naphthalene | ug/kg | ND | ND | | 30 | |
| o-Xylene | ug/kg | ND | ND | | 30 | |
| p-Isopropyltoluene | ug/kg | ND | ND | | 30 | |
| sec-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Styrene | ug/kg | ND | ND | | 30 | |
| tert-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Tetrachloroethene | ug/kg | ND | ND | | 30 | |
| Toluene | ug/kg | ND | ND | | 30 | |
| trans-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| trans-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Trichloroethene | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

SAMPLE DUPLICATE: 1263770

| Parameter | Units | 92212835002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Trichlorofluoromethane | ug/kg | ND | ND | | 30 | |
| Vinyl acetate | ug/kg | ND | ND | | 30 | |
| Vinyl chloride | ug/kg | ND | ND | | 30 | |
| Xylene (Total) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 107 | 105 | 0 | | |
| 4-Bromofluorobenzene (S) | % | 96 | 97 | 3 | | |
| Toluene-d8 (S) | % | 103 | 103 | 2 | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: OEXT/29380 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

METHOD BLANK: 1262753 Matrix: Solid
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Diesel Components | mg/kg | ND | 5.0 | 08/14/14 11:45 | |
| n-Pentacosane (S) | % | 81 | 41-119 | 08/14/14 11:45 | |

LABORATORY CONTROL SAMPLE: 1262754

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Diesel Components | mg/kg | 66.7 | 50.4 | 76 | 49-113 | |
| n-Pentacosane (S) | % | | | 85 | 41-119 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1262755 1262756

| Parameter | Units | 92213072009 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Components | mg/kg | ND | 72.6 | 72.6 | 55.8 | 54.4 | 76 | 74 | 10-146 | 3 | 30 | |
| n-Pentacosane (S) | % | | | | | | 70 | 76 | 41-119 | | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: OEXT/29375 Analysis Method: EPA 8082
QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

METHOD BLANK: 1262608 Matrix: Solid
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 33.0 | 08/13/14 08:48 | |
| Decachlorobiphenyl (S) | % | 80 | 21-132 | 08/13/14 08:48 | |

LABORATORY CONTROL SAMPLE: 1262609

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | 167 | 123 | 74 | 31-120 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 167 | 137 | 82 | 32-120 | |
| Decachlorobiphenyl (S) | % | | | 85 | 21-132 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: OEXT/29379 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

METHOD BLANK: 1262655 Matrix: Solid
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 1-Methylnaphthalene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,4,5-Trichlorophenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,4,6-Trichlorophenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,4-Dichlorophenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,4-Dimethylphenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,4-Dinitrophenol | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| 2,4-Dinitrotoluene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,6-Dinitrotoluene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2-Chloronaphthalene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2-Chlorophenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2-Methylnaphthalene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2-Nitroaniline | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| 2-Nitrophenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 3,3'-Dichlorobenzidine | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| 3-Nitroaniline | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | 660 | 08/14/14 10:10 | |
| 4-Bromophenylphenyl ether | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 4-Chloro-3-methylphenol | ug/kg | ND | 660 | 08/14/14 10:10 | |
| 4-Chloroaniline | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 4-Nitroaniline | ug/kg | ND | 660 | 08/14/14 10:10 | |
| 4-Nitrophenol | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| Acenaphthene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Acenaphthylene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Aniline | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Anthracene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Benzo(a)anthracene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Benzo(a)pyrene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Benzo(b)fluoranthene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Benzo(g,h,i)perylene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Benzo(k)fluoranthene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Benzoic Acid | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| Benzyl alcohol | ug/kg | ND | 660 | 08/14/14 10:10 | |
| bis(2-Chloroethoxy)methane | ug/kg | ND | 330 | 08/14/14 10:10 | |
| bis(2-Chloroethyl) ether | ug/kg | ND | 330 | 08/14/14 10:10 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

METHOD BLANK: 1262655 Matrix: Solid
Associated Lab Samples: 92213006002, 92213006003, 92213006004, 92213006005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| bis(2-Chloroisopropyl) ether | ug/kg | ND | 330 | 08/14/14 10:10 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Butylbenzylphthalate | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Chrysene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Di-n-butylphthalate | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Di-n-octylphthalate | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Dibenz(a,h)anthracene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Dibenzofuran | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Diethylphthalate | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Dimethylphthalate | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Fluoranthene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Fluorene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Hexachlorobenzene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Hexachlorocyclopentadiene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Hexachloroethane | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Isophorone | ug/kg | ND | 330 | 08/14/14 10:10 | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | 330 | 08/14/14 10:10 | |
| N-Nitrosodimethylamine | ug/kg | ND | 330 | 08/14/14 10:10 | |
| N-Nitrosodiphenylamine | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Naphthalene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Nitrobenzene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Pentachlorophenol | ug/kg | ND | 1650 | 08/14/14 10:10 | |
| Phenanthrene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Phenol | ug/kg | ND | 330 | 08/14/14 10:10 | |
| Pyrene | ug/kg | ND | 330 | 08/14/14 10:10 | |
| 2,4,6-Tribromophenol (S) | % | 68 | 27-110 | 08/14/14 10:10 | |
| 2-Fluorobiphenyl (S) | % | 68 | 30-110 | 08/14/14 10:10 | |
| 2-Fluorophenol (S) | % | 63 | 13-110 | 08/14/14 10:10 | |
| Nitrobenzene-d5 (S) | % | 64 | 23-110 | 08/14/14 10:10 | |
| Phenol-d6 (S) | % | 63 | 22-110 | 08/14/14 10:10 | |
| Terphenyl-d14 (S) | % | 75 | 28-110 | 08/14/14 10:10 | |

LABORATORY CONTROL SAMPLE: 1262656

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 1670 | 1210 | 73 | 36-120 | |
| 1,2-Dichlorobenzene | ug/kg | 1670 | 1120 | 67 | 41-120 | |
| 1,3-Dichlorobenzene | ug/kg | 1670 | 1100 | 66 | 66-120 | |
| 1,4-Dichlorobenzene | ug/kg | 1670 | 1150 | 69 | 42-120 | |
| 1-Methylnaphthalene | ug/kg | 1670 | 1240 | 75 | 40-120 | |
| 2,4,5-Trichlorophenol | ug/kg | 1670 | 1380 | 83 | 37-120 | |
| 2,4,6-Trichlorophenol | ug/kg | 1670 | 1370 | 82 | 40-120 | |

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(704)875-9092

## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

LABORATORY CONTROL SAMPLE: 1262656

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 2,4-Dichlorophenol | ug/kg | 1670 | 1370 | 82 | 33-120 | |
| 2,4-Dimethylphenol | ug/kg | 1670 | 1320 | 79 | 36-120 | |
| 2,4-Dinitrophenol | ug/kg | 8330 | 8820 | 106 | 22-121 | |
| 2,4-Dinitrotoluene | ug/kg | 1670 | 1450 | 87 | 60-120 | |
| 2,6-Dinitrotoluene | ug/kg | 1670 | 1510 | 91 | 54-120 | |
| 2-Chloronaphthalene | ug/kg | 1670 | 1200 | 72 | 41-120 | |
| 2-Chlorophenol | ug/kg | 1670 | 1270 | 76 | 39-120 | |
| 2-Methylnaphthalene | ug/kg | 1670 | 1250 | 75 | 26-120 | |
| 2-Methylphenol(o-Cresol) | ug/kg | 1670 | 1210 | 72 | 41-120 | |
| 2-Nitroaniline | ug/kg | 3330 | 2670 | 80 | 45-120 | |
| 2-Nitrophenol | ug/kg | 1670 | 1560 | 94 | 35-120 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | 1670 | 1220 | 73 | 35-120 | |
| 3,3'-Dichlorobenzidine | ug/kg | 3330 | 2720 | 81 | 16-125 | |
| 3-Nitroaniline | ug/kg | 3330 | 2570 | 77 | 45-120 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | 3330 | 4210 | 126 | 46-120 | L3 |
| 4-Bromophenylphenyl ether | ug/kg | 1670 | 1420 | 85 | 36-120 | |
| 4-Chloro-3-methylphenol | ug/kg | 3330 | 2810 | 84 | 37-120 | |
| 4-Chloroaniline | ug/kg | 3330 | 2440 | 73 | 35-120 | |
| 4-Chlorophenylphenyl ether | ug/kg | 1670 | 1330 | 80 | 30-120 | |
| 4-Nitroaniline | ug/kg | 3330 | 2570 | 77 | 48-120 | |
| 4-Nitrophenol | ug/kg | 8330 | 7370 | 88 | 43-120 | |
| Acenaphthene | ug/kg | 1670 | 1250 | 75 | 46-120 | |
| Acenaphthylene | ug/kg | 1670 | 1260 | 76 | 46-120 | |
| Aniline | ug/kg | 1670 | 1100 | 66 | 33-120 | |
| Anthracene | ug/kg | 1670 | 1340 | 80 | 63-120 | |
| Benzo(a)anthracene | ug/kg | 1670 | 1290 | 78 | 61-120 | |
| Benzo(a)pyrene | ug/kg | 1670 | 1280 | 77 | 59-120 | |
| Benzo(b)fluoranthene | ug/kg | 1670 | 1170 | 70 | 55-120 | |
| Benzo(g,h,i)perylene | ug/kg | 1670 | 1230 | 74 | 57-120 | |
| Benzo(k)fluoranthene | ug/kg | 1670 | 1240 | 75 | 56-120 | |
| Benzoic Acid | ug/kg | 8330 | 4670 | 56 | 13-120 | |
| Benzyl alcohol | ug/kg | 3330 | 2630 | 79 | 34-120 | |
| bis(2-Chloroethoxy)methane | ug/kg | 1670 | 1160 | 70 | 21-120 | |
| bis(2-Chloroethyl) ether | ug/kg | 1670 | 1130 | 68 | 25-120 | |
| bis(2-Chloroisopropyl) ether | ug/kg | 1670 | 1070 | 64 | 13-120 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | 1670 | 1590 | 95 | 56-123 | |
| Butylbenzylphthalate | ug/kg | 1670 | 1640 | 98 | 57-120 | |
| Chrysene | ug/kg | 1670 | 1390 | 83 | 64-120 | |
| Di-n-butylphthalate | ug/kg | 1670 | 1440 | 86 | 58-120 | |
| Di-n-octylphthalate | ug/kg | 1670 | 1810 | 109 | 47-121 | |
| Dibenz(a,h)anthracene | ug/kg | 1670 | 1270 | 76 | 56-120 | |
| Dibenzofuran | ug/kg | 1670 | 1390 | 83 | 43-120 | |
| Diethylphthalate | ug/kg | 1670 | 1360 | 82 | 55-120 | |
| Dimethylphthalate | ug/kg | 1670 | 1370 | 82 | 54-120 | |
| Fluoranthene | ug/kg | 1670 | 1320 | 79 | 61-120 | |
| Fluorene | ug/kg | 1670 | 1340 | 80 | 51-120 | |
| Hexachloro-1,3-butadiene | ug/kg | 1670 | 1220 | 73 | 22-120 | |

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(704)875-9092

## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

LABORATORY CONTROL SAMPLE: 1262656

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Hexachlorobenzene | ug/kg | 1670 | 1350 | 81 | 53-120 | |
| Hexachlorocyclopentadiene | ug/kg | 1670 | 1650 | 99 | 18-150 | |
| Hexachloroethane | ug/kg | 1670 | 1240 | 74 | 39-120 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | 1670 | 1010 | 60 | 58-120 | |
| Isophorone | ug/kg | 1670 | 1190 | 71 | 38-120 | |
| N-Nitroso-di-n-propylamine | ug/kg | 1670 | 1140 | 68 | 30-120 | |
| N-Nitrosodimethylamine | ug/kg | 1670 | 1040 | 63 | 32-120 | |
| N-Nitrosodiphenylamine | ug/kg | 1670 | 1380 | 83 | 50-120 | |
| Naphthalene | ug/kg | 1670 | 1190 | 72 | 38-120 | |
| Nitrobenzene | ug/kg | 1670 | 1210 | 73 | 37-120 | |
| Pentachlorophenol | ug/kg | 3330 | 2640 | 79 | 10-120 | |
| Phenanthrene | ug/kg | 1670 | 1290 | 77 | 62-120 | |
| Phenol | ug/kg | 1670 | 1260 | 76 | 37-120 | |
| Pyrene | ug/kg | 1670 | 1370 | 82 | 63-120 | |
| 2,4,6-Tribromophenol (S) | % | | | 94 | 27-110 | |
| 2-Fluorobiphenyl (S) | % | | | 74 | 30-110 | |
| 2-Fluorophenol (S) | % | | | 70 | 13-110 | |
| Nitrobenzene-d5 (S) | % | | | 70 | 23-110 | |
| Phenol-d6 (S) | % | | | 70 | 22-110 | |
| Terphenyl-d14 (S) | % | | | 83 | 28-110 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1262657 1262658

| Parameter | Units | 92213070003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | 2100 | 2100 | 701 | 706 | 33 | 34 | 18-119 | 1 | 30 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 2100 | 2100 | 733 | 716 | 35 | 34 | 50-110 | 2 | 30 | M0 |
| 1,3-Dichlorobenzene | ug/kg | ND | 2100 | 2100 | 692 | 684 | 33 | 33 | 27-110 | 1 | 30 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 2100 | 2100 | 746 | 722 | 36 | 34 | 28-110 | 3 | 30 | |
| 1-Methylnaphthalene | ug/kg | ND | 2100 | 2100 | 788 | 804 | 38 | 38 | 24-116 | 2 | 30 | |
| 2,4,5-Trichlorophenol | ug/kg | ND | 2100 | 2100 | 1080 | 1170 | 51 | 56 | 28-110 | 9 | 30 | |
| 2,4,6-Trichlorophenol | ug/kg | ND | 2100 | 2100 | 959 | 1030 | 46 | 49 | 17-117 | 7 | 30 | |
| 2,4-Dichlorophenol | ug/kg | ND | 2100 | 2100 | 754 | 772 | 36 | 37 | 21-128 | 2 | 30 | |
| 2,4-Dimethylphenol | ug/kg | ND | 2100 | 2100 | 743 | 867 | 36 | 41 | 10-120 | 15 | 30 | |
| 2,4-Dinitrophenol | ug/kg | ND | 10500 | 10500 | 2960 | 5050 | 28 | 48 | 10-107 | 52 | 30 | R1 |
| 2,4-Dinitrotoluene | ug/kg | ND | 2100 | 2100 | 1520 | 1420 | 73 | 68 | 36-109 | 7 | 30 | |
| 2,6-Dinitrotoluene | ug/kg | ND | 2100 | 2100 | 1410 | 1390 | 68 | 67 | 32-110 | 1 | 30 | |
| 2-Chloronaphthalene | ug/kg | ND | 2100 | 2100 | 713 | 849 | 34 | 41 | 30-107 | 17 | 30 | |
| 2-Chlorophenol | ug/kg | ND | 2100 | 2100 | 781 | 778 | 37 | 37 | 14-106 | 0 | 30 | |
| 2-Methylnaphthalene | ug/kg | ND | 2100 | 2100 | 758 | 802 | 36 | 38 | 10-135 | 6 | 30 | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | 2100 | 2100 | 760 | 776 | 36 | 37 | 10-124 | 2 | 30 | |
| 2-Nitroaniline | ug/kg | ND | 4180 | 4180 | 2510 | 2750 | 60 | 66 | 26-116 | 9 | 30 | |
| 2-Nitrophenol | ug/kg | ND | 2100 | 2100 | 853 | 825 | 41 | 39 | 28-103 | 3 | 30 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | 2100 | 2100 | 783 | 777 | 37 | 37 | 10-109 | 1 | 30 | |

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1262657 1262658

| Parameter | Units | 92213070003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3,3'-Dichlorobenzidine | ug/kg | ND | 4180 | 4180 | 2810 | 2920 | 67 | 70 | 10-150 | 4 | 30 | |
| 3-Nitroaniline | ug/kg | ND | 4180 | 4180 | 2680 | 2860 | 64 | 68 | 22-110 | 6 | 30 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | 4180 | 4180 | 2390 | 2950 | 57 | 71 | 13-121 | 21 | 30 | |
| 4-Bromophenylphenyl ether | ug/kg | ND | 2100 | 2100 | 1170 | 1270 | 56 | 61 | 31-109 | 8 | 30 | |
| 4-Chloro-3-methylphenol | ug/kg | ND | 4180 | 4180 | 2320 | 2310 | 55 | 55 | 13-128 | 0 | 30 | |
| 4-Chloroaniline | ug/kg | ND | 4180 | 4180 | 1510J | 1730J | 36 | 41 | 18-102 | | 30 | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | 2100 | 2100 | 1150 | 1260 | 55 | 60 | 29-112 | 9 | 30 | |
| 4-Nitroaniline | ug/kg | ND | 4180 | 4180 | 3020 | 3020 | 72 | 72 | 16-111 | 0 | 30 | |
| 4-Nitrophenol | ug/kg | ND | 10500 | 10500 | 8700 | 6920 | 83 | 66 | 14-135 | 23 | 30 | |
| Acenaphthene | ug/kg | ND | 2100 | 2100 | 935 | 1070 | 45 | 51 | 26-114 | 14 | 30 | |
| Acenaphthylene | ug/kg | ND | 2100 | 2100 | 923 | 1060 | 44 | 51 | 32-108 | 14 | 30 | |
| Aniline | ug/kg | ND | 2100 | 2100 | 700 | 754 | 33 | 36 | 10-107 | 8 | 30 | |
| Anthracene | ug/kg | ND | 2100 | 2100 | 1350 | 1280 | 64 | 61 | 32-111 | 5 | 30 | |
| Benzo(a)anthracene | ug/kg | ND | 2100 | 2100 | 1270 | 1320 | 61 | 63 | 25-117 | 4 | 30 | |
| Benzo(a)pyrene | ug/kg | ND | 2100 | 2100 | 1250 | 1260 | 60 | 60 | 25-106 | 1 | 30 | |
| Benzo(b)fluoranthene | ug/kg | ND | 2100 | 2100 | 1230 | 1270 | 59 | 61 | 24-110 | 4 | 30 | |
| Benzo(g,h,i)perylene | ug/kg | ND | 2100 | 2100 | 1140 | 1230 | 55 | 59 | 19-112 | 8 | 30 | |
| Benzo(k)fluoranthene | ug/kg | ND | 2100 | 2100 | 1120 | 1130 | 53 | 54 | 24-114 | 1 | 30 | |
| Benzoic Acid | ug/kg | ND | 10500 | 10500 | 1120J | 535J | 11 | 5 | 10-110 | | 30 | M0 |
| Benzyl alcohol | ug/kg | ND | 4180 | 4180 | 1600 | 1710 | 38 | 41 | 24-106 | 7 | 30 | |
| bis(2-Chloroethoxy)methane | ug/kg | ND | 2100 | 2100 | 667 | 765 | 32 | 37 | 13-119 | 14 | 30 | |
| bis(2-Chloroethyl) ether | ug/kg | ND | 2100 | 2100 | 706 | 764 | 34 | 36 | 10-134 | 8 | 30 | |
| bis(2-Chloroisopropyl) ether | ug/kg | ND | 2100 | 2100 | 672 | 721 | 32 | 34 | 10-113 | 7 | 30 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | 2100 | 2100 | 1370 | 1470 | 65 | 70 | 10-125 | 7 | 30 | |
| Butylbenzylphthalate | ug/kg | ND | 2100 | 2100 | 1430 | 1500 | 68 | 71 | 18-110 | 4 | 30 | |
| Chrysene | ug/kg | ND | 2100 | 2100 | 1370 | 1320 | 66 | 63 | 30-110 | 4 | 30 | |
| Di-n-butylphthalate | ug/kg | ND | 2100 | 2100 | 1380 | 1380 | 66 | 66 | 19-112 | 0 | 30 | |
| Di-n-octylphthalate | ug/kg | ND | 2100 | 2100 | 1740 | 1490 | 83 | 71 | 17-105 | 15 | 30 | |
| Dibenz(a,h)anthracene | ug/kg | ND | 2100 | 2100 | 1180 | 1260 | 56 | 60 | 23-111 | 6 | 30 | |
| Dibenzofuran | ug/kg | ND | 2100 | 2100 | 1130 | 1230 | 54 | 59 | 35-103 | 8 | 30 | |
| Diethylphthalate | ug/kg | ND | 2100 | 2100 | 1380 | 1430 | 66 | 68 | 27-113 | 4 | 30 | |
| Dimethylphthalate | ug/kg | ND | 2100 | 2100 | 1270 | 1380 | 61 | 66 | 26-111 | 8 | 30 | |
| Fluoranthene | ug/kg | ND | 2100 | 2100 | 1600 | 1280 | 76 | 61 | 33-109 | 22 | 30 | |
| Fluorene | ug/kg | ND | 2100 | 2100 | 1240 | 1300 | 59 | 62 | 32-113 | 5 | 30 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 2100 | 2100 | 665 | 637 | 32 | 30 | 16-116 | 4 | 30 | |
| Hexachlorobenzene | ug/kg | ND | 2100 | 2100 | 1180 | 1210 | 56 | 58 | 27-120 | 2 | 30 | |
| Hexachlorocyclopentadiene | ug/kg | ND | 2100 | 2100 | 276J | 648 | 13 | 31 | 10-108 | | 30 | |
| Hexachloroethane | ug/kg | ND | 2100 | 2100 | 697 | 669 | 33 | 32 | 10-117 | 4 | 30 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | 2100 | 2100 | 931 | 1000 | 45 | 48 | 10-122 | 7 | 30 | |
| Isophorone | ug/kg | ND | 2100 | 2100 | 761 | 854 | 36 | 41 | 28-114 | 11 | 30 | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | 2100 | 2100 | 730 | 821 | 35 | 39 | 27-113 | 12 | 30 | |
| N-Nitrosodimethylamine | ug/kg | ND | 2100 | 2100 | 625 | 734 | 30 | 35 | 10-109 | 16 | 30 | |
| N-Nitrosodiphenylamine | ug/kg | ND | 2100 | 2100 | 1200 | 1330 | 57 | 64 | 10-128 | 11 | 30 | |
| Naphthalene | ug/kg | ND | 2100 | 2100 | 730 | 773 | 35 | 37 | 25-110 | 6 | 30 | |
| Nitrobenzene | ug/kg | ND | 2100 | 2100 | 732 | 771 | 35 | 37 | 18-114 | 5 | 30 | |
| Pentachlorophenol | ug/kg | ND | 4180 | 4180 | 2860 | 2320 | 68 | 55 | 10-122 | 21 | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1262657 1262658

| Parameter | Units | 92213070003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenanthrene | ug/kg | ND | 2100 | 2100 | 1280 | 1260 | 61 | 60 | 30-114 | 1 | 30 | |
| Phenol | ug/kg | ND | 2100 | 2100 | 768 | 817 | 37 | 39 | 11-102 | 6 | 30 | |
| Pyrene | ug/kg | ND | 2100 | 2100 | 1220 | 1340 | 58 | 64 | 25-116 | 10 | 30 | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 71 | 62 | 27-110 | | | |
| 2-Fluorobiphenyl (S) | % | | | | | | 33 | 39 | 30-110 | | | |
| 2-Fluorophenol (S) | % | | | | | | 33 | 33 | 13-110 | | | |
| Nitrobenzene-d5 (S) | % | | | | | | 33 | 36 | 23-110 | | | |
| Phenol-d6 (S) | % | | | | | | 34 | 35 | 22-110 | | | |
| Terphenyl-d14 (S) | % | | | | | | 57 | 64 | 28-110 | | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

QC Batch: PMST/6923 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92213006001, 92213006002, 92213006003, 92213006004, 92213006005

SAMPLE DUPLICATE: 1263848

| Parameter | Units | 92212037002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 88.6 | 88.9 | 0 | 25 | |

SAMPLE DUPLICATE: 1263849

| Parameter | Units | 92213117009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 19.7 | 18.2 | 8 | 25 | |

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# QUALIFIERS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## LABORATORIES

| | |
|---|---|
| PASI-A | Pace Analytical Services - Asheville |
| PASI-C | Pace Analytical Services - Charlotte |

## ANALYTE QUALIFIERS

| | |
|---|---|
| 1g | The internal standard response is below criteria. No hits associated with this internal standard. Results unaffected by high bias. |
| D3 | Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference. |
| E | Analyte concentration exceeded the calibration range. The reported result is estimated. |
| F3 | The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated. |
| L3 | Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias. |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| R1 | RPD value was outside control limits. |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution. |
| S5 | Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis). |



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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213006

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92213006002** | **SPC** | EPA 3546 | OEXT/29380 | EPA 8015 Modified | GCSV/18553 |
| **92213006003** | **B-12 (1-2)** | EPA 3546 | OEXT/29380 | EPA 8015 Modified | GCSV/18553 |
| **92213006004** | **B-2 (2-3)** | EPA 3546 | OEXT/29380 | EPA 8015 Modified | GCSV/18553 |
| **92213006005** | **B-3 (0-1)** | EPA 3546 | OEXT/29380 | EPA 8015 Modified | GCSV/18553 |
| **92213006002** | **SPC** | EPA 3546 | OEXT/29375 | EPA 8082 | GCSV/18545 |
| **92213006003** | **B-12 (1-2)** | EPA 3546 | OEXT/29375 | EPA 8082 | GCSV/18545 |
| **92213006004** | **B-2 (2-3)** | EPA 3546 | OEXT/29375 | EPA 8082 | GCSV/18545 |
| **92213006005** | **B-3 (0-1)** | EPA 3546 | OEXT/29375 | EPA 8082 | GCSV/18545 |
| **92213006002** | **SPC** | 9071B | GCSV/18541 | 9071B | GCSV/18544 |
| **92213006003** | **B-12 (1-2)** | 9071B | GCSV/18541 | 9071B | GCSV/18544 |
| **92213006004** | **B-2 (2-3)** | 9071B | GCSV/18541 | 9071B | GCSV/18544 |
| **92213006005** | **B-3 (0-1)** | 9071B | GCSV/18541 | 9071B | GCSV/18544 |
| **92213006002** | **SPC** | EPA 5035A/5030B | GCV/8441 | EPA 8015 Modified | GCV/8444 |
| **92213006003** | **B-12 (1-2)** | EPA 5035A/5030B | GCV/8441 | EPA 8015 Modified | GCV/8444 |
| **92213006004** | **B-2 (2-3)** | EPA 5035A/5030B | GCV/8441 | EPA 8015 Modified | GCV/8444 |
| **92213006005** | **B-3 (0-1)** | EPA 5035A/5030B | GCV/8441 | EPA 8015 Modified | GCV/8444 |
| **92213006002** | **SPC** | EPA 3050 | MPRP/16689 | EPA 6010 | ICP/15064 |
| **92213006003** | **B-12 (1-2)** | EPA 3050 | MPRP/16666 | EPA 6010 | ICP/15046 |
| **92213006004** | **B-2 (2-3)** | EPA 3050 | MPRP/16666 | EPA 6010 | ICP/15046 |
| **92213006005** | **B-3 (0-1)** | EPA 3050 | MPRP/16666 | EPA 6010 | ICP/15046 |
| **92213006002** | **SPC** | EPA 3010 | MPRP/16723 | EPA 6010 | ICP/15103 |
| **92213006005** | **B-3 (0-1)** | EPA 3010 | MPRP/16723 | EPA 6010 | ICP/15103 |
| **92213006002** | **SPC** | EPA 7470 | MERP/6991 | EPA 7470 | MERC/6730 |
| **92213006005** | **B-3 (0-1)** | EPA 7470 | MERP/6991 | EPA 7470 | MERC/6730 |
| **92213006002** | **SPC** | EPA 7471 | MERP/6975 | EPA 7471 | MERC/6714 |
| **92213006003** | **B-12 (1-2)** | EPA 7471 | MERP/6968 | EPA 7471 | MERC/6708 |
| **92213006004** | **B-2 (2-3)** | EPA 7471 | MERP/6968 | EPA 7471 | MERC/6708 |
| **92213006005** | **B-3 (0-1)** | EPA 7471 | MERP/6968 | EPA 7471 | MERC/6708 |
| **92213006002** | **SPC** | EPA 3546 | OEXT/29379 | EPA 8270 | MSSV/9533 |
| **92213006003** | **B-12 (1-2)** | EPA 3546 | OEXT/29379 | EPA 8270 | MSSV/9533 |
| **92213006004** | **B-2 (2-3)** | EPA 3546 | OEXT/29379 | EPA 8270 | MSSV/9533 |
| **92213006005** | **B-3 (0-1)** | EPA 3546 | OEXT/29379 | EPA 8270 | MSSV/9533 |
| **92213006001** | **SPVOC** | EPA 8260 | MSV/27941 | | |
| **92213006003** | **B-12 (1-2)** | EPA 8260 | MSV/27941 | | |
| **92213006004** | **B-2 (2-3)** | EPA 8260 | MSV/27941 | | |
| **92213006005** | **B-3 (0-1)** | EPA 8260 | MSV/27941 | | |
| **92213006001** | **SPVOC** | ASTM D2974-87 | PMST/6923 | | |
| **92213006002** | **SPC** | ASTM D2974-87 | PMST/6923 | | |
| **92213006003** | **B-12 (1-2)** | ASTM D2974-87 | PMST/6923 | | |
| **92213006004** | **B-2 (2-3)** | ASTM D2974-87 | PMST/6923 | | |
| **92213006005** | **B-3 (0-1)** | ASTM D2974-87 | PMST/6923 | | |



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| Pace Analytical www.pacelabs.com | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: June 10, 2014<br>Page 1 of 2 |
|---|---|---|
| | Document No.:<br>F-ASV-CS-003-rev.14 | Issuing Authorities:<br>Pace Asheville Quality Office |

Client Name: Hart B Hickman

Courier (Circle): Fed Ex UPS USPS Client Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun#3 -130265963 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

IR Gun #4 SN:140290365 Other:_____

Temp Correction Factor: Add / Subtract 0.1 C

Corrected Cooler Temp.: 3.0/4.4 C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 8/12/14 A-c

Temp should be above freezing to 6°C

| | | Comments: |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☑No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☑Yes ☐No ☐N/A | 7. 2 days |
| Sufficient Volume: | ☑Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☑Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes ☐No ☐N/A | |
| Containers Intact: | ☑Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☑No ☐N/A | 11. |
| Sample Labels match COC: | ☑Yes ☐No ☐N/A | 12. |
| -Includes date/time/ID/Analysis Matrix: WL | | |
| All containers needing preservation have been checked. | ☑Yes ☐No ☐N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☑Yes ☐No ☐N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☐Yes ☑No | |
| Samples checked for dechlorination: | ☐Yes ☐No ☑N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☐No ☑N/A | 15. |
| Trip Blank Present: | ☐Yes ☐No ☑N/A | 16. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☑N/A | |
| Pace Trip Blank Lot # (if purchased): | | |

Field Data Required? Y / N

**Client Notification/ Resolution:**

Person Contacted: Dave Graham Date/Time: 8-12-14

Comments/ Resolution: wrong number of containers for item 1 & 2
Haywood Co! Emailed to find out what metals.

**SCURF Review:** AMB Date: 8-12-14

**SRF Review:** JY Date: 8/13/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Place label here

92-213006 OR

Handwrite project number (if no label available)

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1837783

**Section A** Required Client Information:

Company: Hart & Hickman, PC
Address: 2923 S Tryon St. Ste 100
Charlotte, NC 28203
Email To: dgraham@harthickman.com
Phone: 704-586-0007 Fax:
Requested Due Date/TAT: 2 days

**Section B** Required Project Information:

Report To: Dave Graham
Copy To:
Purchase Order No.:
Project Name:
Project Number: ROW-502

**Section C** Invoice Information:

Attention:
Company Name: H+H
Address:
Pace Quote Reference:
Pace Project Manager: 1165-3
Pace Profile #: WO# 35022.1.1

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

Requested Analysis Filtered (Y/N)

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / , -) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N: O.C. & gurgeon Perf | 8260B | 8270D | BTEX | DRO | GRO | GC/LC 24hr A | *TCLP VOC * | *TCLP SVOC * | *TCLP RCRA metals * | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SPVOC | SL | G | | | 8/11/14 | 1525 | | 15 | | | | | | | 2 | 2 | | X | | | | | | | | | 92213006 (01) |
| 2 | SPC | SL | C | 8/11/14 | 1530 | 8/11/14 | 1530 | | 11 | | | | | | | | | X | | X | X | X | X | X | X | X | X | *hold pending 002 |
| 3 | B-4 (1-2) | | G | | | 8/11/14 | 1630 | | 15 | | | | | | | 2 | 2 | X | X | X | X | X | X | X | X | X | X | H+H approval 003 |
| 4 | B-7 (2-3) | | G | | | 8/11/14 | 1900 | | 15 | | | | | | | 2 | 2 | X | X | X | X | X | X | X | X | X | X | 004 |
| 5 | B-3 (0-1) | | G | | | 8/12/14 | 1053 | | 15 | | | | | | | 2 | 2 | X | X | X | X | X | X | X | X | X | X | 005 |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---|---|---|---|---|---|---|---|
| client requested RCRA | H+H | 8/12/14 | 1145 | | 8-12-14 | 13:45 | |
| Met. 15. KL. 8/13/14 | | 8-12-14 | 1345 | | 8/12/14 | 1400 | 3.0 Y N Y |
| | | | | | | | |
| | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Brandt Kayser
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/12/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
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(704)875-9092

August 22, 2014

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on August 13, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: David Graham, Hart & Hickman



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## CERTIFICATIONS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Charlotte Certification IDs**
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

**Asheville Certification IDs**
2225 Riverside Dr., Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222



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## SAMPLE SUMMARY

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92213326002** | **B-7(4-5)** | Solid | 08/12/14 12:50 | 08/13/14 16:52 |
| **92213326003** | **B-3(6-7)** | Solid | 08/12/14 14:25 | 08/13/14 16:52 |
| **92213326004** | **B-2(5-6)** | Solid | 08/12/14 14:55 | 08/13/14 16:52 |
| **92213326005** | **B-6(1-2)** | Solid | 08/12/14 16:20 | 08/13/14 16:52 |
| **92213326006** | **B-8(0-1)** | Solid | 08/12/14 17:00 | 08/13/14 16:52 |
| **92213326007** | **B-10(0-1)** | Solid | 08/12/14 17:50 | 08/13/14 16:52 |
| **92213326008** | **B-9(3-4)** | Solid | 08/12/14 19:00 | 08/13/14 16:52 |
| **92213326009** | **B-1(3-4)** | Solid | 08/13/14 08:35 | 08/13/14 16:52 |
| **92213326010** | **B-1(5-6.5)** | Solid | 08/13/14 09:10 | 08/13/14 16:52 |
| **92213326011** | **B-11(3-4)** | Solid | 08/13/14 11:15 | 08/13/14 16:52 |
| **92213326012** | **B-4(6-7)** | Solid | 08/13/14 12:00 | 08/13/14 16:52 |
| **92213326013** | **B-5(6-7)** | Solid | 08/13/14 12:45 | 08/13/14 16:52 |



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## SAMPLE ANALYTE COUNT

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92213326002** | **B-7(4-5)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326003** | **B-3(6-7)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326004** | **B-2(5-6)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326005** | **B-6(1-2)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | JMW, SH1 | 7 | PASI-A |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |



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## SAMPLE ANALYTE COUNT

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326006** | **B-8(0-1)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326007** | **B-10(0-1)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326008** | **B-9(3-4)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326009** | **B-1(3-4)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |



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## SAMPLE ANALYTE COUNT

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326010** | **B-1(5-6.5)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326011** | **B-11(3-4)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326012** | **B-4(6-7)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92213326013** | **B-5(6-7)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | AM1 | 1 | PASI-C |
| | | EPA 8015 Modified | GAW | 2 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |



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## SAMPLE ANALYTE COUNT

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| | | EPA 8270 | BPJ | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |



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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-7(4-5)** **Lab ID: 92213326002** Collected: 08/12/14 12:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.4 | 1 | 08/14/14 08:40 | 08/14/14 21:45 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 86 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 21:45 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 42.4 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 44 | % | 21-132 | 1 | 08/14/14 09:47 | 08/15/14 09:21 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 90.0 | 1 | 08/14/14 17:31 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.9 | 1 | 08/14/14 13:28 | 08/14/14 14:40 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 14:40 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 0.97 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7440-38-2 | |
| Barium | **193** | mg/kg | 0.49 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7440-39-3 | |
| Cadmium | **0.99** | mg/kg | 0.097 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7440-43-9 | |
| Chromium | **26.6** | mg/kg | 0.49 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7440-47-3 | |
| Lead | **70.2** | mg/kg | 0.49 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7439-92-1 | |
| Selenium | ND | mg/kg | 0.97 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.49 | 1 | 08/14/14 16:55 | 08/15/14 06:30 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.016** | mg/kg | 0.0049 | 1 | 08/14/14 18:00 | 08/16/14 17:51 | 7439-97-6 | M1,M6, R1 |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 208-96-8 | |
| Aniline | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 62-53-3 | |
| Anthracene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-7(4-5)** **Lab ID: 92213326002** Collected: 08/12/14 12:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 848 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 848 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 848 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 206-44-0 | |
| Fluorene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 193-39-5 | |
| Isophorone | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | | |
| Naphthalene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 848 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-7(4-5)** **Lab ID: 92213326002** Collected: 08/12/14 12:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2120 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 85-01-8 | |
| Phenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 108-95-2 | |
| Pyrene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 424 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 59 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 56 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 321-60-8 | |
| Terphenyl-d14 (S) | 46 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 1718-51-0 | |
| Phenol-d6 (S) | 49 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 13127-88-3 | |
| 2-Fluorophenol (S) | 55 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 52 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 17:52 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 104 | 1 | | 08/14/14 17:35 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 104 | 1 | | 08/14/14 17:35 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-7(4-5)** **Lab ID: 92213326002** Collected: 08/12/14 12:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 52.2 | 1 | | 08/14/14 17:35 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 20.9 | 1 | | 08/14/14 17:35 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 52.2 | 1 | | 08/14/14 17:35 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 52.2 | 1 | | 08/14/14 17:35 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.4 | 1 | | 08/14/14 17:35 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.2 | 1 | | 08/14/14 17:35 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 98 | % | 70-130 | 1 | | 08/14/14 17:35 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 83 | % | 70-130 | 1 | | 08/14/14 17:35 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-7(4-5)** **Lab ID: 92213326002** Collected: 08/12/14 12:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | 70-132 | 1 | | 08/14/14 17:35 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **22.2** | % | 0.10 | 1 | | 08/14/14 19:56 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-3(6-7)** **Lab ID: 92213326003** Collected: 08/12/14 14:25 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.8 | 1 | 08/14/14 08:40 | 08/14/14 21:45 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 88 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 21:45 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 44.9 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 83 | % | 21-132 | 1 | 08/14/14 09:47 | 08/16/14 02:26 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 95.2 | 1 | 08/14/14 17:31 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.2 | 1 | 08/14/14 13:28 | 08/14/14 15:53 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 91 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 15:53 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 0.91 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7440-38-2 | |
| Barium | **81.8** | mg/kg | 0.45 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.091 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7440-43-9 | |
| Chromium | **22.4** | mg/kg | 0.45 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7440-47-3 | |
| Lead | **5.0** | mg/kg | 0.45 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7439-92-1 | |
| Selenium | ND | mg/kg | 0.91 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.45 | 1 | 08/14/14 16:55 | 08/15/14 06:33 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.021** | mg/kg | 0.0043 | 1 | 08/14/14 18:00 | 08/16/14 17:59 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 208-96-8 | |
| Aniline | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 62-53-3 | |
| Anthracene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-3(6-7)** **Lab ID: 92213326003** Collected: 08/12/14 14:25 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 897 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 897 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 897 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 206-44-0 | |
| Fluorene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 193-39-5 | |
| Isophorone | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | | |
| Naphthalene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 897 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-3(6-7)** **Lab ID: 92213326003** Collected: 08/12/14 14:25 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 85-01-8 | |
| Phenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 108-95-2 | |
| Pyrene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 449 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 67 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 70 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 321-60-8 | |
| Terphenyl-d14 (S) | 53 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 1718-51-0 | |
| Phenol-d6 (S) | 54 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 13127-88-3 | |
| 2-Fluorophenol (S) | 61 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 57 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 18:21 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 101 | 1 | | 08/14/14 17:55 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 101 | 1 | | 08/14/14 17:55 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-3(6-7)** **Lab ID: 92213326003** Collected: 08/12/14 14:25 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 50.4 | 1 | | 08/14/14 17:55 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 20.2 | 1 | | 08/14/14 17:55 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 50.4 | 1 | | 08/14/14 17:55 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 50.4 | 1 | | 08/14/14 17:55 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.1 | 1 | | 08/14/14 17:55 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.0 | 1 | | 08/14/14 17:55 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | 1 | | 08/14/14 17:55 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-130 | 1 | | 08/14/14 17:55 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-3(6-7)** **Lab ID: 92213326003** Collected: 08/12/14 14:25 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 104 | % | 70-132 | 1 | | 08/14/14 17:55 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **26.4** | % | 0.10 | 1 | | 08/14/14 19:56 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-2(5-6)** **Lab ID: 92213326004** Collected: 08/12/14 14:55 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.6 | 1 | 08/14/14 08:40 | 08/14/14 22:09 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 74 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 22:09 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 80 | % | 21-132 | 1 | 08/14/14 09:47 | 08/16/14 02:47 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 92.6 | 1 | 08/14/14 17:32 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 5.5 | 1 | 08/14/14 13:28 | 08/14/14 16:16 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 87 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 16:16 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.1 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7440-38-2 | |
| Barium | **98.6** | mg/kg | 0.53 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7440-39-3 | |
| Cadmium | **0.25** | mg/kg | 0.11 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7440-43-9 | |
| Chromium | **21.9** | mg/kg | 0.53 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7440-47-3 | |
| Lead | **17.4** | mg/kg | 0.53 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.1 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.53 | 1 | 08/14/14 16:55 | 08/15/14 06:36 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.031** | mg/kg | 0.0050 | 1 | 08/14/14 18:00 | 08/16/14 18:02 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 208-96-8 | |
| Aniline | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 62-53-3 | |
| Anthracene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-2(5-6)** **Lab ID: 92213326004** Collected: 08/12/14 14:55 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 873 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 873 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 873 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 206-44-0 | |
| Fluorene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 193-39-5 | |
| Isophorone | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | | |
| Naphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 873 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-2(5-6)** **Lab ID: 92213326004** Collected: 08/12/14 14:55 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2180 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 85-01-8 | |
| Phenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 108-95-2 | |
| Pyrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 63 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 58 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 321-60-8 | |
| Terphenyl-d14 (S) | 50 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 1718-51-0 | |
| Phenol-d6 (S) | 51 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 13127-88-3 | |
| 2-Fluorophenol (S) | 57 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 51 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 18:50 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 100 | 1 | | 08/14/14 18:14 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 100 | 1 | | 08/14/14 18:14 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 541-73-1 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-2(5-6)** **Lab ID: 92213326004** Collected: 08/12/14 14:55 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 50.2 | 1 | | 08/14/14 18:14 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 20.1 | 1 | | 08/14/14 18:14 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 50.2 | 1 | | 08/14/14 18:14 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 50.2 | 1 | | 08/14/14 18:14 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.0 | 1 | | 08/14/14 18:14 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.0 | 1 | | 08/14/14 18:14 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 101 | % | 70-130 | 1 | | 08/14/14 18:14 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-130 | 1 | | 08/14/14 18:14 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-2(5-6)** **Lab ID: 92213326004** Collected: 08/12/14 14:55 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 106 | % | 70-132 | 1 | | 08/14/14 18:14 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **24.4** | % | 0.10 | 1 | | 08/14/14 19:57 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-6(1-2)** **Lab ID: 92213326005** Collected: 08/12/14 16:20 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | **239** | mg/kg | 6.2 | 1 | 08/14/14 08:40 | 08/14/14 22:09 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 106 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 22:09 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **879** | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **1060** | ug/kg | 204 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 5 | 08/14/14 09:47 | 08/16/14 03:08 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **6750** | mg/kg | 86.4 | 1 | 08/14/14 17:32 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.7 | 1 | 08/14/14 13:28 | 08/14/14 16:39 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 85 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 16:39 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **4.9** | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 06:40 | 7440-38-2 | |
| Barium | **1420** | mg/kg | 5.0 | 10 | 08/14/14 16:55 | 08/15/14 14:55 | 7440-39-3 | |
| Cadmium | **51.7** | mg/kg | 0.10 | 1 | 08/14/14 16:55 | 08/15/14 06:40 | 7440-43-9 | |
| Chromium | **66.5** | mg/kg | 0.50 | 1 | 08/14/14 16:55 | 08/15/14 06:40 | 7440-47-3 | |
| Lead | **1330** | mg/kg | 5.0 | 10 | 08/14/14 16:55 | 08/15/14 14:55 | 7439-92-1 | |
| Selenium | **1.1** | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 06:40 | 7782-49-2 | |
| Silver | **1.6** | mg/kg | 0.50 | 1 | 08/14/14 16:55 | 08/15/14 06:40 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7440-38-2 | |
| Barium | **2.3** | mg/L | 0.25 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7440-39-3 | |
| Cadmium | **0.22** | mg/L | 0.0050 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7440-43-9 | |
| Chromium | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7440-47-3 | |
| Lead | **6.7** | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:05 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 1 | 08/21/14 15:00 | 08/22/14 11:33 | 7439-97-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-6(1-2)** **Lab ID: 92213326005** Collected: 08/12/14 16:20 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.20** | mg/kg | 0.038 | 10 | 08/14/14 18:00 | 08/16/14 18:28 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 208-96-8 | |
| Aniline | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 62-53-3 | |
| Anthracene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 815 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 815 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 815 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | **468** | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 206-44-0 | |
| Fluorene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 118-74-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-6(1-2)** **Lab ID: 92213326005** Collected: 08/12/14 16:20 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Hexachlorocyclopentadiene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 193-39-5 | |
| Isophorone | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | | |
| Naphthalene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 815 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2040 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 85-01-8 | |
| Phenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 108-95-2 | |
| Pyrene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 407 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 44 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 41 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 321-60-8 | |
| Terphenyl-d14 (S) | 34 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 1718-51-0 | |
| Phenol-d6 (S) | 35 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 13127-88-3 | |
| 2-Fluorophenol (S) | 30 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 35 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 22:35 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 112 | 1 | | 08/14/14 18:34 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 112 | 1 | | 08/14/14 18:34 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 56-23-5 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-6(1-2)** **Lab ID: 92213326005** Collected: 08/12/14 16:20 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Chlorobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 55.9 | 1 | | 08/14/14 18:34 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 22.4 | 1 | | 08/14/14 18:34 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 55.9 | 1 | | 08/14/14 18:34 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 79-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-6(1-2)** **Lab ID: 92213326005** Collected: 08/12/14 16:20 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Trichlorofluoromethane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 55.9 | 1 | | 08/14/14 18:34 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 11.2 | 1 | | 08/14/14 18:34 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.6 | 1 | | 08/14/14 18:34 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 98 | % | 70-130 | 1 | | 08/14/14 18:34 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 78 | % | 70-130 | 1 | | 08/14/14 18:34 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-132 | 1 | | 08/14/14 18:34 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **19.0** | % | 0.10 | 1 | | 08/14/14 19:57 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-8(0-1)** **Lab ID: 92213326006** Collected: 08/12/14 17:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | **176** | mg/kg | 6.6 | 1 | 08/14/14 08:40 | 08/14/14 22:32 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 96 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 22:32 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **890** | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 217 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 5 | 08/14/14 09:47 | 08/16/14 03:28 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **1100** | mg/kg | 92.3 | 1 | 08/14/14 17:32 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 8.2 | 1 | 08/14/14 13:28 | 08/14/14 17:01 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 90 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 17:01 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **5.9** | mg/kg | 1.2 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7440-38-2 | |
| Barium | **837** | mg/kg | 0.59 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7440-39-3 | |
| Cadmium | **11.4** | mg/kg | 0.12 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7440-43-9 | |
| Chromium | **52.3** | mg/kg | 0.59 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7440-47-3 | |
| Lead | **1000** | mg/kg | 0.59 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7439-92-1 | |
| Selenium | **1.2** | mg/kg | 1.2 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7782-49-2 | |
| Silver | **0.61** | mg/kg | 0.59 | 1 | 08/14/14 16:55 | 08/15/14 06:43 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7440-38-2 | |
| Barium | **2.7** | mg/L | 0.25 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7440-39-3 | |
| Cadmium | **0.12** | mg/L | 0.0050 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7440-43-9 | |
| Chromium | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7440-47-3 | |
| Lead | **9.2** | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:08 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 1 | 08/21/14 15:00 | 08/22/14 11:36 | 7439-97-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-8(0-1)** **Lab ID: 92213326006** Collected: 08/12/14 17:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.49** | mg/kg | 0.043 | 10 | 08/14/14 18:00 | 08/16/14 18:31 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 208-96-8 | |
| Aniline | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 62-53-3 | |
| Anthracene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 870 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 870 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 870 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | **628** | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 206-44-0 | |
| Fluorene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 118-74-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-8(0-1)** **Lab ID: 92213326006** Collected: 08/12/14 17:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Hexachlorocyclopentadiene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 193-39-5 | |
| Isophorone | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | | |
| Naphthalene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 870 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2170 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 85-01-8 | |
| Phenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 108-95-2 | |
| Pyrene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 435 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 52 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 43 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 321-60-8 | |
| Terphenyl-d14 (S) | 44 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 1718-51-0 | |
| Phenol-d6 (S) | 40 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 13127-88-3 | |
| 2-Fluorophenol (S) | 36 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 47 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 23:03 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 124 | 1 | | 08/14/14 18:54 | 67-64-1 | |
| Benzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 75-27-4 | |
| Bromoform | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 124 | 1 | | 08/14/14 18:54 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 56-23-5 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-8(0-1)** **Lab ID: 92213326006** Collected: 08/12/14 17:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Chlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 75-00-3 | |
| Chloroform | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 61.9 | 1 | | 08/14/14 18:54 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 24.8 | 1 | | 08/14/14 18:54 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 61.9 | 1 | | 08/14/14 18:54 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 103-65-1 | |
| Styrene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 127-18-4 | |
| Toluene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 79-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-8(0-1)** **Lab ID: 92213326006** Collected: 08/12/14 17:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Trichlorofluoromethane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 61.9 | 1 | | 08/14/14 18:54 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 12.4 | 1 | | 08/14/14 18:54 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 6.2 | 1 | | 08/14/14 18:54 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 99 | % | 70-130 | 1 | | 08/14/14 18:54 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 79 | % | 70-130 | 1 | | 08/14/14 18:54 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 116 | % | 70-132 | 1 | | 08/14/14 18:54 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **24.1** | % | 0.10 | 1 | | 08/14/14 19:57 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-10(0-1)** **Lab ID: 92213326007** Collected: 08/12/14 17:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | **149** | mg/kg | 6.3 | 1 | 08/14/14 08:40 | 08/14/14 22:32 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 90 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 22:32 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **518** | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **897** | ug/kg | 168 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 84 | % | 21-132 | 4 | 08/14/14 09:47 | 08/16/14 15:21 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **343** | mg/kg | 88.8 | 1 | 08/14/14 17:33 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.2 | 1 | 08/14/14 13:28 | 08/14/14 17:24 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 93 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 17:24 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **11.1** | mg/kg | 1.2 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7440-38-2 | |
| Barium | **947** | mg/kg | 0.58 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7440-39-3 | |
| Cadmium | **20.9** | mg/kg | 0.12 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7440-43-9 | |
| Chromium | **33.4** | mg/kg | 0.58 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7440-47-3 | |
| Lead | **736** | mg/kg | 0.58 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.2 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7782-49-2 | |
| Silver | **0.94** | mg/kg | 0.58 | 1 | 08/14/14 16:55 | 08/15/14 06:46 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7440-38-2 | |
| Barium | **2.9** | mg/L | 0.25 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7440-39-3 | |
| Cadmium | **0.39** | mg/L | 0.0050 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7440-43-9 | |
| Chromium | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7440-47-3 | |
| Lead | **8.7** | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/21/14 14:35 | 08/22/14 04:11 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/20/14 19:00 | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 1 | 08/21/14 15:00 | 08/22/14 11:38 | 7439-97-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-10(0-1)** **Lab ID: 92213326007** Collected: 08/12/14 17:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.44** | mg/kg | 0.041 | 10 | 08/14/14 18:00 | 08/16/14 18:33 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 208-96-8 | |
| Aniline | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 62-53-3 | |
| Anthracene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 838 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 838 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 838 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 206-44-0 | |
| Fluorene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 118-74-1 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-10(0-1)** **Lab ID: 92213326007** Collected: 08/12/14 17:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Hexachlorocyclopentadiene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 193-39-5 | |
| Isophorone | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | | |
| Naphthalene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 838 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2090 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 85-01-8 | |
| Phenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 108-95-2 | |
| Pyrene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 419 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 60 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 50 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 321-60-8 | |
| Terphenyl-d14 (S) | 39 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 1718-51-0 | |
| Phenol-d6 (S) | 59 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 13127-88-3 | |
| 2-Fluorophenol (S) | 53 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 60 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 23:32 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 123 | 1 | | 08/14/14 19:14 | 67-64-1 | |
| Benzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 75-27-4 | |
| Bromoform | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 123 | 1 | | 08/14/14 19:14 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 56-23-5 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-10(0-1)** **Lab ID: 92213326007** Collected: 08/12/14 17:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Chlorobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 75-00-3 | |
| Chloroform | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 61.5 | 1 | | 08/14/14 19:14 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 24.6 | 1 | | 08/14/14 19:14 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 61.5 | 1 | | 08/14/14 19:14 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 103-65-1 | |
| Styrene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 127-18-4 | |
| Toluene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 79-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-10(0-1)** **Lab ID: 92213326007** Collected: 08/12/14 17:50 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Trichlorofluoromethane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 61.5 | 1 | | 08/14/14 19:14 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 12.3 | 1 | | 08/14/14 19:14 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 6.1 | 1 | | 08/14/14 19:14 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 97 | % | 70-130 | 1 | | 08/14/14 19:14 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 75 | % | 70-130 | 1 | | 08/14/14 19:14 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-132 | 1 | | 08/14/14 19:14 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **21.2** | % | 0.10 | 1 | | 08/14/14 19:57 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-9(3-4)** **Lab ID: 92213326008** Collected: 08/12/14 19:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.7 | 1 | 08/14/14 08:40 | 08/14/14 22:56 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 76 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 22:56 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 43.9 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 66 | % | 21-132 | 1 | 08/14/14 09:47 | 08/15/14 20:57 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 93.1 | 1 | 08/14/14 17:33 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 5.9 | 1 | 08/14/14 13:28 | 08/14/14 17:47 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 88 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 17:47 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7440-38-2 | |
| Barium | **152** | mg/kg | 0.51 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.10 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7440-43-9 | |
| Chromium | **31.5** | mg/kg | 0.51 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7440-47-3 | |
| Lead | **10.4** | mg/kg | 0.51 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.51 | 1 | 08/14/14 16:55 | 08/15/14 06:49 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.057** | mg/kg | 0.0043 | 1 | 08/14/14 18:00 | 08/16/14 18:36 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 208-96-8 | |
| Aniline | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 62-53-3 | |
| Anthracene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 207-08-9 | |



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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-9(3-4)** **Lab ID: 92213326008** Collected: 08/12/14 19:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 878 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 878 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 878 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 206-44-0 | |
| Fluorene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 193-39-5 | |
| Isophorone | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | | |
| Naphthalene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 878 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 100-01-6 | |

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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-9(3-4)** **Lab ID: 92213326008** Collected: 08/12/14 19:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 85-01-8 | |
| Phenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 108-95-2 | |
| Pyrene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 439 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 65 | % | 23-110 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 68 | % | 30-110 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 321-60-8 | |
| Terphenyl-d14 (S) | 70 | % | 28-110 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 1718-51-0 | |
| Phenol-d6 (S) | 63 | % | 22-110 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 13127-88-3 | |
| 2-Fluorophenol (S) | 59 | % | 13-110 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 68 | % | 27-110 | 1 | 08/14/14 10:45 | 08/15/14 12:42 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 99.7 | 1 | | 08/14/14 19:34 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 99.7 | 1 | | 08/14/14 19:34 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 541-73-1 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-9(3-4)** **Lab ID: 92213326008** Collected: 08/12/14 19:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 49.9 | 1 | | 08/14/14 19:34 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 19.9 | 1 | | 08/14/14 19:34 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 49.9 | 1 | | 08/14/14 19:34 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 49.9 | 1 | | 08/14/14 19:34 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10 | 1 | | 08/14/14 19:34 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.0 | 1 | | 08/14/14 19:34 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | 1 | | 08/14/14 19:34 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | 1 | | 08/14/14 19:34 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-9(3-4)** **Lab ID: 92213326008** Collected: 08/12/14 19:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 113 | % | 70-132 | 1 | | 08/14/14 19:34 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **24.8** | % | 0.10 | 1 | | 08/14/14 19:57 | | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(3-4)** **Lab ID: 92213326009** Collected: 08/13/14 08:35 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.3 | 1 | 08/14/14 08:40 | 08/14/14 22:56 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 77 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 22:56 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 41.3 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 82 | % | 21-132 | 1 | 08/14/14 09:47 | 08/16/14 04:09 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 87.7 | 1 | 08/14/14 17:34 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 5.4 | 1 | 08/14/14 13:28 | 08/14/14 18:09 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 88 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 18:09 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.2 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7440-38-2 | |
| Barium | **54.6** | mg/kg | 0.61 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.12 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7440-43-9 | |
| Chromium | **14.5** | mg/kg | 0.61 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7440-47-3 | |
| Lead | **2.5** | mg/kg | 0.61 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.2 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.61 | 1 | 08/14/14 16:55 | 08/15/14 06:52 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.0096** | mg/kg | 0.0041 | 1 | 08/14/14 18:00 | 08/16/14 18:39 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 208-96-8 | |
| Aniline | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 62-53-3 | |
| Anthracene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 207-08-9 | |

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9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(3-4)** **Lab ID: 92213326009** Collected: 08/13/14 08:35 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 827 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 827 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 827 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 206-44-0 | |
| Fluorene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 193-39-5 | |
| Isophorone | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | | |
| Naphthalene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 827 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 100-01-6 | |

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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(3-4)** **Lab ID: 92213326009** Collected: 08/13/14 08:35 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2070 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 85-01-8 | |
| Phenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 108-95-2 | |
| Pyrene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 413 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 60 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 57 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 321-60-8 | |
| Terphenyl-d14 (S) | 44 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 1718-51-0 | |
| Phenol-d6 (S) | 52 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 13127-88-3 | |
| 2-Fluorophenol (S) | 51 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 47 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 19:47 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 91.6 | 1 | | 08/15/14 11:27 | 67-64-1 | |
| Benzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 75-27-4 | |
| Bromoform | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 91.6 | 1 | | 08/15/14 11:27 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 75-00-3 | |
| Chloroform | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 541-73-1 | |

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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(3-4)** **Lab ID: 92213326009** Collected: 08/13/14 08:35 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 45.8 | 1 | | 08/15/14 11:27 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 18.3 | 1 | | 08/15/14 11:27 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 45.8 | 1 | | 08/15/14 11:27 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 103-65-1 | |
| Styrene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 127-18-4 | |
| Toluene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 45.8 | 1 | | 08/15/14 11:27 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 9.2 | 1 | | 08/15/14 11:27 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 4.6 | 1 | | 08/15/14 11:27 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | 1 | | 08/15/14 11:27 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 90 | % | 70-130 | 1 | | 08/15/14 11:27 | 460-00-4 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(3-4)** **Lab ID: 92213326009** Collected: 08/13/14 08:35 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 110 | % | 70-132 | 1 | | 08/15/14 11:27 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **20.2** | % | 0.10 | 1 | | 08/14/14 19:58 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(5-6.5)** **Lab ID: 92213326010** Collected: 08/13/14 09:10 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.4 | 1 | 08/14/14 08:40 | 08/14/14 23:19 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 76 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 23:19 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 42.2 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 84 | % | 21-132 | 1 | 08/14/14 09:47 | 08/16/14 05:32 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 89.4 | 1 | 08/14/14 17:34 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 5.0 | 1 | 08/14/14 13:28 | 08/14/14 18:32 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 92 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 18:32 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.3 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7440-38-2 | |
| Barium | **65.7** | mg/kg | 0.63 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.13 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7440-43-9 | |
| Chromium | **17.9** | mg/kg | 0.63 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7440-47-3 | |
| Lead | **3.9** | mg/kg | 0.63 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.3 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.63 | 1 | 08/14/14 16:55 | 08/15/14 06:55 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.0062** | mg/kg | 0.0042 | 1 | 08/14/14 18:00 | 08/16/14 18:41 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 208-96-8 | |
| Aniline | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 62-53-3 | |
| Anthracene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 207-08-9 | |



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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(5-6.5)** **Lab ID: 92213326010** Collected: 08/13/14 09:10 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 843 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 843 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 843 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 206-44-0 | |
| Fluorene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 193-39-5 | |
| Isophorone | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | | |
| Naphthalene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 843 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(5-6.5)** **Lab ID: 92213326010** Collected: 08/13/14 09:10 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 85-01-8 | |
| Phenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 108-95-2 | |
| Pyrene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 422 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 65 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 66 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 321-60-8 | |
| Terphenyl-d14 (S) | 64 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 1718-51-0 | |
| Phenol-d6 (S) | 63 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 13127-88-3 | |
| 2-Fluorophenol (S) | 57 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 55 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 20:15 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 83.0 | 1 | | 08/14/14 20:13 | 67-64-1 | |
| Benzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 75-27-4 | |
| Bromoform | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 83.0 | 1 | | 08/14/14 20:13 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 75-00-3 | |
| Chloroform | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(5-6.5)** **Lab ID: 92213326010** Collected: 08/13/14 09:10 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 41.5 | 1 | | 08/14/14 20:13 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 16.6 | 1 | | 08/14/14 20:13 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 41.5 | 1 | | 08/14/14 20:13 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 103-65-1 | |
| Styrene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 127-18-4 | |
| Toluene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 41.5 | 1 | | 08/14/14 20:13 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 8.3 | 1 | | 08/14/14 20:13 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 4.1 | 1 | | 08/14/14 20:13 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 103 | % | 70-130 | 1 | | 08/14/14 20:13 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-130 | 1 | | 08/14/14 20:13 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-1(5-6.5)** **Lab ID: 92213326010** Collected: 08/13/14 09:10 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 107 | % | 70-132 | 1 | | 08/14/14 20:13 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **21.7** | % | 0.10 | 1 | | 08/14/14 19:58 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-11(3-4)** **Lab ID: 92213326011** Collected: 08/13/14 11:15 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | **12.3** | mg/kg | 6.0 | 1 | 08/14/14 08:40 | 08/14/14 23:19 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 89 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 23:19 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 198 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 5 | 08/14/14 09:47 | 08/16/14 05:52 | 2051-24-3 | D3,S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **124** | mg/kg | 84.2 | 1 | 08/14/14 17:34 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.1 | 1 | 08/14/14 13:28 | 08/14/14 18:55 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 90 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 18:55 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7440-38-2 | |
| Barium | **204** | mg/kg | 0.50 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.10 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7440-43-9 | |
| Chromium | **31.7** | mg/kg | 0.50 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7440-47-3 | |
| Lead | **17.8** | mg/kg | 0.50 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.50 | 1 | 08/14/14 16:55 | 08/15/14 07:07 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.018** | mg/kg | 0.0038 | 1 | 08/14/14 18:00 | 08/16/14 18:44 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 208-96-8 | |
| Aniline | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 62-53-3 | |
| Anthracene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-11(3-4)** **Lab ID: 92213326011** Collected: 08/13/14 11:15 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 794 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 794 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 794 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 206-44-0 | |
| Fluorene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 193-39-5 | |
| Isophorone | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | | |
| Naphthalene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 794 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-11(3-4)** **Lab ID: 92213326011** Collected: 08/13/14 11:15 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 1980 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 85-01-8 | |
| Phenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 108-95-2 | |
| Pyrene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 397 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 51 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 45 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 321-60-8 | |
| Terphenyl-d14 (S) | 39 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 1718-51-0 | |
| Phenol-d6 (S) | 53 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 13127-88-3 | |
| 2-Fluorophenol (S) | 46 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 44 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 20:43 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 115 | 1 | | 08/14/14 20:33 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 115 | 1 | | 08/14/14 20:33 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 541-73-1 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-11(3-4)** **Lab ID: 92213326011** Collected: 08/13/14 11:15 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 57.7 | 1 | | 08/14/14 20:33 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 23.1 | 1 | | 08/14/14 20:33 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 57.7 | 1 | | 08/14/14 20:33 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 57.7 | 1 | | 08/14/14 20:33 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 11.5 | 1 | | 08/14/14 20:33 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.8 | 1 | | 08/14/14 20:33 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | 1 | | 08/14/14 20:33 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 85 | % | 70-130 | 1 | | 08/14/14 20:33 | 460-00-4 | |

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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-11(3-4)** **Lab ID: 92213326011** Collected: 08/13/14 11:15 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 120 | % | 70-132 | 1 | | 08/14/14 20:33 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **16.8** | % | 0.10 | 1 | | 08/14/14 19:58 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-4(6-7)** **Lab ID: 92213326012** Collected: 08/13/14 12:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.8 | 1 | 08/14/14 08:40 | 08/14/14 23:43 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 78 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 23:43 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 44.8 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 64 | % | 21-132 | 1 | 08/14/14 09:47 | 08/16/14 06:13 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 95.0 | 1 | 08/14/14 17:35 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 7.0 | 1 | 08/14/14 13:28 | 08/14/14 19:18 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 95 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 19:18 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7440-38-2 | |
| Barium | **204** | mg/kg | 0.52 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.10 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7440-43-9 | |
| Chromium | **49.1** | mg/kg | 0.52 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7440-47-3 | |
| Lead | **7.1** | mg/kg | 0.52 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.0 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.52 | 1 | 08/14/14 16:55 | 08/15/14 07:10 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.048** | mg/kg | 0.0050 | 1 | 08/14/14 18:00 | 08/16/14 18:47 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 208-96-8 | |
| Aniline | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 62-53-3 | |
| Anthracene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 207-08-9 | |



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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-4(6-7)** **Lab ID: 92213326012** Collected: 08/13/14 12:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 896 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 896 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 896 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 206-44-0 | |
| Fluorene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 193-39-5 | |
| Isophorone | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | | |
| Naphthalene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 896 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 100-01-6 | |

## REPORT OF LABORATORY ANALYSIS

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-4(6-7)** **Lab ID: 92213326012** Collected: 08/13/14 12:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2240 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 85-01-8 | |
| Phenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 108-95-2 | |
| Pyrene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 448 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 59 | % | 23-110 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 62 | % | 30-110 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 321-60-8 | |
| Terphenyl-d14 (S) | 49 | % | 28-110 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 1718-51-0 | |
| Phenol-d6 (S) | 57 | % | 22-110 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 13127-88-3 | |
| 2-Fluorophenol (S) | 57 | % | 13-110 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 57 | % | 27-110 | 1 | 08/14/14 10:45 | 08/15/14 13:10 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 109 | 1 | | 08/14/14 20:53 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 109 | 1 | | 08/14/14 20:53 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 541-73-1 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-4(6-7)** **Lab ID: 92213326012** Collected: 08/13/14 12:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 75-71-8 | 1g |
| 1,1-Dichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 54.6 | 1 | | 08/14/14 20:53 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 21.9 | 1 | | 08/14/14 20:53 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 54.6 | 1 | | 08/14/14 20:53 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 54.6 | 1 | | 08/14/14 20:53 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.9 | 1 | | 08/14/14 20:53 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.5 | 1 | | 08/14/14 20:53 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 99 | % | 70-130 | 1 | | 08/14/14 20:53 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | 1 | | 08/14/14 20:53 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-4(6-7)** **Lab ID: 92213326012** Collected: 08/13/14 12:00 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 122 | % | 70-132 | 1 | | 08/14/14 20:53 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **26.3** | % | 0.10 | 1 | | 08/14/14 19:58 | | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-5(6-7)** **Lab ID: 92213326013** Collected: 08/13/14 12:45 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Components | ND | mg/kg | 6.6 | 1 | 08/14/14 08:40 | 08/14/14 23:43 | 68334-30-5 | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 72 | % | 41-119 | 1 | 08/14/14 08:40 | 08/14/14 23:43 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 43.7 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 75 | % | 21-132 | 1 | 08/14/14 09:47 | 08/16/14 06:33 | 2051-24-3 | |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | ND | mg/kg | 92.7 | 1 | 08/14/14 17:35 | 08/14/14 18:34 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gasoline Range Organics | ND | mg/kg | 6.1 | 1 | 08/14/14 13:28 | 08/14/14 19:40 | 8006-61-9 | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 91 | % | 70-167 | 1 | 08/14/14 13:28 | 08/14/14 19:40 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 0.84 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7440-38-2 | |
| Barium | **185** | mg/kg | 0.42 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.084 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7440-43-9 | |
| Chromium | **37.5** | mg/kg | 0.42 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7440-47-3 | |
| Lead | **10.1** | mg/kg | 0.42 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7439-92-1 | |
| Selenium | ND | mg/kg | 0.84 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.42 | 1 | 08/14/14 16:55 | 08/15/14 07:13 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.071** | mg/kg | 0.0042 | 1 | 08/14/14 18:00 | 08/16/14 18:49 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 208-96-8 | |
| Aniline | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 62-53-3 | |
| Anthracene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-5(6-7)** **Lab ID: 92213326013** Collected: 08/13/14 12:45 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 874 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 874 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 874 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 206-44-0 | |
| Fluorene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 193-39-5 | |
| Isophorone | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | | |
| Naphthalene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 874 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 100-01-6 | |

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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-5(6-7)** **Lab ID: 92213326013** Collected: 08/13/14 12:45 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 2190 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 85-01-8 | |
| Phenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 108-95-2 | |
| Pyrene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 437 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 61 | % | 23-110 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 62 | % | 30-110 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 321-60-8 | |
| Terphenyl-d14 (S) | 59 | % | 28-110 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 1718-51-0 | |
| Phenol-d6 (S) | 65 | % | 22-110 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 13127-88-3 | |
| 2-Fluorophenol (S) | 55 | % | 13-110 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 55 | % | 27-110 | 1 | 08/14/14 10:45 | 08/14/14 21:40 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 109 | 1 | | 08/14/14 21:13 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 109 | 1 | | 08/14/14 21:13 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-5(6-7)** **Lab ID: 92213326013** Collected: 08/13/14 12:45 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 54.7 | 1 | | 08/14/14 21:13 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 21.9 | 1 | | 08/14/14 21:13 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 54.7 | 1 | | 08/14/14 21:13 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 54.7 | 1 | | 08/14/14 21:13 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 10.9 | 1 | | 08/14/14 21:13 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.5 | 1 | | 08/14/14 21:13 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 102 | % | 70-130 | 1 | | 08/14/14 21:13 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 93 | % | 70-130 | 1 | | 08/14/14 21:13 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

**Sample: B-5(6-7)** **Lab ID: 92213326013** Collected: 08/13/14 12:45 Received: 08/13/14 16:52 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 119 | % | 70-132 | 1 | | 08/14/14 21:13 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **24.5** | % | 0.10 | 1 | | 08/14/14 19:58 | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: GCSV/18551 Analysis Method: 9071B
QC Batch Method: 9071B Analysis Description: 9071 Oil and Grease
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1263986 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Oil and Grease | mg/kg | ND | 70.0 | 08/14/14 18:34 | |

LABORATORY CONTROL SAMPLE & LCSD: 1263987 1263988

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Grease | mg/kg | 1330 | 1290 | 1250 | 97 | 94 | 78-114 | 3 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: GCV/8447 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1263791 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Gasoline Range Organics | mg/kg | ND | 6.0 | 08/14/14 14:16 | |
| 4-Bromofluorobenzene (S) | % | 95 | 70-167 | 08/14/14 14:16 | |

LABORATORY CONTROL SAMPLE: 1263792

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Gasoline Range Organics | mg/kg | 49.9 | 45.5 | 91 | 70-165 | |
| 4-Bromofluorobenzene (S) | % | | | 95 | 70-167 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1263793 1263794

| Parameter | Units | 92213326002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | mg/kg | ND | 57.9 | 57.9 | 63.3 | 69.9 | 109 | 121 | 47-187 | 10 | 30 | |
| 4-Bromofluorobenzene (S) | % | | | | | | 97 | 87 | 70-167 | | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: MERP/6991 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 92213326005, 92213326006, 92213326007

METHOD BLANK: 1269187 Matrix: Water
Associated Lab Samples: 92213326005, 92213326006, 92213326007

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | ug/L | ND | 0.20 | 08/22/14 11:17 | |

LABORATORY CONTROL SAMPLE: 1269188

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | ug/L | 2.5 | 2.4 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1269189 1269190

| Parameter | Units | 92213006002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | ND | 2.5 | 2.5 | 2.2 | 2.2 | 90 | 90 | 75-125 | 0 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: MERP/6970 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1264361 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | mg/kg | ND | 0.0050 | 08/16/14 17:46 | |

LABORATORY CONTROL SAMPLE: 1264362

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | mg/kg | .067 | 0.069 | 103 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1264363 1264364

| Parameter | Units | 92213326002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.016 | .055 | .062 | 0.18 | 0.059 | 298 | 69 | 75-125 | 103 | 20 | M1, M6, R1 |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: MPRP/16676 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1264492 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 1.0 | 08/15/14 05:35 | |
| Barium | mg/kg | ND | 0.50 | 08/15/14 05:35 | |
| Cadmium | mg/kg | ND | 0.10 | 08/15/14 05:35 | |
| Chromium | mg/kg | ND | 0.50 | 08/15/14 05:35 | |
| Lead | mg/kg | ND | 0.50 | 08/15/14 05:35 | |
| Selenium | mg/kg | ND | 1.0 | 08/15/14 05:35 | |
| Silver | mg/kg | ND | 0.50 | 08/15/14 05:35 | |

LABORATORY CONTROL SAMPLE: 1264493

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 50 | 49.2 | 98 | 80-120 | |
| Barium | mg/kg | 50 | 48.6 | 97 | 80-120 | |
| Cadmium | mg/kg | 50 | 50.3 | 101 | 80-120 | |
| Chromium | mg/kg | 50 | 48.2 | 96 | 80-120 | |
| Lead | mg/kg | 50 | 48.7 | 97 | 80-120 | |
| Selenium | mg/kg | 50 | 49.8 | 100 | 80-120 | |
| Silver | mg/kg | 25 | 25.0 | 100 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1264494 1264495

| Parameter | Units | 92211640001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 146 | 154 | 138 | 146 | 94 | 94 | 75-125 | 5 | 20 | |
| Barium | mg/kg | 301 | 146 | 154 | 438 | 437 | 94 | 88 | 75-125 | 0 | 20 | |
| Cadmium | mg/kg | 1.1 | 146 | 154 | 142 | 151 | 97 | 97 | 75-125 | 6 | 20 | |
| Chromium | mg/kg | 27.8 | 146 | 154 | 161 | 170 | 92 | 93 | 75-125 | 5 | 20 | |
| Lead | mg/kg | 39.7 | 146 | 154 | 166 | 177 | 87 | 89 | 75-125 | 7 | 20 | |
| Selenium | mg/kg | 4.3 | 146 | 154 | 136 | 145 | 90 | 92 | 75-125 | 7 | 20 | |
| Silver | mg/kg | 7.2 | 72.6 | 77.1 | 75.3 | 79.2 | 94 | 94 | 75-125 | 5 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: MPRP/16723 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92213326005, 92213326006, 92213326007

METHOD BLANK: 1269180 Matrix: Water
Associated Lab Samples: 92213326005, 92213326006, 92213326007

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/L | ND | 0.050 | 08/22/14 03:37 | |
| Barium | mg/L | ND | 0.25 | 08/22/14 03:37 | |
| Cadmium | mg/L | ND | 0.0050 | 08/22/14 03:37 | |
| Chromium | mg/L | ND | 0.025 | 08/22/14 03:37 | |
| Lead | mg/L | ND | 0.025 | 08/22/14 03:37 | |
| Selenium | mg/L | ND | 0.10 | 08/22/14 03:37 | |
| Silver | mg/L | ND | 0.025 | 08/22/14 03:37 | |

LABORATORY CONTROL SAMPLE: 1269181

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/L | 2.5 | 2.7 | 109 | 80-120 | |
| Barium | mg/L | 2.5 | 2.8 | 110 | 80-120 | |
| Cadmium | mg/L | 2.5 | 2.5 | 101 | 80-120 | |
| Chromium | mg/L | 2.5 | 2.7 | 108 | 80-120 | |
| Lead | mg/L | 2.5 | 2.6 | 104 | 80-120 | |
| Selenium | mg/L | 2.5 | 2.8 | 111 | 80-120 | |
| Silver | mg/L | 1.2 | 1.3 | 100 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1269182 1269183

| Parameter | Units | 92213006002 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/L | ND | 2.5 | 2.5 | 2.7 | 2.8 | 110 | 112 | 75-125 | 2 | 20 | |
| Barium | mg/L | 2.5 | 2.5 | 2.5 | 5.3 | 5.5 | 114 | 119 | 75-125 | 2 | 20 | |
| Cadmium | mg/L | 0.26 | 2.5 | 2.5 | 2.8 | 2.9 | 103 | 105 | 75-125 | 2 | 20 | |
| Chromium | mg/L | ND | 2.5 | 2.5 | 2.8 | 2.8 | 110 | 112 | 75-125 | 2 | 20 | |
| Lead | mg/L | 3.7 | 2.5 | 2.5 | 6.4 | 6.5 | 107 | 112 | 75-125 | 2 | 20 | |
| Selenium | mg/L | ND | 2.5 | 2.5 | 2.8 | 2.8 | 111 | 113 | 75-125 | 2 | 20 | |
| Silver | mg/L | ND | 1.2 | 1.2 | 1.3 | 1.3 | 103 | 105 | 75-125 | 2 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: MSV/27943 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1263977 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,1-Dichloroethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,1-Dichloroethene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,1-Dichloropropene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2-Dichloroethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,2-Dichloropropane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,3-Dichloropropane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 2,2-Dichloropropane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 2-Butanone (MEK) | ug/kg | ND | 81.7 | 08/14/14 12:38 | |
| 2-Chlorotoluene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 2-Hexanone | ug/kg | ND | 40.8 | 08/14/14 12:38 | |
| 4-Chlorotoluene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 40.8 | 08/14/14 12:38 | |
| Acetone | ug/kg | ND | 81.7 | 08/14/14 12:38 | |
| Benzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Bromobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Bromochloromethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Bromodichloromethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Bromoform | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Bromomethane | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| Carbon tetrachloride | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Chlorobenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Chloroethane | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| Chloroform | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Chloromethane | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

METHOD BLANK: 1263977 Matrix: Solid

Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromochloromethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Dibromomethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Dichlorodifluoromethane | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| Diisopropyl ether | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Ethylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| m&p-Xylene | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| Methyl-tert-butyl ether | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Methylene Chloride | ug/kg | ND | 16.3 | 08/14/14 12:38 | |
| n-Butylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| n-Propylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Naphthalene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| o-Xylene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| p-Isopropyltoluene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| sec-Butylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Styrene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| tert-Butylbenzene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Tetrachloroethene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Toluene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Trichloroethene | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Trichlorofluoromethane | ug/kg | ND | 4.1 | 08/14/14 12:38 | |
| Vinyl acetate | ug/kg | ND | 40.8 | 08/14/14 12:38 | |
| Vinyl chloride | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| Xylene (Total) | ug/kg | ND | 8.2 | 08/14/14 12:38 | |
| 1,2-Dichloroethane-d4 (S) | % | 104 | 70-132 | 08/14/14 12:38 | |
| 4-Bromofluorobenzene (S) | % | 97 | 70-130 | 08/14/14 12:38 | |
| Toluene-d8 (S) | % | 103 | 70-130 | 08/14/14 12:38 | |

LABORATORY CONTROL SAMPLE: 1263978

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | 42.1 | 44.1 | 105 | 74-137 | |
| 1,1,1-Trichloroethane | ug/kg | 42.1 | 40.2 | 96 | 67-140 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 42.1 | 45.1 | 107 | 72-141 | |
| 1,1,2-Trichloroethane | ug/kg | 42.1 | 45.5 | 108 | 78-138 | |
| 1,1-Dichloroethane | ug/kg | 42.1 | 38.9 | 92 | 69-134 | |
| 1,1-Dichloroethene | ug/kg | 42.1 | 43.2 | 103 | 67-138 | |
| 1,1-Dichloropropene | ug/kg | 42.1 | 42.7 | 101 | 69-139 | |
| 1,2,3-Trichlorobenzene | ug/kg | 42.1 | 52.5 | 125 | 70-146 | |
| 1,2,3-Trichloropropane | ug/kg | 42.1 | 47.2 | 112 | 69-144 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

LABORATORY CONTROL SAMPLE: 1263978

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 42.1 | 47.7 | 113 | 68-148 | |
| 1,2,4-Trimethylbenzene | ug/kg | 42.1 | 48.3 | 115 | 74-137 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | 42.1 | 52.8 | 125 | 65-140 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 42.1 | 46.4 | 110 | 77-135 | |
| 1,2-Dichlorobenzene | ug/kg | 42.1 | 48.9 | 116 | 77-141 | |
| 1,2-Dichloroethane | ug/kg | 42.1 | 43.3 | 103 | 65-137 | |
| 1,2-Dichloropropane | ug/kg | 42.1 | 45.1 | 107 | 72-136 | |
| 1,3,5-Trimethylbenzene | ug/kg | 42.1 | 47.5 | 113 | 76-133 | |
| 1,3-Dichlorobenzene | ug/kg | 42.1 | 47.8 | 114 | 74-138 | |
| 1,3-Dichloropropane | ug/kg | 42.1 | 46.2 | 110 | 71-139 | |
| 1,4-Dichlorobenzene | ug/kg | 42.1 | 47.1 | 112 | 76-138 | |
| 2,2-Dichloropropane | ug/kg | 42.1 | 41.0 | 97 | 68-137 | |
| 2-Butanone (MEK) | ug/kg | 84.2 | 86.3 | 103 | 58-147 | |
| 2-Chlorotoluene | ug/kg | 42.1 | 47.9 | 114 | 73-139 | |
| 2-Hexanone | ug/kg | 84.2 | 107 | 127 | 62-145 | |
| 4-Chlorotoluene | ug/kg | 42.1 | 47.3 | 112 | 76-141 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | 84.2 | 105 | 125 | 64-149 | |
| Acetone | ug/kg | 84.2 | 80J | 95 | 53-153 | |
| Benzene | ug/kg | 42.1 | 43.2 | 103 | 73-135 | |
| Bromobenzene | ug/kg | 42.1 | 55.8 | 133 | 75-133 | |
| Bromochloromethane | ug/kg | 42.1 | 42.0 | 100 | 73-134 | |
| Bromodichloromethane | ug/kg | 42.1 | 46.5 | 111 | 71-135 | |
| Bromoform | ug/kg | 42.1 | 48.0 | 114 | 66-141 | |
| Bromomethane | ug/kg | 42.1 | 37.2 | 88 | 53-160 | |
| Carbon tetrachloride | ug/kg | 42.1 | 42.3 | 101 | 60-145 | |
| Chlorobenzene | ug/kg | 42.1 | 45.7 | 108 | 78-130 | |
| Chloroethane | ug/kg | 42.1 | 36.1 | 86 | 64-149 | |
| Chloroform | ug/kg | 42.1 | 44.3 | 105 | 70-134 | |
| Chloromethane | ug/kg | 42.1 | 44.8 | 107 | 52-150 | |
| cis-1,2-Dichloroethene | ug/kg | 42.1 | 46.0 | 109 | 70-133 | |
| cis-1,3-Dichloropropene | ug/kg | 42.1 | 46.2 | 110 | 68-134 | |
| Dibromochloromethane | ug/kg | 42.1 | 48.5 | 115 | 71-138 | |
| Dibromomethane | ug/kg | 42.1 | 43.5 | 103 | 74-130 | |
| Dichlorodifluoromethane | ug/kg | 42.1 | 39.5 | 94 | 40-160 | |
| Diisopropyl ether | ug/kg | 42.1 | 44.6 | 106 | 69-141 | |
| Ethylbenzene | ug/kg | 42.1 | 45.1 | 107 | 75-133 | |
| Hexachloro-1,3-butadiene | ug/kg | 42.1 | 47.5 | 113 | 68-143 | |
| Isopropylbenzene (Cumene) | ug/kg | 42.1 | 46.9 | 112 | 76-143 | |
| m&p-Xylene | ug/kg | 84.2 | 91.3 | 108 | 75-136 | |
| Methyl-tert-butyl ether | ug/kg | 42.1 | 43.2 | 103 | 68-144 | |
| Methylene Chloride | ug/kg | 42.1 | 47.5 | 113 | 45-154 | |
| n-Butylbenzene | ug/kg | 42.1 | 47.2 | 112 | 72-137 | |
| n-Propylbenzene | ug/kg | 42.1 | 43.8 | 104 | 76-136 | |
| Naphthalene | ug/kg | 42.1 | 55.4 | 132 | 68-151 | |
| o-Xylene | ug/kg | 42.1 | 46.2 | 110 | 76-141 | |
| p-Isopropyltoluene | ug/kg | 42.1 | 46.6 | 111 | 76-140 | |
| sec-Butylbenzene | ug/kg | 42.1 | 43.9 | 104 | 79-139 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

LABORATORY CONTROL SAMPLE: 1263978

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Styrene | ug/kg | 42.1 | 48.7 | 116 | 79-137 | |
| tert-Butylbenzene | ug/kg | 42.1 | 47.3 | 112 | 74-143 | |
| Tetrachloroethene | ug/kg | 42.1 | 41.4 | 98 | 71-138 | |
| Toluene | ug/kg | 42.1 | 43.5 | 103 | 74-131 | |
| trans-1,2-Dichloroethene | ug/kg | 42.1 | 43.1 | 103 | 67-135 | |
| trans-1,3-Dichloropropene | ug/kg | 42.1 | 46.6 | 111 | 65-146 | |
| Trichloroethene | ug/kg | 42.1 | 42.1 | 100 | 67-135 | |
| Trichlorofluoromethane | ug/kg | 42.1 | 39.0 | 93 | 59-144 | |
| Vinyl acetate | ug/kg | 84.2 | 84.8 | 101 | 40-160 | F3 |
| Vinyl chloride | ug/kg | 42.1 | 39.8 | 95 | 56-141 | |
| Xylene (Total) | ug/kg | 126 | 138 | 109 | 76-137 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 101 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | 100 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE SAMPLE: 1264904

| Parameter | Units | 92213326003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ug/kg | ND | 47.3 | 49.6 | 105 | 49-180 | |
| Benzene | ug/kg | ND | 47.3 | 47.4 | 100 | 50-166 | |
| Chlorobenzene | ug/kg | ND | 47.3 | 45.4 | 96 | 43-169 | |
| Toluene | ug/kg | ND | 47.3 | 44.6 | 94 | 52-163 | |
| Trichloroethene | ug/kg | ND | 47.3 | 44.1 | 93 | 49-167 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 110 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | | 93 | 70-130 | |
| Toluene-d8 (S) | % | | | | 100 | 70-130 | |

SAMPLE DUPLICATE: 1264905

| Parameter | Units | 92212923003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,1-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethene | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloropropene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichloropropane | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trimethylbenzene | ug/kg | 14.1 | 3.1J | | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

SAMPLE DUPLICATE: 1264905

| Parameter | Units | 92212923003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 1,3,5-Trimethylbenzene | ug/kg | 5.4 | 1.7J | | 30 | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 2,2-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 2-Butanone (MEK) | ug/kg | ND | ND | | 30 | |
| 2-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 2-Hexanone | ug/kg | ND | ND | | 30 | |
| 4-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | ND | | 30 | |
| Acetone | ug/kg | 96.8 | ND | | 30 | |
| Benzene | ug/kg | 65.7 | 112 | 52 | 30 | R1 |
| Bromobenzene | ug/kg | ND | ND | | 30 | |
| Bromochloromethane | ug/kg | ND | ND | | 30 | |
| Bromodichloromethane | ug/kg | ND | ND | | 30 | |
| Bromoform | ug/kg | ND | ND | | 30 | |
| Bromomethane | ug/kg | ND | ND | | 30 | |
| Carbon tetrachloride | ug/kg | ND | ND | | 30 | |
| Chlorobenzene | ug/kg | ND | ND | | 30 | |
| Chloroethane | ug/kg | ND | ND | | 30 | |
| Chloroform | ug/kg | ND | ND | | 30 | |
| Chloromethane | ug/kg | ND | ND | | 30 | |
| cis-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| cis-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Dibromochloromethane | ug/kg | ND | ND | | 30 | |
| Dibromomethane | ug/kg | ND | ND | | 30 | |
| Dichlorodifluoromethane | ug/kg | ND | ND | | 30 | |
| Diisopropyl ether | ug/kg | ND | 1.7J | | 30 | |
| Ethylbenzene | ug/kg | 4.0J | ND | | 30 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | 30 | |
| Isopropylbenzene (Cumene) | ug/kg | 2.8J | ND | | 30 | |
| m&p-Xylene | ug/kg | 26.5 | 13.7 | 63 | 30 | R1 |
| Methyl-tert-butyl ether | ug/kg | 4.4J | 4.9 | | 30 | |
| Methylene Chloride | ug/kg | ND | ND | | 30 | |
| n-Butylbenzene | ug/kg | ND | ND | | 30 | |
| n-Propylbenzene | ug/kg | 6.4 | 2.9J | | 30 | |
| Naphthalene | ug/kg | ND | ND | | 30 | |
| o-Xylene | ug/kg | 15.0 | 6.2 | 83 | 30 | R1 |
| p-Isopropyltoluene | ug/kg | ND | ND | | 30 | |
| sec-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Styrene | ug/kg | ND | ND | | 30 | |
| tert-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Tetrachloroethene | ug/kg | ND | ND | | 30 | |
| Toluene | ug/kg | 2.0J | ND | | 30 | |
| trans-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

SAMPLE DUPLICATE: 1264905

| Parameter | Units | 92212923003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Trichloroethene | ug/kg | ND | ND | | 30 | |
| Trichlorofluoromethane | ug/kg | ND | ND | | 30 | |
| Vinyl acetate | ug/kg | ND | ND | | 30 | |
| Vinyl chloride | ug/kg | ND | ND | | 30 | |
| Xylene (Total) | ug/kg | 41.5 | 19.9 | 70 | 30 | RS |
| 1,2-Dichloroethane-d4 (S) | % | 115 | 120 | 1 | | |
| 4-Bromofluorobenzene (S) | % | 90 | 87 | 9 | | |
| Toluene-d8 (S) | % | 100 | 100 | 4 | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: MSV/27962 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92213326009

METHOD BLANK: 1264965 Matrix: Solid
Associated Lab Samples: 92213326009

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,1-Dichloroethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,1-Dichloroethene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,1-Dichloropropene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2-Dichloroethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,2-Dichloropropane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,3-Dichloropropane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 2,2-Dichloropropane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 2-Butanone (MEK) | ug/kg | ND | 92.1 | 08/15/14 10:28 | |
| 2-Chlorotoluene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 2-Hexanone | ug/kg | ND | 46.0 | 08/15/14 10:28 | |
| 4-Chlorotoluene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 46.0 | 08/15/14 10:28 | |
| Acetone | ug/kg | ND | 92.1 | 08/15/14 10:28 | |
| Benzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Bromobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Bromochloromethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Bromodichloromethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Bromoform | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Bromomethane | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| Carbon tetrachloride | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Chlorobenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Chloroethane | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| Chloroform | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Chloromethane | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Dibromochloromethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

METHOD BLANK: 1264965 Matrix: Solid
Associated Lab Samples: 92213326009

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromomethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Dichlorodifluoromethane | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| Diisopropyl ether | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Ethylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| m&p-Xylene | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| Methyl-tert-butyl ether | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Methylene Chloride | ug/kg | ND | 18.4 | 08/15/14 10:28 | |
| n-Butylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| n-Propylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Naphthalene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| o-Xylene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| p-Isopropyltoluene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| sec-Butylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Styrene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| tert-Butylbenzene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Tetrachloroethene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Toluene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Trichloroethene | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Trichlorofluoromethane | ug/kg | ND | 4.6 | 08/15/14 10:28 | |
| Vinyl acetate | ug/kg | ND | 46.0 | 08/15/14 10:28 | |
| Vinyl chloride | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| Xylene (Total) | ug/kg | ND | 9.2 | 08/15/14 10:28 | |
| 1,2-Dichloroethane-d4 (S) | % | 111 | 70-132 | 08/15/14 10:28 | |
| 4-Bromofluorobenzene (S) | % | 95 | 70-130 | 08/15/14 10:28 | |
| Toluene-d8 (S) | % | 101 | 70-130 | 08/15/14 10:28 | |

LABORATORY CONTROL SAMPLE: 1264966

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | 40.6 | 39.9 | 98 | 74-137 | |
| 1,1,1-Trichloroethane | ug/kg | 40.6 | 38.9 | 96 | 67-140 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 40.6 | 36.1 | 89 | 72-141 | |
| 1,1,2-Trichloroethane | ug/kg | 40.6 | 41.8 | 103 | 78-138 | |
| 1,1-Dichloroethane | ug/kg | 40.6 | 37.4 | 92 | 69-134 | |
| 1,1-Dichloroethene | ug/kg | 40.6 | 43.4 | 107 | 67-138 | |
| 1,1-Dichloropropene | ug/kg | 40.6 | 41.5 | 102 | 69-139 | |
| 1,2,3-Trichlorobenzene | ug/kg | 40.6 | 40.8 | 101 | 70-146 | |
| 1,2,3-Trichloropropane | ug/kg | 40.6 | 39.8 | 98 | 69-144 | |
| 1,2,4-Trichlorobenzene | ug/kg | 40.6 | 38.6 | 95 | 68-148 | |
| 1,2,4-Trimethylbenzene | ug/kg | 40.6 | 42.5 | 105 | 74-137 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

LABORATORY CONTROL SAMPLE: 1264966

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | ug/kg | 40.6 | 43.1 | 106 | 65-140 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 40.6 | 40.9 | 101 | 77-135 | |
| 1,2-Dichlorobenzene | ug/kg | 40.6 | 40.4 | 99 | 77-141 | |
| 1,2-Dichloroethane | ug/kg | 40.6 | 42.9 | 106 | 65-137 | |
| 1,2-Dichloropropane | ug/kg | 40.6 | 41.8 | 103 | 72-136 | |
| 1,3,5-Trimethylbenzene | ug/kg | 40.6 | 42.0 | 103 | 76-133 | |
| 1,3-Dichlorobenzene | ug/kg | 40.6 | 40.2 | 99 | 74-138 | |
| 1,3-Dichloropropane | ug/kg | 40.6 | 42.3 | 104 | 71-139 | |
| 1,4-Dichlorobenzene | ug/kg | 40.6 | 39.9 | 98 | 76-138 | |
| 2,2-Dichloropropane | ug/kg | 40.6 | 40.5 | 100 | 68-137 | |
| 2-Butanone (MEK) | ug/kg | 81.2 | 84.7 | 104 | 58-147 | |
| 2-Chlorotoluene | ug/kg | 40.6 | 43.4 | 107 | 73-139 | |
| 2-Hexanone | ug/kg | 81.2 | 91.1 | 112 | 62-145 | |
| 4-Chlorotoluene | ug/kg | 40.6 | 41.4 | 102 | 76-141 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | 81.2 | 94.9 | 117 | 64-149 | |
| Acetone | ug/kg | 81.2 | 84.8 | 104 | 53-153 | |
| Benzene | ug/kg | 40.6 | 42.4 | 105 | 73-135 | |
| Bromobenzene | ug/kg | 40.6 | 42.7 | 105 | 75-133 | |
| Bromochloromethane | ug/kg | 40.6 | 39.1 | 96 | 73-134 | |
| Bromodichloromethane | ug/kg | 40.6 | 43.8 | 108 | 71-135 | |
| Bromoform | ug/kg | 40.6 | 41.8 | 103 | 66-141 | |
| Bromomethane | ug/kg | 40.6 | 38.3 | 94 | 53-160 | |
| Carbon tetrachloride | ug/kg | 40.6 | 41.4 | 102 | 60-145 | |
| Chlorobenzene | ug/kg | 40.6 | 41.0 | 101 | 78-130 | |
| Chloroethane | ug/kg | 40.6 | 36.4 | 90 | 64-149 | |
| Chloroform | ug/kg | 40.6 | 43.5 | 107 | 70-134 | |
| Chloromethane | ug/kg | 40.6 | 46.7 | 115 | 52-150 | |
| cis-1,2-Dichloroethene | ug/kg | 40.6 | 45.1 | 111 | 70-133 | |
| cis-1,3-Dichloropropene | ug/kg | 40.6 | 43.5 | 107 | 68-134 | |
| Dibromochloromethane | ug/kg | 40.6 | 43.6 | 107 | 71-138 | |
| Dibromomethane | ug/kg | 40.6 | 41.5 | 102 | 74-130 | |
| Dichlorodifluoromethane | ug/kg | 40.6 | 38.9 | 96 | 40-160 | |
| Diisopropyl ether | ug/kg | 40.6 | 44.8 | 110 | 69-141 | |
| Ethylbenzene | ug/kg | 40.6 | 41.1 | 101 | 75-133 | |
| Hexachloro-1,3-butadiene | ug/kg | 40.6 | 38.3 | 94 | 68-143 | |
| Isopropylbenzene (Cumene) | ug/kg | 40.6 | 42.4 | 104 | 76-143 | |
| m&p-Xylene | ug/kg | 81.2 | 84.4 | 104 | 75-136 | |
| Methyl-tert-butyl ether | ug/kg | 40.6 | 43.1 | 106 | 68-144 | |
| Methylene Chloride | ug/kg | 40.6 | 42.5 | 105 | 45-154 | |
| n-Butylbenzene | ug/kg | 40.6 | 41.6 | 103 | 72-137 | |
| n-Propylbenzene | ug/kg | 40.6 | 39.6 | 98 | 76-136 | |
| Naphthalene | ug/kg | 40.6 | 42.4 | 105 | 68-151 | |
| o-Xylene | ug/kg | 40.6 | 42.1 | 104 | 76-141 | |
| p-Isopropyltoluene | ug/kg | 40.6 | 40.0 | 98 | 76-140 | |
| sec-Butylbenzene | ug/kg | 40.6 | 39.1 | 96 | 79-139 | |
| Styrene | ug/kg | 40.6 | 43.8 | 108 | 79-137 | |
| tert-Butylbenzene | ug/kg | 40.6 | 41.0 | 101 | 74-143 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

LABORATORY CONTROL SAMPLE: 1264966

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Tetrachloroethene | ug/kg | 40.6 | 38.5 | 95 | 71-138 | |
| Toluene | ug/kg | 40.6 | 41.8 | 103 | 74-131 | |
| trans-1,2-Dichloroethene | ug/kg | 40.6 | 43.3 | 107 | 67-135 | |
| trans-1,3-Dichloropropene | ug/kg | 40.6 | 43.9 | 108 | 65-146 | |
| Trichloroethene | ug/kg | 40.6 | 41.1 | 101 | 67-135 | |
| Trichlorofluoromethane | ug/kg | 40.6 | 38.7 | 95 | 59-144 | |
| Vinyl acetate | ug/kg | 81.2 | 78.7 | 97 | 40-160 | F3 |
| Vinyl chloride | ug/kg | 40.6 | 39.4 | 97 | 56-141 | |
| Xylene (Total) | ug/kg | 122 | 126 | 104 | 76-137 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 106 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | 99 | 70-130 | |
| Toluene-d8 (S) | % | | | 103 | 70-130 | |

MATRIX SPIKE SAMPLE: 1265994

| Parameter | Units | 92213453001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | ug/kg | ND | 59.2 | 60.5 | 102 | 49-180 | |
| Benzene | ug/kg | ND | 59.2 | 63.5 | 107 | 50-166 | |
| Chlorobenzene | ug/kg | ND | 59.2 | 59.6 | 101 | 43-169 | |
| Toluene | ug/kg | ND | 59.2 | 60.2 | 102 | 52-163 | |
| Trichloroethene | ug/kg | ND | 59.2 | 60.4 | 102 | 49-167 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 109 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | | 94 | 70-130 | |
| Toluene-d8 (S) | % | | | | 101 | 70-130 | |

SAMPLE DUPLICATE: 1265993

| Parameter | Units | 92213070001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,1-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethene | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloropropene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichloropropane | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloropropane | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

SAMPLE DUPLICATE: 1265993

| Parameter | Units | 92213070001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,3,5-Trimethylbenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 2,2-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 2-Butanone (MEK) | ug/kg | ND | ND | | 30 | |
| 2-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 2-Hexanone | ug/kg | ND | ND | | 30 | |
| 4-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | ND | | 30 | |
| Acetone | ug/kg | ND | ND | | 30 | |
| Benzene | ug/kg | ND | ND | | 30 | |
| Bromobenzene | ug/kg | ND | ND | | 30 | |
| Bromochloromethane | ug/kg | ND | ND | | 30 | |
| Bromodichloromethane | ug/kg | ND | ND | | 30 | |
| Bromoform | ug/kg | ND | ND | | 30 | |
| Bromomethane | ug/kg | ND | ND | | 30 | |
| Carbon tetrachloride | ug/kg | ND | ND | | 30 | |
| Chlorobenzene | ug/kg | ND | ND | | 30 | |
| Chloroethane | ug/kg | ND | ND | | 30 | |
| Chloroform | ug/kg | ND | ND | | 30 | |
| Chloromethane | ug/kg | ND | ND | | 30 | |
| cis-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| cis-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Dibromochloromethane | ug/kg | ND | ND | | 30 | |
| Dibromomethane | ug/kg | ND | ND | | 30 | |
| Dichlorodifluoromethane | ug/kg | ND | ND | | 30 | |
| Diisopropyl ether | ug/kg | ND | ND | | 30 | |
| Ethylbenzene | ug/kg | ND | ND | | 30 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | 30 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | ND | | 30 | |
| m&p-Xylene | ug/kg | ND | ND | | 30 | |
| Methyl-tert-butyl ether | ug/kg | ND | ND | | 30 | |
| Methylene Chloride | ug/kg | ND | ND | | 30 | |
| n-Butylbenzene | ug/kg | ND | ND | | 30 | |
| n-Propylbenzene | ug/kg | ND | ND | | 30 | |
| Naphthalene | ug/kg | ND | ND | | 30 | |
| o-Xylene | ug/kg | ND | ND | | 30 | |
| p-Isopropyltoluene | ug/kg | ND | ND | | 30 | |
| sec-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Styrene | ug/kg | ND | ND | | 30 | |
| tert-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Tetrachloroethene | ug/kg | ND | ND | | 30 | |
| Toluene | ug/kg | ND | ND | | 30 | |
| trans-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| trans-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Trichloroethene | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

SAMPLE DUPLICATE: 1265993

| Parameter | Units | 92213070001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Trichlorofluoromethane | ug/kg | ND | ND | | 30 | |
| Vinyl acetate | ug/kg | ND | ND | | 30 | |
| Vinyl chloride | ug/kg | ND | ND | | 30 | |
| Xylene (Total) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 105 | 106 | 3 | | |
| 4-Bromofluorobenzene (S) | % | 96 | 93 | 7 | | |
| Toluene-d8 (S) | % | 100 | 104 | 1 | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: OEXT/29396 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1263745 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Diesel Components | mg/kg | ND | 5.0 | 08/14/14 20:34 | |
| n-Pentacosane (S) | % | 83 | 41-119 | 08/14/14 20:34 | |

LABORATORY CONTROL SAMPLE & LCSD: 1263746 1263747

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Components | mg/kg | 66.7 | 55.5 | 60.3 | 83 | 90 | 49-113 | 8 | 30 | |
| n-Pentacosane (S) | % | | | | 89 | 88 | 41-119 | | | |

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(704)875-9092

## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: OEXT/29397 Analysis Method: EPA 8082
QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1263799 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 33.0 | 08/15/14 08:40 | |
| Decachlorobiphenyl (S) | % | 88 | 21-132 | 08/15/14 08:40 | |

LABORATORY CONTROL SAMPLE: 1263800

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | 167 | 125 | 75 | 31-120 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 167 | 132 | 79 | 32-120 | |
| Decachlorobiphenyl (S) | % | | | 80 | 21-132 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: OEXT/29400 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

METHOD BLANK: 1263869 Matrix: Solid
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 1-Methylnaphthalene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,4,5-Trichlorophenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,4,6-Trichlorophenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,4-Dichlorophenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,4-Dimethylphenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,4-Dinitrophenol | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| 2,4-Dinitrotoluene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,6-Dinitrotoluene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2-Chloronaphthalene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2-Chlorophenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2-Methylnaphthalene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2-Nitroaniline | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| 2-Nitrophenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 3,3'-Dichlorobenzidine | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| 3-Nitroaniline | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | 660 | 08/14/14 16:26 | |
| 4-Bromophenylphenyl ether | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 4-Chloro-3-methylphenol | ug/kg | ND | 660 | 08/14/14 16:26 | |
| 4-Chloroaniline | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 4-Nitroaniline | ug/kg | ND | 660 | 08/14/14 16:26 | |
| 4-Nitrophenol | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| Acenaphthene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Acenaphthylene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Aniline | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Anthracene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Benzo(a)anthracene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Benzo(a)pyrene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Benzo(b)fluoranthene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Benzo(g,h,i)perylene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Benzo(k)fluoranthene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Benzoic Acid | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| Benzyl alcohol | ug/kg | ND | 660 | 08/14/14 16:26 | |
| bis(2-Chloroethoxy)methane | ug/kg | ND | 330 | 08/14/14 16:26 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

METHOD BLANK: 1263869 Matrix: Solid

Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| bis(2-Chloroethyl) ether | ug/kg | ND | 330 | 08/14/14 16:26 | |
| bis(2-Chloroisopropyl) ether | ug/kg | ND | 330 | 08/14/14 16:26 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Butylbenzylphthalate | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Chrysene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Di-n-butylphthalate | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Di-n-octylphthalate | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Dibenz(a,h)anthracene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Dibenzofuran | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Diethylphthalate | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Dimethylphthalate | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Fluoranthene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Fluorene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Hexachlorobenzene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Hexachlorocyclopentadiene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Hexachloroethane | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Isophorone | ug/kg | ND | 330 | 08/14/14 16:26 | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | 330 | 08/14/14 16:26 | |
| N-Nitrosodimethylamine | ug/kg | ND | 330 | 08/14/14 16:26 | |
| N-Nitrosodiphenylamine | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Naphthalene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Nitrobenzene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Pentachlorophenol | ug/kg | ND | 1650 | 08/14/14 16:26 | |
| Phenanthrene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Phenol | ug/kg | ND | 330 | 08/14/14 16:26 | |
| Pyrene | ug/kg | ND | 330 | 08/14/14 16:26 | |
| 2,4,6-Tribromophenol (S) | % | 63 | 27-110 | 08/14/14 16:26 | |
| 2-Fluorobiphenyl (S) | % | 66 | 30-110 | 08/14/14 16:26 | |
| 2-Fluorophenol (S) | % | 63 | 13-110 | 08/14/14 16:26 | |
| Nitrobenzene-d5 (S) | % | 69 | 23-110 | 08/14/14 16:26 | |
| Phenol-d6 (S) | % | 61 | 22-110 | 08/14/14 16:26 | |
| Terphenyl-d14 (S) | % | 66 | 28-110 | 08/14/14 16:26 | |

LABORATORY CONTROL SAMPLE & LCSD: 1263870 1263871

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 1670 | 1120 | 1140 | 67 | 69 | 36-120 | 2 | 30 | |
| 1,2-Dichlorobenzene | ug/kg | 1670 | 1110 | 1100 | 67 | 66 | 41-120 | 1 | 30 | |
| 1,3-Dichlorobenzene | ug/kg | 1670 | 1090 | 1080 | 65 | 65 | 66-120 | 1 | 30 | L2 |
| 1,4-Dichlorobenzene | ug/kg | 1670 | 1120 | 1110 | 67 | 67 | 42-120 | 1 | 30 | |
| 1-Methylnaphthalene | ug/kg | 1670 | 1330 | 1280 | 80 | 77 | 40-120 | 3 | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

LABORATORY CONTROL SAMPLE & LCSD: 1263870 1263871

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | ug/kg | 1670 | 1250 | 1280 | 75 | 77 | 37-120 | 2 | 30 | |
| 2,4,6-Trichlorophenol | ug/kg | 1670 | 1190 | 1200 | 71 | 72 | 40-120 | 1 | 30 | |
| 2,4-Dichlorophenol | ug/kg | 1670 | 1350 | 1330 | 81 | 80 | 33-120 | 2 | 30 | |
| 2,4-Dimethylphenol | ug/kg | 1670 | 1450 | 1430 | 87 | 86 | 36-120 | 2 | 30 | |
| 2,4-Dinitrophenol | ug/kg | 8330 | 5570 | 7060 | 67 | 85 | 22-121 | 24 | 30 | |
| 2,4-Dinitrotoluene | ug/kg | 1670 | 1250 | 1460 | 75 | 88 | 60-120 | 16 | 30 | |
| 2,6-Dinitrotoluene | ug/kg | 1670 | 1280 | 1430 | 77 | 86 | 54-120 | 11 | 30 | |
| 2-Chloronaphthalene | ug/kg | 1670 | 1170 | 1150 | 70 | 69 | 41-120 | 1 | 30 | |
| 2-Chlorophenol | ug/kg | 1670 | 1240 | 1260 | 74 | 75 | 39-120 | 1 | 30 | |
| 2-Methylnaphthalene | ug/kg | 1670 | 1310 | 1280 | 79 | 77 | 26-120 | 3 | 30 | |
| 2-Methylphenol(o-Cresol) | ug/kg | 1670 | 1250 | 1270 | 75 | 76 | 41-120 | 2 | 30 | |
| 2-Nitroaniline | ug/kg | 3330 | 2600 | 2810 | 78 | 84 | 45-120 | 8 | 30 | |
| 2-Nitrophenol | ug/kg | 1670 | 1320 | 1370 | 79 | 82 | 35-120 | 3 | 30 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | 1670 | 1320 | 1300 | 79 | 78 | 35-120 | 1 | 30 | |
| 3,3'-Dichlorobenzidine | ug/kg | 3330 | 2430 | 2440 | 73 | 73 | 16-125 | 0 | 30 | |
| 3-Nitroaniline | ug/kg | 3330 | 2390 | 2690 | 72 | 81 | 45-120 | 12 | 30 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | 3330 | 2630 | 2950 | 79 | 88 | 46-120 | 11 | 30 | |
| 4-Bromophenylphenyl ether | ug/kg | 1670 | 1230 | 1220 | 74 | 73 | 36-120 | 1 | 30 | |
| 4-Chloro-3-methylphenol | ug/kg | 3330 | 2970 | 2910 | 89 | 87 | 37-120 | 2 | 30 | |
| 4-Chloroaniline | ug/kg | 3330 | 2720 | 2580 | 82 | 77 | 35-120 | 5 | 30 | |
| 4-Chlorophenylphenyl ether | ug/kg | 1670 | 1240 | 1330 | 74 | 80 | 30-120 | 7 | 30 | |
| 4-Nitroaniline | ug/kg | 3330 | 2570 | 3050 | 77 | 91 | 48-120 | 17 | 30 | |
| 4-Nitrophenol | ug/kg | 8330 | 6020 | 7240 | 72 | 87 | 43-120 | 18 | 30 | |
| Acenaphthene | ug/kg | 1670 | 1230 | 1240 | 74 | 74 | 46-120 | 1 | 30 | |
| Acenaphthylene | ug/kg | 1670 | 1230 | 1260 | 74 | 75 | 46-120 | 2 | 30 | |
| Aniline | ug/kg | 1670 | 1160 | 1180 | 69 | 71 | 33-120 | 2 | 30 | |
| Anthracene | ug/kg | 1670 | 1210 | 1270 | 73 | 76 | 63-120 | 5 | 30 | |
| Benzo(a)anthracene | ug/kg | 1670 | 1220 | 1280 | 73 | 77 | 61-120 | 5 | 30 | |
| Benzo(a)pyrene | ug/kg | 1670 | 1190 | 1260 | 72 | 76 | 59-120 | 5 | 30 | |
| Benzo(b)fluoranthene | ug/kg | 1670 | 1200 | 1190 | 72 | 71 | 55-120 | 0 | 30 | |
| Benzo(g,h,i)perylene | ug/kg | 1670 | 1230 | 1270 | 74 | 76 | 57-120 | 3 | 30 | |
| Benzo(k)fluoranthene | ug/kg | 1670 | 1130 | 1200 | 68 | 72 | 56-120 | 7 | 30 | |
| Benzoic Acid | ug/kg | 8330 | 4780 | 4570 | 57 | 55 | 13-120 | 4 | 30 | |
| Benzyl alcohol | ug/kg | 3330 | 2840 | 2770 | 85 | 83 | 34-120 | 2 | 30 | |
| bis(2-Chloroethoxy)methane | ug/kg | 1670 | 1320 | 1310 | 79 | 79 | 21-120 | 0 | 30 | |
| bis(2-Chloroethyl) ether | ug/kg | 1670 | 1230 | 1210 | 74 | 72 | 25-120 | 2 | 30 | |
| bis(2-Chloroisopropyl) ether | ug/kg | 1670 | 1160 | 1140 | 70 | 68 | 13-120 | 2 | 30 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | 1670 | 1390 | 1450 | 84 | 87 | 56-123 | 4 | 30 | |
| Butylbenzylphthalate | ug/kg | 1670 | 1380 | 1510 | 83 | 91 | 57-120 | 9 | 30 | |
| Chrysene | ug/kg | 1670 | 1240 | 1300 | 75 | 78 | 64-120 | 5 | 30 | |
| Di-n-butylphthalate | ug/kg | 1670 | 1330 | 1460 | 80 | 88 | 58-120 | 9 | 30 | |
| Di-n-octylphthalate | ug/kg | 1670 | 1430 | 1490 | 86 | 90 | 47-121 | 4 | 30 | |
| Dibenz(a,h)anthracene | ug/kg | 1670 | 1240 | 1290 | 74 | 77 | 56-120 | 4 | 30 | |
| Dibenzofuran | ug/kg | 1670 | 1330 | 1360 | 80 | 81 | 43-120 | 2 | 30 | |
| Diethylphthalate | ug/kg | 1670 | 1280 | 1440 | 77 | 87 | 55-120 | 12 | 30 | |
| Dimethylphthalate | ug/kg | 1670 | 1260 | 1390 | 75 | 83 | 54-120 | 10 | 30 | |
| Fluoranthene | ug/kg | 1670 | 1280 | 1370 | 77 | 82 | 61-120 | 7 | 30 | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

LABORATORY CONTROL SAMPLE & LCSD: 1263870 1263871

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluorene | ug/kg | 1670 | 1260 | 1350 | 75 | 81 | 51-120 | 7 | 30 | |
| Hexachloro-1,3-butadiene | ug/kg | 1670 | 1070 | 1080 | 64 | 65 | 22-120 | 1 | 30 | |
| Hexachlorobenzene | ug/kg | 1670 | 1140 | 1160 | 69 | 69 | 53-120 | 1 | 30 | |
| Hexachlorocyclopentadiene | ug/kg | 1670 | 1140 | 1190 | 69 | 72 | 18-150 | 4 | 30 | |
| Hexachloroethane | ug/kg | 1670 | 1140 | 1110 | 68 | 67 | 39-120 | 2 | 30 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | 1670 | 997 | 1030 | 60 | 62 | 58-120 | 3 | 30 | |
| Isophorone | ug/kg | 1670 | 1380 | 1340 | 83 | 80 | 38-120 | 3 | 30 | |
| N-Nitroso-di-n-propylamine | ug/kg | 1670 | 1380 | 1340 | 83 | 81 | 30-120 | 2 | 30 | |
| N-Nitrosodimethylamine | ug/kg | 1670 | 1160 | 1220 | 70 | 73 | 32-120 | 4 | 30 | |
| N-Nitrosodiphenylamine | ug/kg | 1670 | 1250 | 1230 | 75 | 74 | 50-120 | 2 | 30 | |
| Naphthalene | ug/kg | 1670 | 1210 | 1220 | 73 | 73 | 38-120 | 0 | 30 | |
| Nitrobenzene | ug/kg | 1670 | 1210 | 1210 | 73 | 73 | 37-120 | 0 | 30 | |
| Pentachlorophenol | ug/kg | 3330 | 1920 | 2280 | 58 | 68 | 10-120 | 17 | 30 | |
| Phenanthrene | ug/kg | 1670 | 1190 | 1240 | 71 | 74 | 62-120 | 4 | 30 | |
| Phenol | ug/kg | 1670 | 1350 | 1370 | 81 | 82 | 37-120 | 2 | 30 | |
| Pyrene | ug/kg | 1670 | 1100 | 1250 | 66 | 75 | 63-120 | 12 | 30 | |
| 2,4,6-Tribromophenol (S) | % | | | | 73 | 74 | 27-110 | | | |
| 2-Fluorobiphenyl (S) | % | | | | 72 | 70 | 30-110 | | | |
| 2-Fluorophenol (S) | % | | | | 69 | 71 | 13-110 | | | |
| Nitrobenzene-d5 (S) | % | | | | 72 | 72 | 23-110 | | | |
| Phenol-d6 (S) | % | | | | 74 | 76 | 22-110 | | | |
| Terphenyl-d14 (S) | % | | | | 70 | 78 | 28-110 | | | |

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## QUALITY CONTROL DATA

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

QC Batch: PMST/6929 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92213326002, 92213326003, 92213326004, 92213326005, 92213326006, 92213326007, 92213326008, 92213326009, 92213326010, 92213326011, 92213326012, 92213326013

SAMPLE DUPLICATE: 1264108

| Parameter | Units | 92213326002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 22.2 | 29.9 | 29 | 25 | R1 |

SAMPLE DUPLICATE: 1264109

| Parameter | Units | 92213298007 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 10.5 | 11.8 | 12 | 25 | |

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# QUALIFIERS

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## LABORATORIES

| | |
|---|---|
| PASI-A | Pace Analytical Services - Asheville |
| PASI-C | Pace Analytical Services - Charlotte |

## ANALYTE QUALIFIERS

| | |
|---|---|
| 1g | The internal standard response is below criteria. No hits associated with this internal standard. Results unaffected by high bias. |
| D3 | Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference. |
| F3 | The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated. |
| L2 | Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| M6 | Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution. |
| R1 | RPD value was outside control limits. |
| RS | The RPD value in one of the constituent analytes was outside the control limits. |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution. |



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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92213326002** | **B-7(4-5)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326003** | **B-3(6-7)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326004** | **B-2(5-6)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326005** | **B-6(1-2)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326006** | **B-8(0-1)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326007** | **B-10(0-1)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326008** | **B-9(3-4)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326009** | **B-1(3-4)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326010** | **B-1(5-6.5)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326011** | **B-11(3-4)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326012** | **B-4(6-7)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326013** | **B-5(6-7)** | EPA 3546 | OEXT/29396 | EPA 8015 Modified | GCSV/18562 |
| **92213326002** | **B-7(4-5)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326003** | **B-3(6-7)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326004** | **B-2(5-6)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326005** | **B-6(1-2)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326006** | **B-8(0-1)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326007** | **B-10(0-1)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326008** | **B-9(3-4)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326009** | **B-1(3-4)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326010** | **B-1(5-6.5)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326011** | **B-11(3-4)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326012** | **B-4(6-7)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326013** | **B-5(6-7)** | EPA 3546 | OEXT/29397 | EPA 8082 | GCSV/18560 |
| **92213326002** | **B-7(4-5)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326003** | **B-3(6-7)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326004** | **B-2(5-6)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326005** | **B-6(1-2)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326006** | **B-8(0-1)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326007** | **B-10(0-1)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326008** | **B-9(3-4)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326009** | **B-1(3-4)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326010** | **B-1(5-6.5)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326011** | **B-11(3-4)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326012** | **B-4(6-7)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326013** | **B-5(6-7)** | 9071B | GCSV/18551 | 9071B | GCSV/18558 |
| **92213326002** | **B-7(4-5)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326003** | **B-3(6-7)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326004** | **B-2(5-6)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326005** | **B-6(1-2)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326006** | **B-8(0-1)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326007** | **B-10(0-1)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326008** | **B-9(3-4)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326009** | **B-1(3-4)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326010** | **B-1(5-6.5)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326011** | **B-11(3-4)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326012** | **B-4(6-7)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92213326013** | **B-5(6-7)** | EPA 5035A/5030B | GCV/8447 | EPA 8015 Modified | GCV/8449 |
| **92213326002** | **B-7(4-5)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326003** | **B-3(6-7)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326004** | **B-2(5-6)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326005** | **B-6(1-2)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326006** | **B-8(0-1)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326007** | **B-10(0-1)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326008** | **B-9(3-4)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326009** | **B-1(3-4)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326010** | **B-1(5-6.5)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326011** | **B-11(3-4)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326012** | **B-4(6-7)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326013** | **B-5(6-7)** | EPA 3050 | MPRP/16676 | EPA 6010 | ICP/15052 |
| **92213326005** | **B-6(1-2)** | EPA 3010 | MPRP/16723 | EPA 6010 | ICP/15103 |
| **92213326006** | **B-8(0-1)** | EPA 3010 | MPRP/16723 | EPA 6010 | ICP/15103 |
| **92213326007** | **B-10(0-1)** | EPA 3010 | MPRP/16723 | EPA 6010 | ICP/15103 |
| **92213326005** | **B-6(1-2)** | EPA 7470 | MERP/6991 | EPA 7470 | MERC/6730 |
| **92213326006** | **B-8(0-1)** | EPA 7470 | MERP/6991 | EPA 7470 | MERC/6730 |
| **92213326007** | **B-10(0-1)** | EPA 7470 | MERP/6991 | EPA 7470 | MERC/6730 |
| **92213326002** | **B-7(4-5)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326003** | **B-3(6-7)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326004** | **B-2(5-6)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326005** | **B-6(1-2)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326006** | **B-8(0-1)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326007** | **B-10(0-1)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326008** | **B-9(3-4)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326009** | **B-1(3-4)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326010** | **B-1(5-6.5)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326011** | **B-11(3-4)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326012** | **B-4(6-7)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326013** | **B-5(6-7)** | EPA 7471 | MERP/6970 | EPA 7471 | MERC/6712 |
| **92213326002** | **B-7(4-5)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326003** | **B-3(6-7)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326004** | **B-2(5-6)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326005** | **B-6(1-2)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326006** | **B-8(0-1)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326007** | **B-10(0-1)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326008** | **B-9(3-4)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326009** | **B-1(3-4)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326010** | **B-1(5-6.5)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326011** | **B-11(3-4)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326012** | **B-4(6-7)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326013** | **B-5(6-7)** | EPA 3546 | OEXT/29400 | EPA 8270 | MSSV/9539 |
| **92213326002** | **B-7(4-5)** | EPA 8260 | MSV/27943 | | |
| **92213326003** | **B-3(6-7)** | EPA 8260 | MSV/27943 | | |
| **92213326004** | **B-2(5-6)** | EPA 8260 | MSV/27943 | | |

## REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW 502 WBS35022.1.1
Pace Project No.: 92213326

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92213326005** | **B-6(1-2)** | EPA 8260 | MSV/27943 | | |
| **92213326006** | **B-8(0-1)** | EPA 8260 | MSV/27943 | | |
| **92213326007** | **B-10(0-1)** | EPA 8260 | MSV/27943 | | |
| **92213326008** | **B-9(3-4)** | EPA 8260 | MSV/27943 | | |
| **92213326009** | **B-1(3-4)** | EPA 8260 | MSV/27962 | | |
| **92213326010** | **B-1(5-6.5)** | EPA 8260 | MSV/27943 | | |
| **92213326011** | **B-11(3-4)** | EPA 8260 | MSV/27943 | | |
| **92213326012** | **B-4(6-7)** | EPA 8260 | MSV/27943 | | |
| **92213326013** | **B-5(6-7)** | EPA 8260 | MSV/27943 | | |
| **92213326002** | **B-7(4-5)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326003** | **B-3(6-7)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326004** | **B-2(5-6)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326005** | **B-6(1-2)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326006** | **B-8(0-1)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326007** | **B-10(0-1)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326008** | **B-9(3-4)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326009** | **B-1(3-4)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326010** | **B-1(5-6.5)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326011** | **B-11(3-4)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326012** | **B-4(6-7)** | ASTM D2974-87 | PMST/6929 | | |
| **92213326013** | **B-5(6-7)** | ASTM D2974-87 | PMST/6929 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | Issuing Authority: Pace Huntersville Quality Office |

Client Name: Hart + Hickman

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1102 T1401 Type of Ice: Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1102: No Correction T1301: No Correction

Corrected Cooler Temp.: 2.1 °C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: EB 8/13/14

| | | |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☑Yes ☐No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☑No ☐N/A | 7. |
| Sufficient Volume: | ☑Yes ☐No ☐N/A | 8. Did not receive Sample #1 |
| Correct Containers Used: | ☑Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes ☐No ☐N/A | |
| Containers Intact: | ☑Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☑N/A | 11. |
| Sample Labels match COC: | ☑Yes ☐No ☐N/A | 12. |
| -Includes date/time/ID/Analysis Matrix:_____ | | |
| All containers needing preservation have been checked. | ☐Yes ☐No ☑N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☐Yes ☐No ☑N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☐Yes ☑No | |
| Samples checked for dechlorination: | ☐Yes ☐No ☑N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☐No ☑N/A | 15. |
| Trip Blank Present: | ☐Yes ☐No ☑N/A | 16. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☑N/A | |
| Pace Trip Blank Lot # (if purchased):_____ | | |

**Client Notification/ Resolution:** Field Data Required? Y / N

Person Contacted: Brandt Kayser Date/Time: 8/14/14

Comments/ Resolution: PM informed of missing Sample. Brandt submitted B-3 (0-1) on 8/12/14. KG

**SCURF Review:** JG Date: 8/13/14

**SRF Review:** JG Date: 8/14/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92213326

92213326

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

1837784

**Section A** Required Client Information:

Company: Hart & Hickman, PC
Address: 2923 S Tryon St. Ste 100, Charlotte, NC 28203
Email To: dgraham@harthickman.com
Phone: 704-586-0007 Fax:
Requested Due Date/TAT: 3 days

**Section B** Required Project Information:

Report To: Dave Graham
Copy To:
Purchase Order No.:
Project Name:
Project Number: ROW-502

**Section C** Invoice Information:

Attention:
Company Name: H+H
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: WBS# 35022.1.1

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

**Section D** Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | 9071 | 8260 | 8270 | 8082 | DRO | GRO | 6010/7471A (RCRA) | *TCLP VOC | *TCLP SVOC | *TCLP RCRA metals | | | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-3 (0-1) | SL | G | | | 8/12/14 | 1055 | | 15 | 7 | | | | | 2 | 4 | 2 | | X | X | X | X | X | X | X | X | X | X | | | |
| 2 | B-7 (4-5) | | | | | | 1250 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | 00 | 2 | #Hold all TCLP pending analyses pending H+H approval |
| 3 | B-3 (6-7) | | | | | | 1425 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | 00 | 3 | |
| 4 | B-2 (5-6) | | | | | | 1455 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | 00 | 4 | |
| 5 | B-6 (1-2) | | | | | | 1620 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 005 |
| 6 | B-8 (0-1) | | | | | | 1700 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 006 |
| 7 | B-10 (0-1) | | | | | | 1750 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 007 |
| 8 | B-9 (3-4) | | | | | | 1900 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 008 |
| 9 | B-1 (3-4) | | | | | 8/13/14 | 0835 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 009 |
| 10 | B-1 (5-6.5) | | | | | | 0910 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 010 |
| 11 | B-11 (3-4) | | | | | | 1115 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 011 |
| 12 | B-4 (6-7) | | | | | | 1200 | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | 012 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | H+H | 8/13/14 | 1652 | PACE | 8/13/14 | 1652 | 2.1 | Y | N | Y |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Brandt Kayser
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 8/13/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



1837785

**Section A** Required Client Information:

Company: Hart & HickmanPC
Address: 2923 S Tryon St, Ste 100
Charlotte, NC 28203
Email To: dgraham@hanthickman.com
Phone: 704-586-0007 Fax:
Requested Due Date/TAT: 3 days

**Section B** Required Project Information:

Report To: Dave Graham
Copy To:
Purchase Order No.:
Project Name:
Project Number: ROW-502

**Section C** Invoice Information:

Attention:
Company Name: H+H
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: WBS# 35022.1.1

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED: COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | 8260 | 8270 | 9071 | 8081 | DRO | GRO | 6010/7471A (RCRA) | *TCLP VOC # | *TCLP SVOC # | *TCLP RCRA metals # | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-5 (G-7) | SL | G | | | 8/01/14 | 1245 | | 15 | 7 | | | | | 2 | 4 | 2 | | X | X | X | X | X | X | X | X | | 9221332 6 |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 013 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | *Hold all TCLP analyses pending H+H approval |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | H+H | 8/01/14 | 1652 | PACE | 8/13/14 | 1652 | 2.1 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Brandt Kayser
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 8/13/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

September 08, 2014

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on August 27, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: David Graham, Hart & Hickman



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## CERTIFICATIONS

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

**Charlotte Certification IDs**
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

**Asheville Certification IDs**
2225 Riverside Dr., Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222



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## SAMPLE SUMMARY

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92215089001** | **B-3 (1-2)** | Solid | 08/27/14 12:00 | 08/27/14 15:34 |
| **92215089002** | **B-3 (2-3)** | Solid | 08/27/14 12:10 | 08/27/14 15:34 |
| **92215089003** | **B-3 (3-4)** | Solid | 08/27/14 12:20 | 08/27/14 15:34 |



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## SAMPLE ANALYTE COUNT

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92215089001** | **B-3 (1-2)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | JDW1 | 8 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92215089002** | **B-3 (2-3)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | JDW1 | 8 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92215089003** | **B-3 (3-4)** | EPA 8015 Modified | JDW1 | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 6010 | SH1 | 7 | PASI-A |
| | | EPA 7470 | HVK | 1 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |



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## ANALYTICAL RESULTS

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

**Sample: B-3 (1-2)** **Lab ID: 92215089001** Collected: 08/27/14 12:00 Received: 08/27/14 15:34 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | ND | mg/kg | 6.4 | 1 | 09/03/14 09:54 | 09/04/14 16:40 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 60 | % | 41-119 | 1 | 09/03/14 09:54 | 09/04/14 16:40 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 42.1 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 71 | % | 21-132 | 1 | 09/03/14 09:05 | 09/05/14 05:00 | 2051-24-3 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.1 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7440-38-2 | |
| Barium | **233** | mg/kg | 0.57 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7440-39-3 | |
| Cadmium | **0.56** | mg/kg | 0.11 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7440-43-9 | |
| Chromium | **38.8** | mg/kg | 0.57 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7440-47-3 | |
| Lead | **28.8** | mg/kg | 0.57 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.1 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.57 | 1 | 08/28/14 17:00 | 08/29/14 13:57 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/28/14 15:50 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7440-38-2 | |
| Barium | **4.2** | mg/L | 0.25 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7440-39-3 | M1 |
| Cadmium | ND | mg/L | 0.0050 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7440-43-9 | |
| Chromium | **0.62** | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7440-47-3 | |
| Lead | **0.16** | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 14:53 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/28/14 15:50 | | | | | | | |
| Mercury | **0.72** | ug/L | 0.20 | 1 | 08/29/14 08:30 | 08/29/14 14:00 | 7439-97-6 | M1,R1 |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.017** | mg/kg | 0.0046 | 1 | 08/28/14 14:10 | 08/28/14 16:22 | 7439-97-6 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **21.7** | % | 0.10 | 1 | | 08/29/14 14:13 | | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

**Sample: B-3 (2-3)** **Lab ID: 92215089002** Collected: 08/27/14 12:10 Received: 08/27/14 15:34 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | ND | mg/kg | 6.1 | 1 | 09/03/14 09:54 | 09/04/14 17:09 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 75 | % | 41-119 | 1 | 09/03/14 09:54 | 09/04/14 17:09 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 40.3 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 48 | % | 21-132 | 1 | 09/03/14 09:05 | 09/05/14 05:20 | 2051-24-3 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 1.1 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7440-38-2 | |
| Barium | **106** | mg/kg | 0.53 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7440-39-3 | |
| Cadmium | ND | mg/kg | 0.11 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7440-43-9 | |
| Chromium | **20.6** | mg/kg | 0.53 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7440-47-3 | |
| Lead | **5.1** | mg/kg | 0.53 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7439-92-1 | |
| Selenium | ND | mg/kg | 1.1 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.53 | 1 | 08/28/14 17:00 | 08/29/14 14:00 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/28/14 15:50 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7440-38-2 | |
| Barium | **1.5** | mg/L | 0.25 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7440-39-3 | |
| Cadmium | ND | mg/L | 0.0050 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7440-43-9 | |
| Chromium | **0.15** | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7440-47-3 | |
| Lead | **0.030** | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 15:11 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/28/14 15:50 | | | | | | | |
| Mercury | ND | ug/L | 0.20 | 1 | 08/29/14 08:30 | 08/29/14 14:13 | 7439-97-6 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.016** | mg/kg | 0.0057 | 1 | 08/28/14 14:10 | 08/28/14 16:29 | 7439-97-6 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **18.2** | % | 0.10 | 1 | | 08/29/14 14:14 | | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

**Sample: B-3 (3-4)** **Lab ID: 92215089003** Collected: 08/27/14 12:20 Received: 08/27/14 15:34 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | ND | mg/kg | 7.0 | 1 | 09/03/14 09:54 | 09/04/14 17:33 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 70 | % | 41-119 | 1 | 09/03/14 09:54 | 09/04/14 17:33 | 629-99-2 | |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 45.9 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 61 | % | 21-132 | 1 | 09/03/14 09:05 | 09/05/14 23:50 | 2051-24-3 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | ND | mg/kg | 0.87 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7440-38-2 | |
| Barium | **234** | mg/kg | 0.43 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7440-39-3 | |
| Cadmium | **0.65** | mg/kg | 0.087 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7440-43-9 | |
| Chromium | **30.6** | mg/kg | 0.43 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7440-47-3 | |
| Lead | **35.7** | mg/kg | 0.43 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7439-92-1 | |
| Selenium | ND | mg/kg | 0.87 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.43 | 1 | 08/28/14 17:00 | 08/29/14 14:03 | 7440-22-4 | |
| **6010 MET ICP, TCLP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010<br>Leachate Method/Date: EPA 1311; 08/28/14 15:50 | | | | | | | |
| Arsenic | ND | mg/L | 0.050 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7440-38-2 | |
| Barium | **3.0** | mg/L | 0.25 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7440-39-3 | |
| Cadmium | **0.015** | mg/L | 0.0050 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7440-43-9 | |
| Chromium | **0.15** | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7440-47-3 | |
| Lead | **0.28** | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.10 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7782-49-2 | |
| Silver | ND | mg/L | 0.025 | 1 | 08/29/14 08:30 | 08/29/14 15:15 | 7440-22-4 | |
| **7470 Mercury, TCLP** | Analytical Method: EPA 7470 Preparation Method: EPA 7470<br>Leachate Method/Date: EPA 1311; 08/28/14 15:50 | | | | | | | |
| Mercury | **0.58** | ug/L | 0.20 | 1 | 08/29/14 08:30 | 08/29/14 14:15 | 7439-97-6 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.096** | mg/kg | 0.0047 | 1 | 08/28/14 14:10 | 08/28/14 16:32 | 7439-97-6 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **28.1** | % | 0.10 | 1 | | 08/29/14 14:15 | | |

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## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: MERP/7025 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 92215089001, 92215089002, 92215089003

METHOD BLANK: 1274812 Matrix: Water
Associated Lab Samples: 92215089001, 92215089002, 92215089003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | ug/L | ND | 0.20 | 08/29/14 13:54 | |

LABORATORY CONTROL SAMPLE: 1274813

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | ug/L | 2.5 | 2.5 | 98 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1274814 1274815

| Parameter | Units | 92215089001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ug/L | 0.72 | 2.5 | 2.5 | 1.5 | 1.9 | 33 | 48 | 75-125 | 21 | 20 | M1,R1 |

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Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: MERP/7022 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92215089001, 92215089002, 92215089003

METHOD BLANK: 1274020 Matrix: Solid
Associated Lab Samples: 92215089001, 92215089002, 92215089003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | mg/kg | ND | 0.0050 | 08/28/14 16:16 | |

LABORATORY CONTROL SAMPLE: 1274021

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | mg/kg | .067 | 0.060 | 90 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1274022 1274023

| Parameter | Units | 92215089001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 0.017 | .069 | .065 | 0.084 | 0.078 | 97 | 94 | 75-125 | 7 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: MPRP/16785 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92215089001, 92215089002, 92215089003

METHOD BLANK: 1274480 Matrix: Solid
Associated Lab Samples: 92215089001, 92215089002, 92215089003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 1.0 | 08/29/14 13:20 | |
| Barium | mg/kg | ND | 0.50 | 08/29/14 13:20 | |
| Cadmium | mg/kg | ND | 0.10 | 08/29/14 13:20 | |
| Chromium | mg/kg | ND | 0.50 | 08/29/14 13:20 | |
| Lead | mg/kg | ND | 0.50 | 08/29/14 13:20 | |
| Selenium | mg/kg | ND | 1.0 | 08/29/14 13:20 | |
| Silver | mg/kg | ND | 0.50 | 08/29/14 13:20 | |

LABORATORY CONTROL SAMPLE: 1274481

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 50 | 48.6 | 97 | 80-120 | |
| Barium | mg/kg | 50 | 49.8 | 100 | 80-120 | |
| Cadmium | mg/kg | 50 | 49.3 | 99 | 80-120 | |
| Chromium | mg/kg | 50 | 49.7 | 99 | 80-120 | |
| Lead | mg/kg | 50 | 49.8 | 100 | 80-120 | |
| Selenium | mg/kg | 50 | 48.9 | 98 | 80-120 | |
| Silver | mg/kg | 25 | 23.7 | 95 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1274482 1274483

| Parameter | Units | 92214075001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 150 | 167 | 147 | 162 | 97 | 96 | 75-125 | 9 | 20 | |
| Barium | mg/kg | 724 | 150 | 167 | 915 | 976 | 126 | 151 | 75-125 | 7 | 20 | M1 |
| Cadmium | mg/kg | 0.97 | 150 | 167 | 148 | 163 | 98 | 97 | 75-125 | 10 | 20 | |
| Chromium | mg/kg | 15.5 | 150 | 167 | 154 | 172 | 92 | 94 | 75-125 | 11 | 20 | |
| Lead | mg/kg | 7.7 | 150 | 167 | 149 | 166 | 94 | 95 | 75-125 | 11 | 20 | |
| Selenium | mg/kg | 3.9 | 150 | 167 | 150 | 161 | 97 | 94 | 75-125 | 7 | 20 | |
| Silver | mg/kg | 4.6 | 75.3 | 83.3 | 72.7 | 80.6 | 91 | 91 | 75-125 | 10 | 20 | |

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(704)875-9092

## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: MPRP/16789 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
Associated Lab Samples: 92215089001, 92215089002, 92215089003

METHOD BLANK: 1274805 Matrix: Water
Associated Lab Samples: 92215089001, 92215089002, 92215089003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/L | ND | 0.050 | 08/29/14 14:46 | |
| Barium | mg/L | ND | 0.25 | 08/29/14 14:46 | |
| Cadmium | mg/L | ND | 0.0050 | 08/29/14 14:46 | |
| Chromium | mg/L | ND | 0.025 | 08/29/14 14:46 | |
| Lead | mg/L | ND | 0.025 | 08/29/14 14:46 | |
| Selenium | mg/L | ND | 0.10 | 08/29/14 14:46 | |
| Silver | mg/L | ND | 0.025 | 08/29/14 14:46 | |

LABORATORY CONTROL SAMPLE: 1274806

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/L | 2.5 | 2.5 | 101 | 80-120 | |
| Barium | mg/L | 2.5 | 2.5 | 99 | 80-120 | |
| Cadmium | mg/L | 2.5 | 2.5 | 99 | 80-120 | |
| Chromium | mg/L | 2.5 | 2.4 | 96 | 80-120 | |
| Lead | mg/L | 2.5 | 2.3 | 94 | 80-120 | |
| Selenium | mg/L | 2.5 | 2.5 | 102 | 80-120 | |
| Silver | mg/L | 1.2 | 1.2 | 96 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1274807 1274808

| Parameter | Units | 92215089001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/L | ND | 2.5 | 2.5 | 2.8 | 2.6 | 111 | 105 | 75-125 | 6 | 20 | |
| Barium | mg/L | 4.2 | 2.5 | 2.5 | 5.2 | 5.1 | 38 | 33 | 75-125 | 2 | 20 | M1 |
| Cadmium | mg/L | ND | 2.5 | 2.5 | 2.8 | 2.6 | 111 | 104 | 75-125 | 6 | 20 | |
| Chromium | mg/L | 0.62 | 2.5 | 2.5 | 2.9 | 2.8 | 90 | 87 | 75-125 | 3 | 20 | |
| Lead | mg/L | 0.16 | 2.5 | 2.5 | 2.6 | 2.5 | 99 | 95 | 75-125 | 4 | 20 | |
| Selenium | mg/L | ND | 2.5 | 2.5 | 2.9 | 2.7 | 115 | 107 | 75-125 | 7 | 20 | |
| Silver | mg/L | ND | 1.2 | 1.2 | 1.3 | 1.3 | 108 | 103 | 75-125 | 5 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: OEXT/29730 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92215089001, 92215089002, 92215089003

METHOD BLANK: 1276928 Matrix: Solid
Associated Lab Samples: 92215089001, 92215089002, 92215089003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | ND | 5.0 | 09/04/14 14:43 | |
| n-Pentacosane (S) | % | 67 | 41-119 | 09/04/14 14:43 | |

LABORATORY CONTROL SAMPLE: 1276929

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | 66.7 | 44.3 | 66 | 49-113 | |
| n-Pentacosane (S) | % | | | 68 | 41-119 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1276930 1276931

| Parameter | Units | 92215470001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | 1350 | 66.7 | 66.7 | 1200 | 1680 | -234 | 488 | 10-146 | 34 | 30 | M3,R1 |
| n-Pentacosane (S) | % | | | | | | 324 | 590 | 41-119 | | | S5 |

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## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: OEXT/29729 Analysis Method: EPA 8082
QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 92215089001, 92215089002, 92215089003

METHOD BLANK: 1276875 Matrix: Solid
Associated Lab Samples: 92215089001, 92215089002, 92215089003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 33.0 | 09/05/14 03:58 | |
| Decachlorobiphenyl (S) | % | 103 | 21-132 | 09/05/14 03:58 | |

LABORATORY CONTROL SAMPLE & LCSD: 1276876 1276877

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | 167 | 83.7 | 88.5 | 50 | 53 | 31-120 | 5 | 30 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 167 | 122 | 122 | 73 | 73 | 32-120 | 0 | 30 | |
| Decachlorobiphenyl (S) | % | | | | 69 | 73 | 21-132 | | | |

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## QUALITY CONTROL DATA

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

QC Batch: PMST/6978 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92215089001, 92215089002, 92215089003

SAMPLE DUPLICATE: 1274747

| Parameter | Units | 92215089001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 21.7 | 24.6 | 13 | 25 | |

SAMPLE DUPLICATE: 1274748

| Parameter | Units | 92214810001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 14.2 | 13.5 | 5 | 25 | |

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# QUALIFIERS

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## LABORATORIES

| | |
|---|---|
| PASI-A | Pace Analytical Services - Asheville |
| PASI-C | Pace Analytical Services - Charlotte |

## ANALYTE QUALIFIERS

| | |
|---|---|
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| M3 | Matrix spike recovery was outside laboratory control limits due to matrix interferences. |
| R1 | RPD value was outside control limits. |
| S5 | Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis). |



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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW.502 WBS#35022.11
Pace Project No.: 92215089

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92215089001** | **B-3 (1-2)** | EPA 3546 | OEXT/29730 | EPA 8015 Modified | GCSV/18786 |
| **92215089002** | **B-3 (2-3)** | EPA 3546 | OEXT/29730 | EPA 8015 Modified | GCSV/18786 |
| **92215089003** | **B-3 (3-4)** | EPA 3546 | OEXT/29730 | EPA 8015 Modified | GCSV/18786 |
| **92215089001** | **B-3 (1-2)** | EPA 3546 | OEXT/29729 | EPA 8082 | GCSV/18769 |
| **92215089002** | **B-3 (2-3)** | EPA 3546 | OEXT/29729 | EPA 8082 | GCSV/18769 |
| **92215089003** | **B-3 (3-4)** | EPA 3546 | OEXT/29729 | EPA 8082 | GCSV/18769 |
| **92215089001** | **B-3 (1-2)** | EPA 3050 | MPRP/16785 | EPA 6010 | ICP/15146 |
| **92215089002** | **B-3 (2-3)** | EPA 3050 | MPRP/16785 | EPA 6010 | ICP/15146 |
| **92215089003** | **B-3 (3-4)** | EPA 3050 | MPRP/16785 | EPA 6010 | ICP/15146 |
| **92215089001** | **B-3 (1-2)** | EPA 3010 | MPRP/16789 | EPA 6010 | ICP/15153 |
| **92215089002** | **B-3 (2-3)** | EPA 3010 | MPRP/16789 | EPA 6010 | ICP/15153 |
| **92215089003** | **B-3 (3-4)** | EPA 3010 | MPRP/16789 | EPA 6010 | ICP/15153 |
| **92215089001** | **B-3 (1-2)** | EPA 7470 | MERP/7025 | EPA 7470 | MERC/6763 |
| **92215089002** | **B-3 (2-3)** | EPA 7470 | MERP/7025 | EPA 7470 | MERC/6763 |
| **92215089003** | **B-3 (3-4)** | EPA 7470 | MERP/7025 | EPA 7470 | MERC/6763 |
| **92215089001** | **B-3 (1-2)** | EPA 7471 | MERP/7022 | EPA 7471 | MERC/6757 |
| **92215089002** | **B-3 (2-3)** | EPA 7471 | MERP/7022 | EPA 7471 | MERC/6757 |
| **92215089003** | **B-3 (3-4)** | EPA 7471 | MERP/7022 | EPA 7471 | MERC/6757 |
| **92215089001** | **B-3 (1-2)** | ASTM D2974-87 | PMST/6978 | | |
| **92215089002** | **B-3 (2-3)** | ASTM D2974-87 | PMST/6978 | | |
| **92215089003** | **B-3 (3-4)** | ASTM D2974-87 | PMST/6978 | | |



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| Pace Analytical | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: April 07. 2014 Page 1 of 2 |
|---|---|---|
| | Document Number: **F-CHR-CS-003-rev.14** | Issuing Authority: Pace Huntersville Quality Office |

Client Name: Hart & Hickman

**Courier:** ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

**Custody Seal on Cooler/Box Present:** ☐ yes ☐ no Seals intact: ☐ yes ☐ no

**Packing Material:** ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

**Thermometer Used:** IR Gun T1102 T1401 **Type of Ice:** Wet Blue None ☐ Samples on ice, cooling process has begun

**Temp Correction Factor** **T1102**: No Correction **T1301**: No Correction

**Corrected Cooler Temp.:** 9.7 °C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C **Comments:**

| Optional |
|---|
| Proj. Due Date: |
| Proj. Name: |

**Date and Initials of person examining contents:** SMF 8/27/14

| | | |
|---|---|---|
| Chain of Custody Present: | ☐Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☐Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☐Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☐Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☐Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☐No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☐No ☐N/A | 7. |
| Sufficient Volume: | ☐Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☐Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☐Yes ☐No ☐N/A | |
| Containers Intact: | ☐Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☐N/A | 11. |
| Sample Labels match COC: | ☐Yes ☐No ☐N/A | 12. |
| -Includes date/time/ID/Analysis Matrix:_____ | | |
| All containers needing preservation have been checked. | ☐Yes ☐No ☐N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☐Yes ☐No ☐N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☐Yes ☐No | |
| Samples checked for dechlorination: | ☐Yes ☐No ☐N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☐No ☐N/A | 15. |
| Trip Blank Present: | ☐Yes ☐No ☐N/A | 16. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☐N/A | |
| Pace Trip Blank Lot # (if purchased):_____ | | |

**Client Notification/ Resolution:** Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

| | | | |
|---|---|---|---|
| **SCURF Review:** | | **Date:** | |
| **SRF Review:** | JMO | **Date:** | 8-27-14 |

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

**WO# : 92215089**

92215089

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1836752

**Section A** Required Client Information:

Company: Hart HICKMAN
Address: 2923 S. Tryon St
CLT, NC
Email To: DGrahamC HH.com
Phone: 704 586 6xx Fax:
Requested Due Date/TAT:

**Section B** Required Project Information:

Report To: DAVE Graham
Copy To:
Purchase Order No.: WBS 35022.11
Project Name: ROW.502
Project Number: ~~0035~~ ROW.502

**Section C** Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 1165-3

**REGULATORY AGENCY**

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: NC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED: COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N: TCLP RCRA metals | RCRA metals | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-3 (1-2') | SL | G | | | 8/27 | 1200 | | 2 | X | | | | | | | | X | X | | |
| 2 | B-3 (2-3') | ↓ | ↓ | | | ↓ | 1210 | | 2 | X | | | | | | | | X | X | | >48 hr turn 001 012 |
| 3 | B-3 (3-4') | ↓ | ↓ | | | ↓ | 1220 | | 2 | X | | | | | | | | X | X | | |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---|---|---|---|---|---|---|---|
| 48 hr turn | G. Stent / HH | 8-27-14 | 1534 | Alyssa Amerling Pace | 8/27/14 | 1534 | 2.7 |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Gabe Stent
SIGNATURE of SAMPLER: G. Stent
DATE Signed (MM/DD/YY): 8-27-14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



F-ALL-Q-020rev.07, 15-May-2007

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

October 29, 2014

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kevin Godwin
kevin.godwin@pacelabs.com
Project Manager

Enclosures

cc: David Graham, Hart & Hickman



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## CERTIFICATIONS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Charlotte Certification IDs**
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

**Asheville Certification IDs**
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
West Virginia Certification #: 356
Virginia/VELAP Certification #: 460222



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## SAMPLE SUMMARY

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| **92222144001** | **SW-1(2')** | Solid | 10/20/14 14:45 | 10/21/14 09:40 |
| **92222144002** | **SW-2(2')** | Solid | 10/20/14 15:00 | 10/21/14 09:40 |
| **92222144003** | **SW-3(2')** | Solid | 10/20/14 15:15 | 10/21/14 09:40 |
| **92222144004** | **SW-4(2')** | Solid | 10/20/14 15:30 | 10/21/14 09:40 |



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## SAMPLE ANALYTE COUNT

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92222144001** | **SW-1(2')** | EPA 8015 Modified | RES | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | CLW | 1 | PASI-C |
| | | EPA 8015 Modified | BFW | 2 | PASI-C |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | RES | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92222144002** | **SW-2(2')** | EPA 8015 Modified | RES | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | CLW | 1 | PASI-C |
| | | EPA 8015 Modified | BFW | 2 | PASI-C |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | RES | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92222144003** | **SW-3(2')** | EPA 8015 Modified | RES | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | CLW | 1 | PASI-C |
| | | EPA 8015 Modified | BFW | 2 | PASI-C |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | RES | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |
| **92222144004** | **SW-4(2')** | EPA 8015 Modified | RES | 2 | PASI-C |
| | | EPA 8082 | RES | 8 | PASI-C |
| | | 9071B | CLW | 1 | PASI-C |
| | | EPA 8015 Modified | BFW | 2 | PASI-C |
| | | EPA 6010 | JMW | 7 | PASI-A |
| | | EPA 7471 | HVK | 1 | PASI-A |
| | | EPA 8270 | RES | 74 | PASI-C |
| | | EPA 8260 | DLK | 70 | PASI-C |
| | | ASTM D2974-87 | ACS | 1 | PASI-C |



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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-1(2')** **Lab ID: 92222144001** Collected: 10/20/14 14:45 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | **593** | mg/kg | 24.1 | 4 | 10/22/14 08:33 | 10/23/14 12:40 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 180 | % | 41-119 | 4 | 10/22/14 08:33 | 10/23/14 12:40 | 629-99-2 | S5 |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **2190** | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **2440** | ug/kg | 397 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 10 | 10/22/14 14:30 | 10/28/14 13:10 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **1330** | mg/kg | 84.3 | 1 | 10/27/14 11:14 | 10/27/14 14:33 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gas Range Organics (C6-C10) | ND | mg/kg | 7.0 | 1 | 10/22/14 14:40 | 10/22/14 19:58 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 93 | % | 70-167 | 1 | 10/22/14 14:40 | 10/22/14 19:58 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **8.4** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7440-38-2 | |
| Barium | **940** | mg/kg | 0.57 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7440-39-3 | M1 |
| Cadmium | **17.4** | mg/kg | 0.11 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7440-43-9 | |
| Chromium | **51.0** | mg/kg | 0.57 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7440-47-3 | M1 |
| Lead | **1010** | mg/kg | 0.57 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7439-92-1 | M1,R1 |
| Selenium | **3.0** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.57 | 1 | 10/22/14 16:20 | 10/23/14 01:35 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **21.1** | mg/kg | 1.9 | 500 | 10/22/14 16:15 | 10/24/14 12:49 | 7439-97-6 | M6,R1 |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 208-96-8 | |
| Aniline | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 62-53-3 | |
| Anthracene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 207-08-9 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-1(2')** **Lab ID: 92222144001** Collected: 10/20/14 14:45 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 7950 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 7950 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 7950 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 206-44-0 | |
| Fluorene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 193-39-5 | |
| Isophorone | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | | |
| Naphthalene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 7950 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 100-01-6 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-1(2')** **Lab ID: 92222144001** Collected: 10/20/14 14:45 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 19900 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 85-01-8 | |
| Phenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 108-95-2 | |
| Pyrene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 3970 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 0 | % | 23-110 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 4165-60-0 | D3,S4 |
| 2-Fluorobiphenyl (S) | 0 | % | 30-110 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 321-60-8 | |
| Terphenyl-d14 (S) | 0 | % | 28-110 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 1718-51-0 | |
| Phenol-d6 (S) | 0 | % | 22-110 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 13127-88-3 | |
| 2-Fluorophenol (S) | 0 | % | 13-110 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 0 | % | 27-110 | 10 | 10/23/14 13:01 | 10/28/14 16:29 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | **125** | ug/kg | 124 | 1 | | 10/24/14 21:10 | 67-64-1 | A+ |
| Benzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 75-27-4 | |
| Bromoform | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 124 | 1 | | 10/24/14 21:10 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 75-00-3 | |
| Chloroform | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 541-73-1 | |

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-1(2')** **Lab ID: 92222144001** Collected: 10/20/14 14:45 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 62.2 | 1 | | 10/24/14 21:10 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 24.9 | 1 | | 10/24/14 21:10 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 62.2 | 1 | | 10/24/14 21:10 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 103-65-1 | |
| Styrene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 127-18-4 | |
| Toluene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 62.2 | 1 | | 10/24/14 21:10 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 12.4 | 1 | | 10/24/14 21:10 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 6.2 | 1 | | 10/24/14 21:10 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 94 | % | 70-130 | 1 | | 10/24/14 21:10 | 2037-26-5 | 1g |
| 4-Bromofluorobenzene (S) | 78 | % | 70-130 | 1 | | 10/24/14 21:10 | 460-00-4 | |

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Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-1(2')** **Lab ID: 92222144001** Collected: 10/20/14 14:45 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 125 | % | 70-132 | 1 | | 10/24/14 21:10 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **17.0** | % | 0.10 | 1 | | 10/23/14 13:22 | | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-2(2')** **Lab ID: 92222144002** Collected: 10/20/14 15:00 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | **381** | mg/kg | 5.9 | 1 | 10/22/14 08:33 | 10/22/14 18:23 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 146 | % | 41-119 | 1 | 10/22/14 08:33 | 10/22/14 18:23 | 629-99-2 | S5 |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **1700** | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **1530** | ug/kg | 196 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 5 | 10/22/14 14:30 | 10/28/14 13:31 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **1240** | mg/kg | 83.0 | 1 | 10/27/14 11:15 | 10/27/14 14:33 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gas Range Organics (C6-C10) | ND | mg/kg | 7.2 | 1 | 10/22/14 14:40 | 10/22/14 20:21 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 91 | % | 70-167 | 1 | 10/22/14 14:40 | 10/22/14 20:21 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **7.0** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7440-38-2 | |
| Barium | **782** | mg/kg | 0.56 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7440-39-3 | |
| Cadmium | **15.4** | mg/kg | 0.11 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7440-43-9 | |
| Chromium | **38.3** | mg/kg | 0.56 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7440-47-3 | |
| Lead | **905** | mg/kg | 0.56 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7439-92-1 | |
| Selenium | **3.0** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.56 | 1 | 10/22/14 16:20 | 10/23/14 01:44 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.33** | mg/kg | 0.039 | 10 | 10/22/14 16:15 | 10/24/14 12:43 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 208-96-8 | |
| Aniline | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 62-53-3 | |
| Anthracene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-2(2')** **Lab ID: 92222144002** Collected: 10/20/14 15:00 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 7820 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 7820 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 7820 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 206-44-0 | |
| Fluorene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 193-39-5 | |
| Isophorone | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | | |
| Naphthalene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 7820 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-2(2')** **Lab ID: 92222144002** Collected: 10/20/14 15:00 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 19600 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 85-01-8 | |
| Phenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 108-95-2 | |
| Pyrene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 3910 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 0 | % | 23-110 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 4165-60-0 | D3,S4 |
| 2-Fluorobiphenyl (S) | 0 | % | 30-110 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 321-60-8 | |
| Terphenyl-d14 (S) | 0 | % | 28-110 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 1718-51-0 | |
| Phenol-d6 (S) | 0 | % | 22-110 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 13127-88-3 | |
| 2-Fluorophenol (S) | 0 | % | 13-110 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 0 | % | 27-110 | 10 | 10/23/14 13:01 | 10/28/14 16:56 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | ND | ug/kg | 117 | 1 | | 10/24/14 21:29 | 67-64-1 | |
| Benzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 117 | 1 | | 10/24/14 21:29 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 541-73-1 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-2(2')** **Lab ID: 92222144002** Collected: 10/20/14 15:00 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 58.5 | 1 | | 10/24/14 21:29 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 23.4 | 1 | | 10/24/14 21:29 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 58.5 | 1 | | 10/24/14 21:29 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 58.5 | 1 | | 10/24/14 21:29 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:29 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.8 | 1 | | 10/24/14 21:29 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 97 | % | 70-130 | 1 | | 10/24/14 21:29 | 2037-26-5 | 1g |
| 4-Bromofluorobenzene (S) | 81 | % | 70-130 | 1 | | 10/24/14 21:29 | 460-00-4 | |

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Huntersville, NC 28078
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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-2(2')** **Lab ID: 92222144002** Collected: 10/20/14 15:00 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 129 | % | 70-132 | 1 | | 10/24/14 21:29 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **15.6** | % | 0.10 | 1 | | 10/23/14 13:22 | | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-3(2')** **Lab ID: 92222144003** Collected: 10/20/14 15:15 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | **443** | mg/kg | 23.5 | 4 | 10/22/14 08:33 | 10/23/14 12:40 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 159 | % | 41-119 | 4 | 10/22/14 08:33 | 10/23/14 12:40 | 629-99-2 | S5 |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | **28300** | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 3870 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 100 | 10/22/14 14:30 | 10/28/14 13:51 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **1710** | mg/kg | 82.2 | 1 | 10/27/14 11:15 | 10/27/14 14:33 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gas Range Organics (C6-C10) | ND | mg/kg | 7.5 | 1 | 10/22/14 14:40 | 10/22/14 20:44 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-167 | 1 | 10/22/14 14:40 | 10/22/14 20:44 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **27.6** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:48 | 7440-38-2 | |
| Barium | **826** | mg/kg | 0.54 | 1 | 10/22/14 16:20 | 10/23/14 01:48 | 7440-39-3 | |
| Cadmium | **18.6** | mg/kg | 0.11 | 1 | 10/22/14 16:20 | 10/23/14 01:48 | 7440-43-9 | |
| Chromium | **65.0** | mg/kg | 0.54 | 1 | 10/22/14 16:20 | 10/23/14 01:48 | 7440-47-3 | |
| Lead | **1710** | mg/kg | 10.9 | 20 | 10/22/14 16:20 | 10/23/14 13:56 | 7439-92-1 | |
| Selenium | **6.0** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:48 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.54 | 1 | 10/22/14 16:20 | 10/23/14 01:48 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **1.4** | mg/kg | 0.42 | 100 | 10/22/14 16:15 | 10/24/14 12:16 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 208-96-8 | |
| Aniline | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 62-53-3 | |
| Anthracene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 207-08-9 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-3(2')** **Lab ID: 92222144003** Collected: 10/20/14 15:15 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 7750 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 7750 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 7750 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 206-44-0 | |
| Fluorene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 193-39-5 | |
| Isophorone | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | | |
| Naphthalene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 7750 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 100-01-6 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-3(2')** **Lab ID: 92222144003** Collected: 10/20/14 15:15 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 19400 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 85-01-8 | |
| Phenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 108-95-2 | |
| Pyrene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 3870 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 0 | % | 23-110 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 4165-60-0 | D3,S4 |
| 2-Fluorobiphenyl (S) | 0 | % | 30-110 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 321-60-8 | |
| Terphenyl-d14 (S) | 0 | % | 28-110 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 1718-51-0 | |
| Phenol-d6 (S) | 0 | % | 22-110 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 13127-88-3 | |
| 2-Fluorophenol (S) | 0 | % | 13-110 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 0 | % | 27-110 | 10 | 10/23/14 13:01 | 10/28/14 17:24 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | **249** | ug/kg | 117 | 1 | | 10/24/14 21:49 | 67-64-1 | A+,D6 |
| Benzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 75-27-4 | |
| Bromoform | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 75-25-2 | |
| Bromomethane | **18.9** | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 117 | 1 | | 10/24/14 21:49 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 75-00-3 | |
| Chloroform | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 67-66-3 | |
| Chloromethane | **47.9** | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-3(2')** **Lab ID: 92222144003** Collected: 10/20/14 15:15 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 58.7 | 1 | | 10/24/14 21:49 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 23.5 | 1 | | 10/24/14 21:49 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 58.7 | 1 | | 10/24/14 21:49 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 103-65-1 | |
| Styrene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 127-18-4 | |
| Toluene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 58.7 | 1 | | 10/24/14 21:49 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 11.7 | 1 | | 10/24/14 21:49 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 5.9 | 1 | | 10/24/14 21:49 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 91 | % | 70-130 | 1 | | 10/24/14 21:49 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 76 | % | 70-130 | 1 | | 10/24/14 21:49 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-3(2')** **Lab ID: 92222144003** Collected: 10/20/14 15:15 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 141 | % | 70-132 | 1 | | 10/24/14 21:49 | 17060-07-0 | S0 |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **14.8** | % | 0.10 | 1 | | 10/23/14 13:22 | | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-4(2')** **Lab ID: 92222144004** Collected: 10/20/14 15:30 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546 | | | | | | | |
| Diesel Range Organics(C10-C28) | **757** | mg/kg | 31.8 | 5 | 10/22/14 08:33 | 10/23/14 13:11 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 0 | % | 41-119 | 5 | 10/22/14 08:33 | 10/23/14 13:11 | 629-99-2 | S4 |
| **8082 GCS PCB** | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | **8910** | ug/kg | 2100 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 11096-82-5 | |
| ***Surrogates*** | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 21-132 | 50 | 10/22/14 14:30 | 10/28/14 14:12 | 2051-24-3 | S4 |
| **9071 Oil and Grease** | Analytical Method: 9071B Preparation Method: 9071B | | | | | | | |
| Oil and Grease | **2650** | mg/kg | 89.1 | 1 | 10/27/14 11:15 | 10/27/14 14:33 | | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B | | | | | | | |
| Gas Range Organics (C6-C10) | ND | mg/kg | 5.5 | 1 | 10/22/14 14:40 | 10/22/14 21:07 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 91 | % | 70-167 | 1 | 10/22/14 14:40 | 10/22/14 21:07 | 460-00-4 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Arsenic | **30.7** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:51 | 7440-38-2 | |
| Barium | **1430** | mg/kg | 11.0 | 20 | 10/22/14 16:20 | 10/23/14 13:59 | 7440-39-3 | |
| Cadmium | **25.2** | mg/kg | 0.11 | 1 | 10/22/14 16:20 | 10/23/14 01:51 | 7440-43-9 | |
| Chromium | **47.9** | mg/kg | 0.55 | 1 | 10/22/14 16:20 | 10/23/14 01:51 | 7440-47-3 | |
| Lead | **7750** | mg/kg | 11.0 | 20 | 10/22/14 16:20 | 10/23/14 13:59 | 7439-92-1 | |
| Selenium | **5.1** | mg/kg | 1.1 | 1 | 10/22/14 16:20 | 10/23/14 01:51 | 7782-49-2 | |
| Silver | **2.2** | mg/kg | 0.55 | 1 | 10/22/14 16:20 | 10/23/14 01:51 | 7440-22-4 | |
| **7471 Mercury** | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | **0.37** | mg/kg | 0.041 | 10 | 10/22/14 16:15 | 10/24/14 12:46 | 7439-97-6 | |
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Acenaphthene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 208-96-8 | |
| Aniline | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 62-53-3 | |
| Anthracene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 207-08-9 | |



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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-4(2')** **Lab ID: 92222144004** Collected: 10/20/14 15:30 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Benzoic Acid | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 8400 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 8400 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 111-44-4 | |
| bis(2-Chloroisopropyl) ether | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 108-60-1 | |
| 2-Chloronaphthalene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 8400 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 206-44-0 | |
| Fluorene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 193-39-5 | |
| Isophorone | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | | |
| Naphthalene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 8400 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 100-01-6 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-4(2')** **Lab ID: 92222144004** Collected: 10/20/14 15:30 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270 MSSV Microwave** | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| Nitrobenzene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 86-30-6 | |
| Pentachlorophenol | ND | ug/kg | 21000 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 85-01-8 | |
| Phenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 108-95-2 | |
| Pyrene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 4200 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 0 | % | 23-110 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 4165-60-0 | D3,S4 |
| 2-Fluorobiphenyl (S) | 0 | % | 30-110 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 321-60-8 | |
| Terphenyl-d14 (S) | 0 | % | 28-110 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 1718-51-0 | |
| Phenol-d6 (S) | 0 | % | 22-110 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 13127-88-3 | |
| 2-Fluorophenol (S) | 0 | % | 13-110 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 0 | % | 27-110 | 10 | 10/23/14 13:01 | 10/28/14 17:51 | 118-79-6 | |
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| Acetone | **164** | ug/kg | 128 | 1 | | 10/24/14 22:09 | 67-64-1 | A+ |
| Benzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 75-27-4 | |
| Bromoform | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 128 | 1 | | 10/24/14 22:09 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 75-00-3 | |
| Chloroform | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 541-73-1 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-4(2')** **Lab ID: 92222144004** Collected: 10/20/14 15:30 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| 1,4-Dichlorobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 63.8 | 1 | | 10/24/14 22:09 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 25.5 | 1 | | 10/24/14 22:09 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 63.8 | 1 | | 10/24/14 22:09 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 91-20-3 | |
| n-Propylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 103-65-1 | |
| Styrene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 127-18-4 | |
| Toluene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 63.8 | 1 | | 10/24/14 22:09 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 12.8 | 1 | | 10/24/14 22:09 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 6.4 | 1 | | 10/24/14 22:09 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 95 | % | 70-130 | 1 | | 10/24/14 22:09 | 2037-26-5 | 1g |
| 4-Bromofluorobenzene (S) | 80 | % | 70-130 | 1 | | 10/24/14 22:09 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**Sample: SW-4(2')** **Lab ID: 92222144004** Collected: 10/20/14 15:30 Received: 10/21/14 09:40 Matrix: Solid

***Results reported on a "dry-weight" basis***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260/5035A Volatile Organics** | Analytical Method: EPA 8260 | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 118 | % | 70-132 | 1 | | 10/24/14 22:09 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: ASTM D2974-87 | | | | | | | |
| Percent Moisture | **21.5** | % | 0.10 | 1 | | 10/23/14 13:22 | | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: GCSV/19299 Analysis Method: 9071B
QC Batch Method: 9071B Analysis Description: 9071 Oil and Grease
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1315667 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Oil and Grease | mg/kg | ND | 70.0 | 10/27/14 14:33 | |

LABORATORY CONTROL SAMPLE: 1315668

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Oil and Grease | mg/kg | 1330 | 1190 | 89 | 78-114 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1315669 1315670

| Parameter | Units | 92222629008 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Oil and Grease | mg/kg | 364 | 1440 | 1440 | 1280 | 1250 | 63 | 62 | 78-114 | 2 | 20 | M3 |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: GCV/8689 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1312517 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | 6.0 | 10/22/14 19:13 | |
| 4-Bromofluorobenzene (S) | % | 95 | 70-167 | 10/22/14 19:13 | |

LABORATORY CONTROL SAMPLE: 1312518

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | 50 | 53.8 | 108 | 70-165 | |
| 4-Bromofluorobenzene (S) | % | | | 90 | 70-167 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312519 1312520

| Parameter | Units | 92222320006 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | 61.6 | 61.6 | 62.0 | 69.1 | 100 | 112 | 47-187 | 11 | 30 | |
| 4-Bromofluorobenzene (S) | % | | | | | | 90 | 86 | 70-167 | | | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: MERP/7213 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1312648 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Mercury | mg/kg | ND | 0.0050 | 10/24/14 11:45 | |

LABORATORY CONTROL SAMPLE: 1312649

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Mercury | mg/kg | .067 | 0.059 | 88 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312650 1312651

| Parameter | Units | 92222144001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | 21.1 | .058 | .065 | 11.7 | 5.8 | -16417 | -23454 | 75-125 | 67 | 20 | M6,R1 |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: MPRP/17181 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1312783 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Arsenic | mg/kg | ND | 1.0 | 10/23/14 01:29 | |
| Barium | mg/kg | ND | 0.50 | 10/23/14 01:29 | |
| Cadmium | mg/kg | ND | 0.10 | 10/23/14 01:29 | |
| Chromium | mg/kg | ND | 0.50 | 10/23/14 01:29 | |
| Lead | mg/kg | ND | 0.50 | 10/23/14 01:29 | |
| Selenium | mg/kg | ND | 1.0 | 10/23/14 01:29 | |
| Silver | mg/kg | ND | 0.50 | 10/23/14 01:29 | |

LABORATORY CONTROL SAMPLE: 1312784

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 50 | 48.2 | 96 | 80-120 | |
| Barium | mg/kg | 50 | 49.0 | 98 | 80-120 | |
| Cadmium | mg/kg | 50 | 49.2 | 98 | 80-120 | |
| Chromium | mg/kg | 50 | 48.1 | 96 | 80-120 | |
| Lead | mg/kg | 50 | 49.1 | 98 | 80-120 | |
| Selenium | mg/kg | 50 | 49.4 | 99 | 80-120 | |
| Silver | mg/kg | 25 | 24.5 | 98 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312785 1312786

| Parameter | Units | 92222144001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | mg/kg | 8.4 | 55.8 | 53.7 | 59.9 | 53.4 | 92 | 84 | 75-125 | 11 | 20 | |
| Barium | mg/kg | 940 | 55.8 | 53.7 | 885 | 1020 | -98 | 145 | 75-125 | 14 | 20 | M1 |
| Cadmium | mg/kg | 17.4 | 55.8 | 53.7 | 65.6 | 64.7 | 86 | 88 | 75-125 | 1 | 20 | |
| Chromium | mg/kg | 51.0 | 55.8 | 53.7 | 85.5 | 85.7 | 62 | 65 | 75-125 | 0 | 20 | M1 |
| Lead | mg/kg | 1010 | 55.8 | 53.7 | 764 | 973 | -439 | -65 | 75-125 | 24 | 20 | M1,R1 |
| Selenium | mg/kg | 3.0 | 55.8 | 53.7 | 47.8 | 48.7 | 80 | 85 | 75-125 | 2 | 20 | |
| Silver | mg/kg | ND | 27.8 | 26.9 | 24.6 | 24.4 | 86 | 89 | 75-125 | 1 | 20 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: MSV/28892 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035A Volatile Organics
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1314695 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,1-Dichloroethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,1-Dichloroethene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,1-Dichloropropene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2-Dichloroethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,2-Dichloropropane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,3-Dichloropropane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 2,2-Dichloropropane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 2-Butanone (MEK) | ug/kg | ND | 95.8 | 10/24/14 13:53 | |
| 2-Chlorotoluene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 2-Hexanone | ug/kg | ND | 47.9 | 10/24/14 13:53 | |
| 4-Chlorotoluene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 47.9 | 10/24/14 13:53 | |
| Acetone | ug/kg | ND | 95.8 | 10/24/14 13:53 | |
| Benzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Bromobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Bromochloromethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Bromodichloromethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Bromoform | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Bromomethane | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| Carbon tetrachloride | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Chlorobenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Chloroethane | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| Chloroform | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Chloromethane | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Dibromochloromethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

METHOD BLANK: 1314695 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromomethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Dichlorodifluoromethane | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| Diisopropyl ether | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Ethylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| m&p-Xylene | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| Methyl-tert-butyl ether | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Methylene Chloride | ug/kg | ND | 19.2 | 10/24/14 13:53 | |
| n-Butylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| n-Propylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Naphthalene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| o-Xylene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| p-Isopropyltoluene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| sec-Butylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Styrene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| tert-Butylbenzene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Tetrachloroethene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Toluene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Trichloroethene | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Trichlorofluoromethane | ug/kg | ND | 4.8 | 10/24/14 13:53 | |
| Vinyl acetate | ug/kg | ND | 47.9 | 10/24/14 13:53 | |
| Vinyl chloride | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| Xylene (Total) | ug/kg | ND | 9.6 | 10/24/14 13:53 | |
| 1,2-Dichloroethane-d4 (S) | % | 95 | 70-132 | 10/24/14 13:53 | |
| 4-Bromofluorobenzene (S) | % | 96 | 70-130 | 10/24/14 13:53 | |
| Toluene-d8 (S) | % | 102 | 70-130 | 10/24/14 13:53 | |

LABORATORY CONTROL SAMPLE: 1314697

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | 46.9 | 44.0 | 94 | 74-137 | |
| 1,1,1-Trichloroethane | ug/kg | 46.9 | 44.0 | 94 | 67-140 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 46.9 | 38.2 | 81 | 72-141 | |
| 1,1,2-Trichloroethane | ug/kg | 46.9 | 40.5 | 86 | 78-138 | |
| 1,1-Dichloroethane | ug/kg | 46.9 | 44.2 | 94 | 69-134 | |
| 1,1-Dichloroethene | ug/kg | 46.9 | 45.4 | 97 | 67-138 | |
| 1,1-Dichloropropene | ug/kg | 46.9 | 42.8 | 91 | 69-139 | |
| 1,2,3-Trichlorobenzene | ug/kg | 46.9 | 44.8 | 96 | 70-146 | |
| 1,2,3-Trichloropropane | ug/kg | 46.9 | 42.9 | 91 | 69-144 | |
| 1,2,4-Trichlorobenzene | ug/kg | 46.9 | 43.7 | 93 | 68-148 | |
| 1,2,4-Trimethylbenzene | ug/kg | 46.9 | 45.5 | 97 | 74-137 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

LABORATORY CONTROL SAMPLE: 1314697

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | ug/kg | 46.9 | 39.1 | 83 | 65-140 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 46.9 | 42.5 | 91 | 77-135 | |
| 1,2-Dichlorobenzene | ug/kg | 46.9 | 44.3 | 94 | 77-141 | |
| 1,2-Dichloroethane | ug/kg | 46.9 | 41.0 | 87 | 65-137 | |
| 1,2-Dichloropropane | ug/kg | 46.9 | 43.3 | 92 | 72-136 | |
| 1,3,5-Trimethylbenzene | ug/kg | 46.9 | 45.6 | 97 | 76-133 | |
| 1,3-Dichlorobenzene | ug/kg | 46.9 | 45.1 | 96 | 74-138 | |
| 1,3-Dichloropropane | ug/kg | 46.9 | 42.3 | 90 | 71-139 | |
| 1,4-Dichlorobenzene | ug/kg | 46.9 | 44.6 | 95 | 76-138 | |
| 2,2-Dichloropropane | ug/kg | 46.9 | 45.4 | 97 | 68-137 | |
| 2-Butanone (MEK) | ug/kg | 93.8 | 74.4J | 79 | 58-147 | |
| 2-Chlorotoluene | ug/kg | 46.9 | 45.5 | 97 | 73-139 | |
| 2-Hexanone | ug/kg | 93.8 | 87.2 | 93 | 62-145 | |
| 4-Chlorotoluene | ug/kg | 46.9 | 44.3 | 94 | 76-141 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | 93.8 | 85.6 | 91 | 64-149 | |
| Acetone | ug/kg | 93.8 | 71.7J | 76 | 53-153 | |
| Benzene | ug/kg | 46.9 | 43.6 | 93 | 73-135 | |
| Bromobenzene | ug/kg | 46.9 | 41.9 | 89 | 75-133 | |
| Bromochloromethane | ug/kg | 46.9 | 41.2 | 88 | 73-134 | |
| Bromodichloromethane | ug/kg | 46.9 | 43.1 | 92 | 71-135 | |
| Bromoform | ug/kg | 46.9 | 42.4 | 90 | 66-141 | |
| Bromomethane | ug/kg | 46.9 | 47.7 | 102 | 53-160 | |
| Carbon tetrachloride | ug/kg | 46.9 | 44.2 | 94 | 60-145 | |
| Chlorobenzene | ug/kg | 46.9 | 44.3 | 94 | 78-130 | |
| Chloroethane | ug/kg | 46.9 | 42.6 | 91 | 64-149 | |
| Chloroform | ug/kg | 46.9 | 44.9 | 96 | 70-134 | |
| Chloromethane | ug/kg | 46.9 | 47.1 | 100 | 52-150 | |
| cis-1,2-Dichloroethene | ug/kg | 46.9 | 45.0 | 96 | 70-133 | |
| cis-1,3-Dichloropropene | ug/kg | 46.9 | 43.6 | 93 | 68-134 | |
| Dibromochloromethane | ug/kg | 46.9 | 45.0 | 96 | 71-138 | |
| Dibromomethane | ug/kg | 46.9 | 41.8 | 89 | 74-130 | |
| Dichlorodifluoromethane | ug/kg | 46.9 | 46.6 | 99 | 40-160 | |
| Diisopropyl ether | ug/kg | 46.9 | 44.3 | 94 | 69-141 | |
| Ethylbenzene | ug/kg | 46.9 | 44.9 | 96 | 75-133 | |
| Hexachloro-1,3-butadiene | ug/kg | 46.9 | 42.7 | 91 | 68-143 | |
| Isopropylbenzene (Cumene) | ug/kg | 46.9 | 43.6 | 93 | 76-143 | |
| m&p-Xylene | ug/kg | 93.8 | 84.6 | 90 | 75-136 | |
| Methyl-tert-butyl ether | ug/kg | 46.9 | 40.4 | 86 | 68-144 | |
| Methylene Chloride | ug/kg | 46.9 | 46.6 | 99 | 45-154 | |
| n-Butylbenzene | ug/kg | 46.9 | 42.8 | 91 | 72-137 | |
| n-Propylbenzene | ug/kg | 46.9 | 41.9 | 89 | 76-136 | |
| Naphthalene | ug/kg | 46.9 | 43.3 | 92 | 68-151 | |
| o-Xylene | ug/kg | 46.9 | 44.0 | 94 | 76-141 | |
| p-Isopropyltoluene | ug/kg | 46.9 | 42.4 | 90 | 76-140 | |
| sec-Butylbenzene | ug/kg | 46.9 | 42.5 | 91 | 79-139 | |
| Styrene | ug/kg | 46.9 | 45.4 | 97 | 79-137 | |
| tert-Butylbenzene | ug/kg | 46.9 | 39.3 | 84 | 74-143 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

LABORATORY CONTROL SAMPLE: 1314697

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Tetrachloroethene | ug/kg | 46.9 | 42.0 | 90 | 71-138 | |
| Toluene | ug/kg | 46.9 | 43.2 | 92 | 74-131 | |
| trans-1,2-Dichloroethene | ug/kg | 46.9 | 44.9 | 96 | 67-135 | |
| trans-1,3-Dichloropropene | ug/kg | 46.9 | 43.4 | 93 | 65-146 | |
| Trichloroethene | ug/kg | 46.9 | 45.5 | 97 | 67-135 | |
| Trichlorofluoromethane | ug/kg | 46.9 | 42.6 | 91 | 59-144 | |
| Vinyl acetate | ug/kg | 93.8 | 52.0 | 55 | 40-160 | F3 |
| Vinyl chloride | ug/kg | 46.9 | 47.3 | 101 | 56-141 | |
| Xylene (Total) | ug/kg | 141 | 129 | 91 | 76-137 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 93 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | 101 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE SAMPLE: 1315570

| Parameter | Units | 92222000027 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 18.6 | 19.1 | 103 | 70-130 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 18.6 | 20.0 | 107 | 70-130 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 18.6 | 18.5 | 100 | 70-130 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 18.6 | 18.3 | 98 | 70-130 | |
| 1,1-Dichloroethane | ug/kg | ND | 18.6 | 19.6 | 106 | 70-130 | |
| 1,1-Dichloroethene | ug/kg | ND | 18.6 | 19.8 | 106 | 49-180 | |
| 1,1-Dichloropropene | ug/kg | ND | 18.6 | 20.4 | 110 | 70-130 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 18.6 | 19.1 | 103 | 70-130 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 18.6 | 18.3 | 99 | 70-130 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 18.6 | 18.9 | 102 | 70-130 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 18.6 | 20.4 | 110 | 70-130 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 18.6 | 16.3 | 88 | 70-130 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 18.6 | 18.3 | 99 | 70-130 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 18.6 | 19.4 | 105 | 70-130 | |
| 1,2-Dichloroethane | ug/kg | ND | 18.6 | 17.5 | 94 | 70-130 | |
| 1,2-Dichloropropane | ug/kg | ND | 18.6 | 19.7 | 106 | 70-130 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 18.6 | 20.4 | 110 | 70-130 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 18.6 | 20.2 | 109 | 70-130 | |
| 1,3-Dichloropropane | ug/kg | ND | 18.6 | 18.9 | 102 | 70-130 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 18.6 | 20.1 | 108 | 70-130 | |
| 2,2-Dichloropropane | ug/kg | ND | 18.6 | 20.1 | 108 | 70-130 | |
| 2-Butanone (MEK) | ug/kg | ND | 37.1 | 32.6J | 88 | 70-130 | |
| 2-Chlorotoluene | ug/kg | ND | 18.6 | 20.5 | 111 | 70-130 | |
| 2-Hexanone | ug/kg | ND | 37.1 | 33.3J | 90 | 70-130 | |
| 4-Chlorotoluene | ug/kg | ND | 18.6 | 20.4 | 110 | 70-130 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 37.1 | 33.2J | 89 | 70-130 | |
| Acetone | ug/kg | ND | 37.1 | 31J | 83 | 70-130 | |
| Benzene | ug/kg | ND | 18.6 | 19.8 | 107 | 50-166 | |
| Bromobenzene | ug/kg | ND | 18.6 | 20.4 | 110 | 70-130 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

MATRIX SPIKE SAMPLE: 1315570

| Parameter | Units | 92222000027 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Bromochloromethane | ug/kg | ND | 18.6 | 18.3 | 98 | 70-130 | |
| Bromodichloromethane | ug/kg | ND | 18.6 | 16.9 | 91 | 70-130 | |
| Bromoform | ug/kg | ND | 18.6 | 16.1 | 87 | 70-130 | |
| Bromomethane | ug/kg | ND | 18.6 | 18.1 | 97 | 70-130 | |
| Carbon tetrachloride | ug/kg | ND | 18.6 | 19.7 | 106 | 70-130 | |
| Chlorobenzene | ug/kg | ND | 18.6 | 19.8 | 107 | 43-169 | |
| Chloroethane | ug/kg | ND | 18.6 | 18.5 | 100 | 70-130 | |
| Chloroform | ug/kg | ND | 18.6 | 18.3 | 98 | 70-130 | |
| Chloromethane | ug/kg | ND | 18.6 | 18.9 | 102 | 70-130 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 18.6 | 19.2 | 104 | 70-130 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 18.6 | 18.0 | 97 | 70-130 | |
| Dibromochloromethane | ug/kg | ND | 18.6 | 16.5 | 89 | 70-130 | |
| Dibromomethane | ug/kg | ND | 18.6 | 18.2 | 98 | 70-130 | |
| Dichlorodifluoromethane | ug/kg | ND | 18.6 | 19.3 | 104 | 70-130 | |
| Diisopropyl ether | ug/kg | ND | 18.6 | 18.7 | 101 | 70-130 | |
| Ethylbenzene | ug/kg | ND | 18.6 | 21.0 | 113 | 70-130 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 18.6 | 19.6 | 106 | 70-130 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 18.6 | 20.0 | 108 | 70-130 | |
| m&p-Xylene | ug/kg | ND | 37.1 | 40.1 | 108 | 70-130 | |
| Methyl-tert-butyl ether | ug/kg | ND | 18.6 | 16.9 | 91 | 70-130 | |
| Methylene Chloride | ug/kg | ND | 18.6 | 19.9 | 107 | 70-130 | |
| n-Butylbenzene | ug/kg | ND | 18.6 | 20.0 | 108 | 70-130 | |
| n-Propylbenzene | ug/kg | ND | 18.6 | 20.0 | 107 | 70-130 | |
| Naphthalene | ug/kg | ND | 18.6 | 16.9 | 91 | 70-130 | |
| o-Xylene | ug/kg | ND | 18.6 | 19.8 | 106 | 70-130 | |
| p-Isopropyltoluene | ug/kg | ND | 18.6 | 19.5 | 105 | 70-130 | |
| sec-Butylbenzene | ug/kg | ND | 18.6 | 20.1 | 108 | 70-130 | |
| Styrene | ug/kg | ND | 18.6 | 20.1 | 109 | 70-130 | |
| tert-Butylbenzene | ug/kg | ND | 18.6 | 18.2 | 98 | 70-130 | |
| Tetrachloroethene | ug/kg | ND | 18.6 | 18.6 | 100 | 70-130 | |
| Toluene | ug/kg | ND | 18.6 | 19.9 | 107 | 52-163 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 18.6 | 20.2 | 109 | 70-130 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 18.6 | 18.4 | 99 | 70-130 | |
| Trichloroethene | ug/kg | ND | 18.6 | 19.0 | 102 | 49-167 | |
| Trichlorofluoromethane | ug/kg | ND | 18.6 | 19.6 | 106 | 70-130 | |
| Vinyl acetate | ug/kg | ND | 37.1 | 33.6J | 90 | 70-130 | |
| Vinyl chloride | ug/kg | ND | 18.6 | 20.5 | 111 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 94 | 70-132 | |
| 4-Bromofluorobenzene (S) | % | | | | 100 | 70-130 | |
| Toluene-d8 (S) | % | | | | 99 | 70-130 | |

SAMPLE DUPLICATE: 1315569

| Parameter | Units | 92222144003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

SAMPLE DUPLICATE: 1315569

| Parameter | Units | 92222144003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | ND | | 30 | |
| 1,1,2-Trichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloroethene | ug/kg | ND | ND | | 30 | |
| 1,1-Dichloropropene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,3-Trichloropropane | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | ND | | 30 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloroethane | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 1,3-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | 30 | |
| 2,2-Dichloropropane | ug/kg | ND | ND | | 30 | |
| 2-Butanone (MEK) | ug/kg | ND | ND | | 30 | |
| 2-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 2-Hexanone | ug/kg | ND | ND | | 30 | |
| 4-Chlorotoluene | ug/kg | ND | ND | | 30 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | ND | | 30 | |
| Acetone | ug/kg | 249 | 129 | 63 | 30 | A+,D6 |
| Benzene | ug/kg | ND | 3.3J | | 30 | |
| Bromobenzene | ug/kg | ND | ND | | 30 | |
| Bromochloromethane | ug/kg | ND | ND | | 30 | |
| Bromodichloromethane | ug/kg | ND | ND | | 30 | |
| Bromoform | ug/kg | ND | ND | | 30 | |
| Bromomethane | ug/kg | 18.9 | ND | | 30 | |
| Carbon tetrachloride | ug/kg | ND | ND | | 30 | |
| Chlorobenzene | ug/kg | ND | ND | | 30 | |
| Chloroethane | ug/kg | ND | ND | | 30 | |
| Chloroform | ug/kg | ND | ND | | 30 | |
| Chloromethane | ug/kg | 47.9 | 5J | | 30 | |
| cis-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| cis-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Dibromochloromethane | ug/kg | ND | ND | | 30 | |
| Dibromomethane | ug/kg | ND | ND | | 30 | |
| Dichlorodifluoromethane | ug/kg | ND | ND | | 30 | |
| Diisopropyl ether | ug/kg | ND | ND | | 30 | |
| Ethylbenzene | ug/kg | ND | ND | | 30 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | 30 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | ND | | 30 | |
| m&p-Xylene | ug/kg | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

SAMPLE DUPLICATE: 1315569

| Parameter | Units | 92222144003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Methyl-tert-butyl ether | ug/kg | ND | ND | | 30 | |
| Methylene Chloride | ug/kg | ND | ND | | 30 | |
| n-Butylbenzene | ug/kg | ND | ND | | 30 | |
| n-Propylbenzene | ug/kg | ND | ND | | 30 | |
| Naphthalene | ug/kg | ND | ND | | 30 | |
| o-Xylene | ug/kg | ND | ND | | 30 | |
| p-Isopropyltoluene | ug/kg | ND | ND | | 30 | |
| sec-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Styrene | ug/kg | ND | ND | | 30 | |
| tert-Butylbenzene | ug/kg | ND | ND | | 30 | |
| Tetrachloroethene | ug/kg | ND | ND | | 30 | |
| Toluene | ug/kg | ND | ND | | 30 | |
| trans-1,2-Dichloroethene | ug/kg | ND | ND | | 30 | |
| trans-1,3-Dichloropropene | ug/kg | ND | ND | | 30 | |
| Trichloroethene | ug/kg | ND | ND | | 30 | |
| Trichlorofluoromethane | ug/kg | ND | ND | | 30 | |
| Vinyl acetate | ug/kg | ND | ND | | 30 | |
| Vinyl chloride | ug/kg | ND | ND | | 30 | |
| Xylene (Total) | ug/kg | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 141 | 136 | 5 | | S0 |
| 4-Bromofluorobenzene (S) | % | 76 | 74 | 3 | | |
| Toluene-d8 (S) | % | 91 | 93 | 2 | | 1g |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: OEXT/30607 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1312183 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | ND | 5.0 | 10/22/14 16:26 | |
| n-Pentacosane (S) | % | 89 | 41-119 | 10/22/14 16:26 | |

LABORATORY CONTROL SAMPLE: 1312184

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | 66.7 | 63.2 | 95 | 49-113 | |
| n-Pentacosane (S) | % | | | 91 | 41-119 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312185 1312186

| Parameter | Units | 92222009021 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | ND | 91.6 | 91.6 | 60.9 | 62.9 | 63 | 66 | 10-146 | 3 | 30 | |
| n-Pentacosane (S) | % | | | | | | 73 | 70 | 41-119 | | | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: OEXT/30616 Analysis Method: EPA 8082
QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1312569 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 33.0 | 10/27/14 21:44 | |
| Decachlorobiphenyl (S) | % | 83 | 21-132 | 10/27/14 21:44 | |

LABORATORY CONTROL SAMPLE: 1312570

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | 167 | 159 | 95 | 31-120 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 167 | 159 | 95 | 32-120 | |
| Decachlorobiphenyl (S) | % | | | 98 | 21-132 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1312571 1312572

| Parameter | Units | 92222144001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 201 | 201 | 516 | 418 | 257 | 208 | 49-150 | 21 | 30 | M3 |
| PCB-1260 (Aroclor 1260) | ug/kg | 2440 | 201 | 201 | 2310 | 1960 | -63 | -240 | 50-150 | 17 | 30 | P6 |
| Decachlorobiphenyl (S) | % | | | | | | 158 | 145 | 21-132 | | | S5 |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: OEXT/30642 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

METHOD BLANK: 1313547 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 1-Methylnaphthalene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,4,5-Trichlorophenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,4,6-Trichlorophenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,4-Dichlorophenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,4-Dimethylphenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,4-Dinitrophenol | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| 2,4-Dinitrotoluene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,6-Dinitrotoluene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2-Chloronaphthalene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2-Chlorophenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2-Methylnaphthalene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2-Nitroaniline | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| 2-Nitrophenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 3,3'-Dichlorobenzidine | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| 3-Nitroaniline | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | 660 | 10/28/14 18:19 | |
| 4-Bromophenylphenyl ether | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 4-Chloro-3-methylphenol | ug/kg | ND | 660 | 10/28/14 18:19 | |
| 4-Chloroaniline | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 4-Nitroaniline | ug/kg | ND | 660 | 10/28/14 18:19 | |
| 4-Nitrophenol | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| Acenaphthene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Acenaphthylene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Aniline | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Anthracene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Benzo(a)anthracene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Benzo(a)pyrene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Benzo(b)fluoranthene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Benzo(g,h,i)perylene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Benzo(k)fluoranthene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Benzoic Acid | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| Benzyl alcohol | ug/kg | ND | 660 | 10/28/14 18:19 | |
| bis(2-Chloroethoxy)methane | ug/kg | ND | 330 | 10/28/14 18:19 | |
| bis(2-Chloroethyl) ether | ug/kg | ND | 330 | 10/28/14 18:19 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

METHOD BLANK: 1313547 Matrix: Solid
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| bis(2-Chloroisopropyl) ether | ug/kg | ND | 330 | 10/28/14 18:19 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Butylbenzylphthalate | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Chrysene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Di-n-butylphthalate | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Di-n-octylphthalate | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Dibenz(a,h)anthracene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Dibenzofuran | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Diethylphthalate | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Dimethylphthalate | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Fluoranthene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Fluorene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Hexachlorobenzene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Hexachlorocyclopentadiene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Hexachloroethane | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Isophorone | ug/kg | ND | 330 | 10/28/14 18:19 | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | 330 | 10/28/14 18:19 | |
| N-Nitrosodimethylamine | ug/kg | ND | 330 | 10/28/14 18:19 | |
| N-Nitrosodiphenylamine | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Naphthalene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Nitrobenzene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Pentachlorophenol | ug/kg | ND | 1650 | 10/28/14 18:19 | |
| Phenanthrene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Phenol | ug/kg | ND | 330 | 10/28/14 18:19 | |
| Pyrene | ug/kg | ND | 330 | 10/28/14 18:19 | |
| 2,4,6-Tribromophenol (S) | % | 71 | 27-110 | 10/28/14 18:19 | |
| 2-Fluorobiphenyl (S) | % | 64 | 30-110 | 10/28/14 18:19 | |
| 2-Fluorophenol (S) | % | 56 | 13-110 | 10/28/14 18:19 | |
| Nitrobenzene-d5 (S) | % | 59 | 23-110 | 10/28/14 18:19 | |
| Phenol-d6 (S) | % | 61 | 22-110 | 10/28/14 18:19 | |
| Terphenyl-d14 (S) | % | 75 | 28-110 | 10/28/14 18:19 | |

LABORATORY CONTROL SAMPLE: 1313548

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 1670 | 1250 | 75 | 36-120 | |
| 1,2-Dichlorobenzene | ug/kg | 1670 | 1120 | 67 | 41-120 | |
| 1,3-Dichlorobenzene | ug/kg | 1670 | 1070 | 64 | 66-120 | L2 |
| 1,4-Dichlorobenzene | ug/kg | 1670 | 1150 | 69 | 42-120 | |
| 1-Methylnaphthalene | ug/kg | 1670 | 1160 | 70 | 40-120 | |
| 2,4,5-Trichlorophenol | ug/kg | 1670 | 1290 | 77 | 37-120 | |
| 2,4,6-Trichlorophenol | ug/kg | 1670 | 1190 | 72 | 40-120 | |

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## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

LABORATORY CONTROL SAMPLE: 1313548

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 2,4-Dichlorophenol | ug/kg | 1670 | 1250 | 75 | 33-120 | |
| 2,4-Dimethylphenol | ug/kg | 1670 | 1230 | 74 | 36-120 | |
| 2,4-Dinitrophenol | ug/kg | 8330 | 6120 | 73 | 22-121 | |
| 2,4-Dinitrotoluene | ug/kg | 1670 | 1400 | 84 | 60-120 | |
| 2,6-Dinitrotoluene | ug/kg | 1670 | 1330 | 80 | 54-120 | |
| 2-Chloronaphthalene | ug/kg | 1670 | 1160 | 69 | 41-120 | |
| 2-Chlorophenol | ug/kg | 1670 | 1210 | 72 | 39-120 | |
| 2-Methylnaphthalene | ug/kg | 1670 | 1140 | 69 | 26-120 | |
| 2-Methylphenol(o-Cresol) | ug/kg | 1670 | 1170 | 70 | 41-120 | |
| 2-Nitroaniline | ug/kg | 3330 | 2290 | 69 | 45-120 | |
| 2-Nitrophenol | ug/kg | 1670 | 1200 | 72 | 35-120 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | 1670 | 1160 | 70 | 35-120 | |
| 3,3'-Dichlorobenzidine | ug/kg | 3330 | 2550 | 76 | 16-125 | |
| 3-Nitroaniline | ug/kg | 3330 | 2390 | 72 | 45-120 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | 3330 | 2750 | 82 | 46-120 | |
| 4-Bromophenylphenyl ether | ug/kg | 1670 | 1390 | 83 | 36-120 | |
| 4-Chloro-3-methylphenol | ug/kg | 3330 | 2590 | 78 | 37-120 | |
| 4-Chloroaniline | ug/kg | 3330 | 2250 | 67 | 35-120 | |
| 4-Chlorophenylphenyl ether | ug/kg | 1670 | 1390 | 84 | 30-120 | |
| 4-Nitroaniline | ug/kg | 3330 | 2570 | 77 | 48-120 | |
| 4-Nitrophenol | ug/kg | 8330 | 6350 | 76 | 43-120 | |
| Acenaphthene | ug/kg | 1670 | 1210 | 72 | 46-120 | |
| Acenaphthylene | ug/kg | 1670 | 1140 | 69 | 46-120 | |
| Aniline | ug/kg | 1670 | 936 | 56 | 33-120 | |
| Anthracene | ug/kg | 1670 | 1330 | 80 | 63-120 | |
| Benzo(a)anthracene | ug/kg | 1670 | 1320 | 79 | 61-120 | |
| Benzo(a)pyrene | ug/kg | 1670 | 1310 | 78 | 59-120 | |
| Benzo(b)fluoranthene | ug/kg | 1670 | 1220 | 73 | 55-120 | |
| Benzo(g,h,i)perylene | ug/kg | 1670 | 1200 | 72 | 57-120 | |
| Benzo(k)fluoranthene | ug/kg | 1670 | 1240 | 75 | 56-120 | |
| Benzoic Acid | ug/kg | 8330 | 3530 | 42 | 13-120 | |
| Benzyl alcohol | ug/kg | 3330 | 2540 | 76 | 34-120 | |
| bis(2-Chloroethoxy)methane | ug/kg | 1670 | 1080 | 65 | 21-120 | |
| bis(2-Chloroethyl) ether | ug/kg | 1670 | 1060 | 64 | 25-120 | |
| bis(2-Chloroisopropyl) ether | ug/kg | 1670 | 850 | 51 | 13-120 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | 1670 | 1250 | 75 | 56-123 | |
| Butylbenzylphthalate | ug/kg | 1670 | 1220 | 73 | 57-120 | |
| Chrysene | ug/kg | 1670 | 1310 | 79 | 64-120 | |
| Di-n-butylphthalate | ug/kg | 1670 | 1330 | 80 | 58-120 | |
| Di-n-octylphthalate | ug/kg | 1670 | 1170 | 70 | 47-121 | |
| Dibenz(a,h)anthracene | ug/kg | 1670 | 1320 | 79 | 56-120 | |
| Dibenzofuran | ug/kg | 1670 | 1300 | 78 | 43-120 | |
| Diethylphthalate | ug/kg | 1670 | 1320 | 79 | 55-120 | |
| Dimethylphthalate | ug/kg | 1670 | 1310 | 78 | 54-120 | |
| Fluoranthene | ug/kg | 1670 | 1460 | 88 | 61-120 | |
| Fluorene | ug/kg | 1670 | 1340 | 81 | 51-120 | |
| Hexachloro-1,3-butadiene | ug/kg | 1670 | 1290 | 77 | 22-120 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

LABORATORY CONTROL SAMPLE: 1313548

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Hexachlorobenzene | ug/kg | 1670 | 1400 | 84 | 53-120 | |
| Hexachlorocyclopentadiene | ug/kg | 1670 | 786 | 47 | 18-150 | |
| Hexachloroethane | ug/kg | 1670 | 1080 | 65 | 39-120 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | 1670 | 1000 | 60 | 58-120 | |
| Isophorone | ug/kg | 1670 | 1130 | 68 | 38-120 | |
| N-Nitroso-di-n-propylamine | ug/kg | 1670 | 1170 | 70 | 30-120 | |
| N-Nitrosodimethylamine | ug/kg | 1670 | 949 | 57 | 32-120 | |
| N-Nitrosodiphenylamine | ug/kg | 1670 | 1290 | 78 | 50-120 | |
| Naphthalene | ug/kg | 1670 | 1110 | 66 | 38-120 | |
| Nitrobenzene | ug/kg | 1670 | 1080 | 65 | 37-120 | |
| Pentachlorophenol | ug/kg | 3330 | 2400 | 72 | 10-120 | |
| Phenanthrene | ug/kg | 1670 | 1290 | 77 | 62-120 | |
| Phenol | ug/kg | 1670 | 1280 | 77 | 37-120 | |
| Pyrene | ug/kg | 1670 | 1250 | 75 | 63-120 | |
| 2,4,6-Tribromophenol (S) | % | | | 83 | 27-110 | |
| 2-Fluorobiphenyl (S) | % | | | 66 | 30-110 | |
| 2-Fluorophenol (S) | % | | | 63 | 13-110 | |
| Nitrobenzene-d5 (S) | % | | | 63 | 23-110 | |
| Phenol-d6 (S) | % | | | 67 | 22-110 | |
| Terphenyl-d14 (S) | % | | | 78 | 28-110 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

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Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

QC Batch: PMST/7155 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92222144001, 92222144002, 92222144003, 92222144004

SAMPLE DUPLICATE: 1312271

| Parameter | Units | 92222028001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 4.9 | 5.1 | 4 | 25 | |

SAMPLE DUPLICATE: 1312272

| Parameter | Units | 92222321005 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Percent Moisture | % | 27.9 | 27.3 | 2 | 25 | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

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(704)875-9092

# QUALIFIERS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## LABORATORIES

| | |
|---|---|
| PASI-A | Pace Analytical Services - Asheville |
| PASI-C | Pace Analytical Services - Charlotte |

## ANALYTE QUALIFIERS

| | |
|---|---|
| 1g | The internal standard response is below criteria. No hits associated with this internal standard. Results unaffected by high bias. |
| A+ | The reaction of the soil preservative, sodium bisulfate, is known to react with humic acid in soils to produce ketones. Based upon method blank results, the laboratory feels the ketones in this sample are a result of that reaction. |
| D3 | Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference. |
| D6 | The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits. |
| F3 | The recovery of the second source standard used to verify the initial calibration curve for this analyte is outside the laboratory's control limits. The result is estimated. |
| L2 | Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| M3 | Matrix spike recovery was outside laboratory control limits due to matrix interferences. |
| M6 | Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution. |
| P6 | Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level. |
| R1 | RPD value was outside control limits. |
| S0 | Surrogate recovery outside laboratory control limits. |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution. |



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# QUALIFIERS

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

**ANALYTE QUALIFIERS**

S5 Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).



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Huntersville, NC 28078
(704)875-9092

## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ROW-502 WBS#35022.1.1
Pace Project No.: 92222144

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92222144001** | **SW-1(2')** | EPA 3546 | OEXT/30607 | EPA 8015 Modified | GCSV/19266 |
| **92222144002** | **SW-2(2')** | EPA 3546 | OEXT/30607 | EPA 8015 Modified | GCSV/19266 |
| **92222144003** | **SW-3(2')** | EPA 3546 | OEXT/30607 | EPA 8015 Modified | GCSV/19266 |
| **92222144004** | **SW-4(2')** | EPA 3546 | OEXT/30607 | EPA 8015 Modified | GCSV/19266 |
| **92222144001** | **SW-1(2')** | EPA 3546 | OEXT/30616 | EPA 8082 | GCSV/19303 |
| **92222144002** | **SW-2(2')** | EPA 3546 | OEXT/30616 | EPA 8082 | GCSV/19303 |
| **92222144003** | **SW-3(2')** | EPA 3546 | OEXT/30616 | EPA 8082 | GCSV/19303 |
| **92222144004** | **SW-4(2')** | EPA 3546 | OEXT/30616 | EPA 8082 | GCSV/19303 |
| **92222144001** | **SW-1(2')** | 9071B | GCSV/19299 | 9071B | GCSV/19300 |
| **92222144002** | **SW-2(2')** | 9071B | GCSV/19299 | 9071B | GCSV/19300 |
| **92222144003** | **SW-3(2')** | 9071B | GCSV/19299 | 9071B | GCSV/19300 |
| **92222144004** | **SW-4(2')** | 9071B | GCSV/19299 | 9071B | GCSV/19300 |
| **92222144001** | **SW-1(2')** | EPA 5035A/5030B | GCV/8689 | EPA 8015 Modified | GCV/8691 |
| **92222144002** | **SW-2(2')** | EPA 5035A/5030B | GCV/8689 | EPA 8015 Modified | GCV/8691 |
| **92222144003** | **SW-3(2')** | EPA 5035A/5030B | GCV/8689 | EPA 8015 Modified | GCV/8691 |
| **92222144004** | **SW-4(2')** | EPA 5035A/5030B | GCV/8689 | EPA 8015 Modified | GCV/8691 |
| **92222144001** | **SW-1(2')** | EPA 3050 | MPRP/17181 | EPA 6010 | ICP/15483 |
| **92222144002** | **SW-2(2')** | EPA 3050 | MPRP/17181 | EPA 6010 | ICP/15483 |
| **92222144003** | **SW-3(2')** | EPA 3050 | MPRP/17181 | EPA 6010 | ICP/15483 |
| **92222144004** | **SW-4(2')** | EPA 3050 | MPRP/17181 | EPA 6010 | ICP/15483 |
| **92222144001** | **SW-1(2')** | EPA 7471 | MERP/7213 | EPA 7471 | MERC/6934 |
| **92222144002** | **SW-2(2')** | EPA 7471 | MERP/7213 | EPA 7471 | MERC/6934 |
| **92222144003** | **SW-3(2')** | EPA 7471 | MERP/7213 | EPA 7471 | MERC/6934 |
| **92222144004** | **SW-4(2')** | EPA 7471 | MERP/7213 | EPA 7471 | MERC/6934 |
| **92222144001** | **SW-1(2')** | EPA 3546 | OEXT/30642 | EPA 8270 | MSSV/9829 |
| **92222144002** | **SW-2(2')** | EPA 3546 | OEXT/30642 | EPA 8270 | MSSV/9829 |
| **92222144003** | **SW-3(2')** | EPA 3546 | OEXT/30642 | EPA 8270 | MSSV/9829 |
| **92222144004** | **SW-4(2')** | EPA 3546 | OEXT/30642 | EPA 8270 | MSSV/9829 |
| **92222144001** | **SW-1(2')** | EPA 8260 | MSV/28892 | | |
| **92222144002** | **SW-2(2')** | EPA 8260 | MSV/28892 | | |
| **92222144003** | **SW-3(2')** | EPA 8260 | MSV/28892 | | |
| **92222144004** | **SW-4(2')** | EPA 8260 | MSV/28892 | | |
| **92222144001** | **SW-1(2')** | ASTM D2974-87 | PMST/7155 | | |
| **92222144002** | **SW-2(2')** | ASTM D2974-87 | PMST/7155 | | |
| **92222144003** | **SW-3(2')** | ASTM D2974-87 | PMST/7155 | | |
| **92222144004** | **SW-4(2')** | ASTM D2974-87 | PMST/7155 | | |



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| Pace Analytical www.pacelabs.com | Document Name: **Sample Condition Upon Receipt (SCUR)** | Document Revised: June 10, 2014<br>Page 1 of 2 |
|---|---|---|
| | Document No.:<br>F-ASV-CS-003-rev.14 | Issuing Authorities:<br>Pace Asheville Quality Office |

Client Name: Hart & Hickman

Courier (Circle): Fed Ex UPS USPS (Client) Commercial Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other_____

Thermometer Used: IR Gun#3 -130265963 Type of Ice (Wet) Blue None ☑ Samples on ice, cooling process has begun

(IR Gun #4 SN:140290365) Other:_____

Temp Correction Factor: Add / Subtract 0.0 C

Corrected Cooler Temp.: 2.7 C Biological Tissue is Frozen: Yes No N/A

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: BDB 10/21/14

| | | |
|---|---|---|
| Chain of Custody Present: | ☑Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☑Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☑Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☑Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☑Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☑No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☑Yes ☐No ☐N/A | 7. 5 day |
| Sufficient Volume: | ☑Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☑Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☑Yes ☐No ☐N/A | |
| Containers Intact: | ☑Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☑No ☐N/A | 11. |
| Sample Labels match COC: | ☑Yes ☐No ☐N/A | 12. |
| -Includes date/time/ID/Analysis Matrix: WT SL | | |
| All containers needing preservation have been checked. | ☑Yes ☐No ☐N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☑Yes ☐No ☐N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☐Yes ☑No | |
| Samples checked for dechlorination: | ☐Yes ☐No ☑N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☐No ☑N/A | 15. |
| Trip Blank Present: | ☐Yes ☐No ☑N/A | 16. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☑N/A | |
| Pace Trip Blank Lot # (if purchased):_____ | | |

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

SCURF Review: Date: 10/21/14

SRF Review: Date: 10/22/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

**WO# : 92222144**

92222144

Pace Analytical®
www.pacelabs.com

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1782801

**Section A** Required Client Information:

Company: Hart + Hickman
Address: 2923 S. Tryon Street
Charlotte, NC
Email To: David Graham
Phone: 704-586-0007 Fax:
Requested Due Date/TAT: 5-day Std. H+H

**Section B** Required Project Information:

Report To: David Graham
Copy To: DGraham@harthickman.com
Purchase Order No.: WBS 35022.1.1
Project Name: ROW-502
Project Number: ROW-502

**Section C** Invoice Information:

Attention: Cynthia Wells
Company Name:
Address: cwells@harthickman.com
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | VOCs - 8260 | SVOCs - 8270 | TPH - GRO | TPH - DRO | Oil + Grease | PCBs | RCRA Metals (Arsenic) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | Y/N | N | N | N | | | | | | 9222144 |
| 1 | SW-1 (2') | SL | G | | | 10/20/14 | 1445 | | | X | | | | | X | X | | | X | X | X | X | X | X | X | | |
| 2 | SW-2 (2') | SL | G | | | 10/20/14 | 1500 | | | X | | | | | X | X | | | X | X | X | X | X | X | X | | |
| 3 | SW-3 (2') | SL | G | | | 10/20/14 | 1515 | | | X | | | | | X | X | | | X | X | X | X | X | X | X | | |
| 4 | SW-4 (2') | SL | G | | | 10/20/14 | 1530 | | | X | | | | | X | X | | | X | X | X | X | X | X | X | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Requested Analysis Filtered (Y/N)

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Bryan S. Wence (H+H) | 10/21/14 | 9:40 | [signature] | 10/21/14 | 9:48 | 2.7 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Bryan S. Wence

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/21/14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

# Appendix D

# Provisional EPA ID Number Letter and RCRA Detail

North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

September 04, 2014

GORDON BOX
NORTH CAROLINA DEPT OF TRANSPORTAION
90 HOWELL MILL RD
WAYNESVILLE, NC 28786

RE: PROVISIONAL EPA ID: # NCP090314036
NORTH CAROLINA DEPT OF TRANSPORTAION

Dear Facility Contact:

The above Provisional EPA ID Number has been assigned to your facility as a handler of hazardous waste. This number is to be used for the hazardous waste activity as described on the application. Specifically, please note that the Provisional EPA ID Number is for the shipment of hazardous waste from none other than the facility and site identified on the application. This number is effective for a period of ninety (90) days only.

All handlers of hazardous waste are required to pay an annual fee. N.C.G. S. 130A-294.1 (f) requires that a person who generates greater than 1,000 kilograms (2,200 lbs.) of hazardous waste in any calendar month during the year shall pay an annual fee of one thousand four hundred dollars ($1,400.00). Effective July 1, 2010, Hazardous Waste fees increased pursuant to the North Carolina General Statute 130A-294.1. The new hazardous waste fees may be found on page two of the attached Invoice. N.C.G.S. 25-3-506 states that a processing fee of $25.00 will be charged for a returned check.

If you have any questions, please contact Ray Strawbridge at (919)-707-8231.

Sincerely,

Patricia Davalos

Patricia Davalos
Business Officer/Supervisor,
HW Financial and Information Management Unit

cc: Central Files (General)

# IBEAM - RCRA Site Detail

Report run on: September 04, 2014

**NCP090314036 NORTH CAROLINA DEPT OF TRANSPORTAION**

**County:** HAYWOOD **Source Type:** P **Seq. Number:** 3 **Receive Date:** 03-Sep-2014

| | |
|---|---|
| **Location Address:** | 90 HOWELL MILL RD<br>WAYNESVILLE, NC 28786 |
| **Mailing Address:** | 90 HOWELL MILL RD<br>WAYNESVILLE, NC 28786 |

**Contact Person** For Source Information: GORDON BOX (919) 707-6859
1020 BIRCH RIDGE DR
RALEIGH, NC 27610
US

**Owner (current)**
W. R. BOYD INVESTMENTS
44 ACADEMY STREET
WAYNESVILLE, NC 28786
Type: P
From: 01/01/1601 To: Phone:

**Operator (current)**
Type:
From: To: Phone:

Land Type: P | Non Notifier : E | Commercial Availability: | Tsd Date:
Accessibility: | No. Employees : | State District:

## Regulated Waste Activities

Hazardous Waste Generator Status - Federal: Large Quantity Generator; State: Large Quantity Generator

Transfer Facility:

Other Hazardous Waste Generator Activities

| | |
|---|---|
| Importer Activity: | No |
| Mixed Waste Generator: | No |
| Transporter Activity: | No |
| TSD Activity: | No |
| Recycler Activity: | No |

Exempt Boiler and/or Industrial Furnace

| | |
|---|---|
| Small Quantity Onsite Burner Exemption: | No |
| Smelting, melting, Refining Furnace Exemption: | No |

**Used Oil Activities**

Used Oil Transport Activity

| | |
|---|---|
| Transporter: | No |
| Transfer Facility: | No |

Used Oil Processor and/or Re-refiner Activity

| | |
|---|---|
| Processor: | No |
| Refiner | No |

Underground Injection Control: No

Off-Specification Used Oil Burner: No

Used Oil Fuel Marketer Activity

Marketer who direct shipment off-specification used oil to off-specification used oil burner: No

Marketer who first claims the used oil meets the specifications: No

Destination Facility for Universal Waste: No

## Certification Information

First Name : GORDON
Last Name : BOX
Title ENV PROJ MGR
Date Signed 09/02/2014

## NAICS Codes

## Comments

CREATED PER PROVISIONAL APPLICATION DATED 9/2/2014 FOR REMOVAL OF SOIL IMPACTED BY AUTOMOTIVE DEBRIS. SRP 09/03/2014

## Waste Codes

| Code D | Code F | Code K | Code P | Code R | Code U | Code X |
|---|---|---|---|---|---|---|

# Appendix E

## Non-Hazardous Soil Disposal Manifests

EVO CORPORATION

1703 Vargrave Street
Winston-Salem, NC 27107
ph 336-725-5844
fax 336-725-6244

# CERTIFICATE OF DISPOSAL

Evo Corporation does hereby certify that 252.39 tons of non-hazardous contaminated material received on 10/13/2014, 10/14/2014, and 10/15/2014 from:

Generator: NC Department of Transportation

Originating at: 90 Howell Mill Road
Waynesville, NC

EC Waste ID #: 081469

has been disposed of by Evo Corporation in a manner approved by the North Carolina Department of Environment and Natural Resources.

Signature

Thomas W. Hammett
CEO
Evo Corporation

989939

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004360 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375
U.S. EPA ID Number

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 18 | T | 51,220 |
| | 2. | | | | | 29780 |
| | 3. | | | | | 21,440 |
| | 4. | | | | | 10.72 T |

14. Special Handling Instructions and Additional Information
DT 10

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence Agent for D.O.T. — Signature — Month 10 Day 13 Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Bobby Light — Signature — Month 10 Day 13 Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Bowter — Signature — Month 10 Day 23 Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 989939

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/13/2014 | Vehicle# | 10 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004360 | Grid | N880W827E1 669A10 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/13/14 12:38:58 PM | Scale1 | BELINDA | | Gross | 51220 | lb |
| Out | 10/13/14 12:54:51 PM | Scale1 | BELINDA | | Tare | 29780 | lb |
| | | | | | Net | 21440 | lb |
| | | | | | Tons | 10.72 | |

989944 CK

Please print or type.

**NON HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. |
|---|---|---|---|
| | 1 | (800)424-9300 | **WM** - 20004361 |

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT 98 Hwy Powell Mill Rd Boonville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
RMS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143 TN | | T | 18 | T | 50,020 |
| | 2. | | | | | 27,000 |
| | | | | | | 23,020 |
| | 3. | | | | | 11.57T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 12

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month: 10 — Day: 13 — Year: 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: x Terry Light — Signature: x Terry Light — Month: 10 — Day: 13 — Year: 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: B Gunter — Signature — Month: 10 — Day: 13 — Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 989944

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/13/2014 | Vehicle# | 12 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004361 | Grid | N880W827E1 669A10 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/13/14 12:53:34 PM | Scale1 | BELINDA | | Gross | 50020 | lb |
| Out | 10/13/14 01:06:35 PM | Scale1 | BELINDA | | Tare | 27000 | lb |
| | | | | | Net | 23020 | lb |
| | | | | | Tons | 11.51 | |

989950

ype.

| AZARDOUS E MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004359 |
|---|---|---|---|---|

nerator's Name and Mailing Address
EVO CORPORATION
1700 VARONA AVE STE 1
WINSTON SALEM NC 27107
Generator's Phone: (336) 725-9844

Generator's Site Address (If different than mailing address)
NCDOT
9D Powell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
[illegible]
1700 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-4375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | SOIL WITH AUTOMOTIVE DEBRIS 102143 TN | | Tr | 18 | T | 50,540 |
| | 2. | | | | | 26,700<br>23,840 |
| | 3. | | | | | 11,927 |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information

DT13

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Venie Agent for DOT
Signature: Bryan S. Venie
Month: 10 Day: 13 Year: 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Steve Frazier
Signature: Steve Frazier
Month: Day: Year:

17. Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Blunter
Signature
Month: 10 Day: 13 Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 989950

| | | | | |
|---|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION | |
| Ticket Date | 10/13/2014 | Vehicle# | 13 | Volume |
| Payment Type | Credit Account | Container | | |
| Manual Ticket# | | Driver | DON CHAPMAN | |
| Hauling Ticket# | | Check# | | |
| Route | | Billing# | 0005151 | |
| StateWasteCode | | Gen EPA ID | NR | |
| Manifest | WM20004359 | Grid | N880W827E1 669A10 | |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/13/14 01:05:11 PM | Scale1 | BELINDA | | Gross | 50540 | lb |
| Out | 10/13/14 01:20:25 PM | Scale1 | BELINDA | | Tare | 26700 | lb |
| | | | | | Net | 23840 | lb |
| | | | | | Tons | 11.92 | |

4894452 CW

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004362 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Woodsville, NC 27587

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. [illegible] AUTOMOTIVE DUPRIS 10/14/TN | | Tr | 18 | T | 53900<br>27020<br>26880<br>13.44T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 14

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 | Day 13 | Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X HOLLAND Grott — Signature — Month 10 | Day 13 | Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month | Day | Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month 10 | Day 13 | Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 989952

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/13/2014 | Vehicle# | 14 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | BILL |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004362 | Grid | N880W827E1 669A10 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/13/14 01:13:43 PM | Scale1 | BELINDA | | Gross | 53900 | lb |
| Out | 10/13/14 01:29:18 PM | Scale1 | BELINDA | | Tare | 27020 | lb |
| | | | | | Net | 26880 | lb |
| | | | | | Tons | 13.44 | |

Please print or type.

989953

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004363 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVA CORPORATION
1701 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143 TN | | Tr | 18 | T | 48,100 |
| | 2. | | | | | 30,680 |
| | 3. DT 11 | | | | | 17,420 |
| | 4. | | | | | 8.71 |

14. Special Handling Instructions and Additional Information

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence Agent for DOT — Signature — Month: 10 Day: 13 Year: 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X Brian Flatford — Signature — Month: 10 Day: 13 Year: 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes
1. 4 | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 18a

Printed/Typed Name: B Gunter — Signature — Month: 10 Day: 13 Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 989953

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/13/2014 | Vehicle# | 11 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004363 | Grid | N880W827E1 669A10 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/13/14 01:18:53 PM | Scale1 | BELINDA | | Gross | 48100 | lb |
| Out | 10/13/14 01:32:45 PM | Scale1 | BELINDA | | Tare | 30680 | lb |
| | | | | | Net | 17420 | lb |
| | | | | | Tons | 8.71 | |

990009

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004364 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 52,640 |
| | 2. | | | | | 27,000<br>25,640 |
| | 3. | | | | | 12.82 T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 12

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 — Day 14 — Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X Terry Light — Signature: X — Month 10 — Day 14 — Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes
1. | 2. | 3. | 4.

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: B Hunter — Signature — Month 10 — Day 14 — Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990009

| | | | | |
|---|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION | |
| Ticket Date | 10/14/2014 | Vehicle# | 12 | Volume |
| Payment Type | Credit Account | Container | | |
| Manual Ticket# | | Driver | | |
| Hauling Ticket# | | Check# | | |
| Route | | Billing# | 0005151 | |
| StateWasteCode | | Gen EPA ID | NR | |
| Manifest | WM20004364 | Grid | N876W820E1 645A9 | |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/14/14 09:20:17 AM | Scale1 | BELINDA | | Gross | 52640 | lb |
| Out | 10/14/14 09:20:17 AM | | BELINDA | | Tare | 27000 | lb |
| | | | | | Net | 25640 | lb |
| | | | | | Tons | 12.82 | |

9900014 CW

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004365 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 54,360 |
| | 2. | | | | | 29,780 |
| | | | | | | 24,520 |
| | 3. | | | | | 12.26 T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 10

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 — Day 14 — Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: x Bobby Light — Signature: x Bobby Light — Month 10 — Day 14 — Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Porter — Signature — Month 10 — Day 14 — Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990014

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/14/2014 | Vehicle# | 10 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004365 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/14/14 09:28:00 AM | Scale1 | BELINDA | | Gross | 54300 | lb |
| Out | 10/14/14 09:28:00 AM | | BELINDA | | Tare | 29780 | lb |
| | | | | | Net | 24520 | lb |
| | | | | | Tons | 12.26 | |

9/10/17 CV

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004366 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
9P Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | T | 18 | T | 54,760<br>30,680<br>24,080<br>12,04T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 11

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 — Day 14 — Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X Brian Flatford — Signature — Month 10 — Day 14 — Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Blunter — Signature — Month 10 — Day 14 — Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990017

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/14/2014 | Vehicle# | 11 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004366 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Gross | 54760 | lb |
| In | 10/14/14 09:31:45 AM | Scale1 | BELINDA | | Tare | 30680 | lb |
| Out | 10/14/14 09:31:45 AM | | BELINDA | | Net | 24080 | lb |
| | | | | | Tons | 12.04 | |

990024 CV

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004367 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 54,100 |
| | 2. | | | | | 26,700 |
| | 3. | | | | | 27,400 |
| | 4. | | | | | 13,70 T |

14. Special Handling Instructions and Additional Information
DT 13

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 — Day 14 — Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Steve Frazier — Signature — Month 10 — Day 14 — Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 18a

Printed/Typed Name: Hunter — Signature — Month 10 — Day 14 — Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990024

| | | | | |
|---|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION | |
| Ticket Date | 10/14/2014 | Vehicle# | 13 | Volume |
| Payment Type | Credit Account | Container | | |
| Manual Ticket# | | Driver | DON CHAPMAN | |
| Hauling Ticket# | | Check# | | |
| Route | | Billing# | 0005151 | |
| StateWasteCode | | Gen EPA ID | NR | |
| Manifest | WM20004367 | Grid | N876W820E1 645A9 | |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/14/14 09:54:36 AM | Scale1 | BELINDA | | Gross | 54100 | lb |
| Out | 10/14/14 09:54:36 AM | | BELINDA | | Tare | 26700 | lb |
| | | | | | Net | 27400 | lb |
| | | | | | Tons | 13.7 | |

Please print or type.

940025 CV

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004368 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
@ Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | TC | 14 | T | 61,060<br>27020<br>34,040<br>17.02 T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 14

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence Agent for D.O.T. — Signature — Month 10 Day 14 Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X HOLLAND — Signature — Month 10 Day 14 Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: B Coulter — Signature — Month 10 Day 14 Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990025

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/14/2014 | Vehicle# | 14 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | BILL |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004368 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/14/14 09:56:26 AM | Scale1 | BELINDA | | Gross | 61060 | lb |
| Out | 10/14/14 09:56:26 AM | | BELINDA | | Tare | 27020 | lb |
| | | | | | Net | 34040 | lb |
| | | | | | Tons | 17.02 | |

490079 CY

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004371 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 10214371N | | Tr | 18 | T | 59,040<br>30,680<br>28,360<br>14.18 T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 11

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 — Day 14 — Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Brian Flatford — Signature — Month 10 — Day 14 — Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Owner — Signature — Month 10 — Day 14 — Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990079

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/14/2014 | Vehicle# | 11 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004371 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/14/14 02:15:26 PM | Scale1 | BELINDA | | Gross | 59040 | lb |
| Out | 10/14/14 02:15:26 PM | | BELINDA | | Tare | 30680 | lb |
| | | | | | Net | 28360 | lb |
| | | | | | Tons | 14.18 | |

990083 CVM

Please print or type.

**NON HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. |
|---|---|---|---|
| | 1 | (800)424-9300 | WM - 20004372 |

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Lewisville, NC 27023

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 56,820 |
| | 2. | | | | | 26,700<br>30,120 |
| | 3. | | | | | 15.06T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 13

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature: Bryan S. Wence — Month: 10 — Day: 14 — Year: 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Steve Frazier — Signature: Steve Frazier — Month: 10 — Day: 14 — Year: 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: B Gunter — Signature — Month: 10 — Day: 15 — Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990083

| | | | | |
|---|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION | |
| Ticket Date | 10/15/2014 | Vehicle# | 13 | Volume |
| Payment Type | Credit Account | Container | | |
| Manual Ticket# | | Driver | DON CHAPMAN | |
| Hauling Ticket# | | Check# | | |
| Route | | Billing# | 0005151 | |
| StateWasteCode | | Gen EPA ID | NR | |
| Manifest | WM20004372 | Grid | N876W820E1 645A9 | |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/15/14 06:46:13 AM | Scale1 | BELINDA | | Gross | 56820 | lb |
| Out | 10/15/14 06:46:13 AM | | BELINDA | | Tare | 26700 | lb |
| | | | | | Net | 30120 | lb |
| | | | | | Tons | 15.06 | |

Please print or type.

990086

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004369 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1700 VARGRAVE STREET
WINSTON SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375
U.S. EPA ID Number

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | SOIL WITH AUTOMOTIVE DEBRIS 10214 3TN | | Tr | 14 | T | 69,820 |
| | 2. | | | | | 29,780 |
| | 3. | | | | | 40,040 |
| | 4. | | | | | 20.02T |

14. Special Handling Instructions and Additional Information
DT 10

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name — Signature — Month — Day — Year

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Bryan S. Wence, Agent for N.D.O.T. — Signature — Month: 10 — Day: 14 — Year: 14

17. Transporter 2 Printed/Typed Name: Bobby Light — Signature: Bobby Light — Month: 10 — Day: 14 — Year: 14

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: B Hunter — Signature — Month: 10 — Day: 15 — Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990086

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/15/2014 | Vehicle# | 10 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004369 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/15/14 06:52:00 AM | Scale1 | BELINDA | | Gross | 69820 | lb |
| Out | 10/15/14 06:52:00 AM | | BELINDA | | Tare | 29780 | lb |
| | | | | | Net | 40040 | lb |
| | | | | | Tons | 20.02 | |

990088 CW

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004370 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Walnesville, NC 28590

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375
U.S. EPA ID Number

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 57,300 |
| | 2. | | | | | 27,000 |
| | | | | | | 30,300 |
| | 3. | | | | | 15.15T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
DT 12

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month: 10 — Day: 14 — Year: 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: x Terry L. Light — Signature: x Terry Light — Month: 10 — Day: 14 — Year: 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Hunter — Signature — Month: 10 — Day: 15 — Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990088

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/15/2014 | Vehicle# | 12 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004370 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/15/14 06:55:17 AM | Scale1 | BELINDA | | Gross | 57300 | lb |
| Out | 10/15/14 06:55:17 AM | | BELINDA | | Tare | 27000 | lb |
| | | | | | Net | 30300 | lb |
| | | | | | Tons | 15.15 | |

990089 CVA

Please print or type.

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004373 |
|---|---|---|---|---|

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON SALEM NC 27107
Generator's Phone: (336)725-5944

Generator's Site Address (If different than mailing address)
NCDOT
99 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
RMS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 63180 |
| | 2. | | | | | 27020 36160 |
| | 3. | | | | | 18.08T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
NT 14

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence Agent for D.O.T. — Signature: Bryan S. Wence — Month 10 Day 14 Year 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X Holland Grott — Signature: X — Month 10 Day 14 Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: B Gunter — Signature: B Gunter — Month 10 Day 15 Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990089

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | VICDAVISCO VICDAVISCONSTRUCTION |
| Ticket Date | 10/15/2014 | Vehicle# | 14 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | BILL |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | WM20004373 | Grid | N876W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/15/14 07:09:36 AM | Scale1 | BELINDA | | Gross | 63180 | lb |
| Out | 10/15/14 07:09:36 AM | | BELINDA | | Tare | 27020 | lb |
| | | | | | Net | 36160 | lb |
| | | | | | Tons | 18.08 | |

Please print or type.

9401449

CW

**NON HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. |
|---|---|---|---|
| | 1 | (800)424-9300 | WM - 20004375 |

**GENERATOR**

5. Generator's Name and Mailing Address
EVO CORPORATION
1705 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725 5844

Generator's Site Address (If different than mailing address)
NCDOT
Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 10214 TN | | Tr | 14 | T | 57,640<br>25,260<br>32,380<br>16.19 T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
KJ-21

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wenke Agent for D.O.T. — Signature — Month: 10 — Day: 15 — Year: 14

**TRANSPORTER**

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X Kerry McCroskey — Signature — Month: 10 — Day: 15 — Year: 14

17. Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

**DESIGNATED FACILITY**

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: WASTE MANAGEMENT, INC. IRIS GLEN ENVIRONMENTAL CENTER
1705 E. MAIN STREET
JOHNSON CITY, TN 37601
(423) 926-8375

Signature — Month: 10 — Day: 15 — Year: 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990149

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | JONES TRUCKING TJONESTRUCKING |
| Ticket Date | 10/15/2014 | Vehicle# | KJ21 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | 20004375 | Grid | N889W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Gross | 57640 | lb |
| In | 10/15/14 11:43:10 AM | Scale1 | JBUTCHER | | Tare | 25260 | lb |
| Out | 10/15/14 11:43:10 AM | | JBUTCHER | | Net | 32380 | lb |
| | | | | | Tons | 16.19 | |

99 0150

Please print or type.

CW

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004376 |
|---|---|---|---|---|

5. Generator's Name and Mailing Address
EVO CORPORATION
1705 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5844

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375
U.S. EPA ID Number

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 10214TN | | TF | 14 | T | 58,880 |
| | 2. | | | | | 25,320 33,560 |
| | 3. | | | | | 16.78T |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
KS-22

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

GENERATOR

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 | Day 15 | Year 14

TRANSPORTER

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X — Signature: X Dean Perkins — Month 10 | Day 15 | Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: WASTE MANAGEMENT, INC. IRIS GLEN ENVIRONMENTAL CENTER 1705 E. MAIN STREET JOHNSON CITY, TN 37601 (423) 926-8375 — Signature — Month 10 | Day 15 | Year 14

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990150

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | JONES TRUCKING TJONESTRUCKING |
| Ticket Date | 10/15/2014 | Vehicle# | KJ22 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | 2004376 | Grid | N889W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/15/14 11:46:03 AM | Scale1 | JBUTCHER | | Gross | 58880 | lb |
| Out | 10/15/14 11:46:03 AM | | JBUTCHER | | Tare | 25320 | lb |
| | | | | | Net | 33560 | lb |
| | | | | | Tons | 16.78 | |

Please print or type.

990151

| NON HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of 1 | 3. Emergency Response Phone (800)424-9300 | 4. WM - 20004374 |
|---|---|---|---|---|

5. Generator's Name and Mailing Address
EVO CORPORATION
1703 VARGRAVE STREET
WINSTON-SALEM NC 27107
Generator's Phone: (336)725-5944

Generator's Site Address (If different than mailing address)
NCDOT
90 Howell Mill Rd
Mocksville, NC 27028

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
IRIS GLEN
1705 EAST MAIN STREET
JOHNSON CITY TN 37601
Facility's Phone: (423)926-8375
U.S. EPA ID Number

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste No. |
|---|---|---|---|---|---|---|
| | 1. SOIL WITH AUTOMOTIVE DEBRIS 102143TN | | Tr | 14 | T | 51,160 |
| | 2. | | | | | 25,580 |
| | 3. | | | | | 25,580 |
| | 4. | | | | | 12.79 T |

14. Special Handling Instructions and Additional Information
KJ-7

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. — Signature — Month 10 | Day 15 | Year 14

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: X James B. Williams — Signature — Month 10 | Day 15 | Year 14

17. Transporter 2 Printed/Typed Name — Signature — Month | Day | Year

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

19. Management Method Codes

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| | | | |

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: WASTE MANAGEMENT, INC. IRIS GLEN ENVIRONMENTAL CENTER 1705 E. MAIN STREET JOHNSON CITY, TN 37601 (423) 926-8375 — Signature — Month 10 | Day 15 | Year 14

GENERATOR — TRANSPORTER — DESIGNATED FACILITY

Iris Glen Environmental Center
1705 E MAIN ST,
JOHNSON CITY, TN, 37601-4990
Ph: (423) 926-8375

Reprint Ticket # 990151

| | | | |
|---|---|---|---|
| Customer Name | EVO | Carrier | JONES TRUCKING TJONESTRUCKING |
| Ticket Date | 10/15/2014 | Vehicle# | KJ7 Volume |
| Payment Type | Credit Account | Container | |
| Manual Ticket# | | Driver | |
| Hauling Ticket# | | Check# | |
| Route | | Billing# | 0005151 |
| StateWasteCode | | Gen EPA ID | NR |
| Manifest | 20004374 | Grid | N889W820E1 645A9 |

Destination
PO#
Profile 102143TN(SOIL WITH AUTOMOTIVE DEBRIS)
Generator 1719432 181-NCDEPARTMENT

| | Time | Scale | Operator | Inbound | | | |
|---|---|---|---|---|---|---|---|
| In | 10/15/14 11:48:23 AM | Scale1 | JBUTCHER | | Gross | 51160 | lb |
| Out | 10/15/14 11:48:23 AM | | JBUTCHER | | Tare | 25580 | lb |
| | | | | | Net | 25580 | lb |
| | | | | | Tons | 12.79 | |

# Appendix F

# Hazardous Soil Disposal Manifests

Invoice: 104278 Receipt 21-00 1027119 Manifest 002795637FLE

1-4865

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: NCPD903140386
2. Page 1 of: 1
3. Emergency Response Phone: N/A
4. Manifest Tracking Number: 002795637 FLE

5. Generator's Name and Mailing Address: NC Department of Transportation
1020 Birch Ridge Dr
Raleigh, NC 27610
Generator's Phone: 919-707-6859

Generator's Site Address (if different than mailing address): NC Department of Transportation
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name: U.S. Bulk
U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: EQ Detroit, Inc.
1923 Frederick St
Detroit, MI
Facility's Phone: 313-923-0080
U.S. EPA ID Number: MID980991566

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, Hazardous Waste Solid, NOS, 9, PGIII (Lead) | 1 | TT | Est 22,000 | T | D008 21.24 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: 1443A
EMO #081469 EQ-3141001DET

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter. I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. | Signature: Bryan S. Wence | Month 10 | Day 14 | Year 14

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit
Transporter signature (for exports only): Date leaving U.S.

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: X David Shope U.S. Bulk | Signature: X David Shope U.S. Bulk | Month 10 | Day 14 | Year 14
Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY
19. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone.
18c. Signature of Alternate Facility (or Generator) Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H110 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name | Signature | Month 10 | Day 15 | Year 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



7520729

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: NCD003140360 | 2. Page 1 of: 1 | 3. Emergency Response Phone: DOT | 4. Manifest Tracking Number: 002795647 FLE

5. Generator's Name and Mailing Address: NC Department of Transportation, 1020 Birch Ridge Dr, Raleigh, NC 27610
Generator's Phone: 919-707-6859
Generator's Site Address (if different than mailing address): NC Department of Trans., 90 Howell Mill Rd, Waynesville, NC 28786

6. Transporter 1 Company Name: US Bulk | U.S. EPA ID Number: [redacted]

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: Ed. Deketa, Inc, 1973 Frederick St, Detroit, MI
Facility's Phone: 313-923-0080 | U.S. EPA ID Number: MID099315666

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10 Containers No. | 10 Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13 Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, Hazardous Waste Solid, NOS, 9, PG III, (D008) | 1 | TT | 21 22 | T | D008 20.94 T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
177
EQD # 0814169 EQ-J141001DE7

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. | Signature: Bryan S. Wence | Month: 10 | Day: 14 | Year: 14

**INT'L**
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only) Date leaving U.S.:

**TRANSPORTER**
17 Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X Dave Ruppert | Signature: X [signature] | Month: 10 | Day: 14 | Year: 14

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

**DESIGNATED FACILITY**
18 Discrepancy

18a Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1 | 2. | 3 | 4 |
|---|---|---|---|
| H110 | | | |

20 Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [signature] | Signature | Month: 10 | Day: 15 | Year: 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



7520731

Invoice: 105376 Receipt 21-00 1028127 Manifest 002795655FLE

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: NCP0903147036 | 2. Page 1 of: 1 | 3. Emergency Response Phone: (800) 424-9300 919-707-2859 | 4. Manifest Tracking Number: 002795655 FLE

5. Generator's Name and Mailing Address: NC Department of Transportation
1900 Birch Ridge Dr
Raleigh, NC 27610
Generator's Phone: 919-329-1859

Generator's Site Address (if different than mailing address): NC Dept Transportation
99 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name: LS Bulk Transport Inc. | U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: EQ Detroit Inc
1923 Fredrick St
Detroit, MI
Facility's Phone: 313-923-0080 | U.S. EPA ID Number: MID980991560

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, Hazardous Waste Solid NOS, PGIII (Lead) | 1 | DT | est. 22 | T | D008 |
| | 2. | | | | | 23.81 T |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information
TRK- 149
TRL- 149A
EQ#-081469 EQ-J141001DET

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. | Signature: Bryan Wence | Month: 10 | Day: 20 | Year: 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: X ERIC HARTMAN | Signature: X | Month: 10 | Day: 20 | Year: 14

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

16. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. H141 | 2. | 3. | 4. |
|---|---|---|---|

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month: 10 | Day: 21 | Year: 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



7537119

Invoice: 105376 Receipt 21-00 1028129 Manifest 002795648FLE

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: NCD083140836 | 2. Page 1 of: 1 | 3. Emergency Response Phone: (NCDOT) 919-707-6859 | 4. Manifest Tracking Number: 002795648 FLE

5. Generator's Name and Mailing Address: NC Department of Transportation
1020 Birch Ridge Dr
Raleigh, NC 27610
Generator's Phone: 919-707-6859

Generator's Site Address (if different than mailing address): NC Department of Transportation
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name: US Bulk | U.S. EPA ID Number: PAD987347515

7. Transporter 2 Company Name: | U.S. EPA ID Number:

8. Designated Facility Name and Site Address: EQ Detroit, Inc
1923 Frederick St
Detroit, MI
Facility's Phone: 313-923-0080 | U.S. EPA ID Number: MID988099156

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, Hazardous Waste Solid, NOS, 9, PG III (Lead) | 1 | DT | 22 est. | T | D008 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: 147

ERG # 08 14169 EQ - J14001DET

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Bryan S. Weeks, Agent for D.O.T. | Signature | Month: 10 | Day: 20 | Year: 14

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.

Transporter signature (for exports only)

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: KEVIN ZAKREWSKY | Signature | Month: 10 | Day: 20 | Year: 14

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| 1. | 2. | 3. | 4. |
|---|---|---|---|
| H110 | | | |

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month: 10 | Day: 21 | Year: 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



7537160

Invoice: 105376 Receipt 21-00 1028130 Manifest 002795654FLE

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: NCD980814036 | 2. Page 1 of: 1 | 3. Emergency Response Phone: (BW) DTA 919-707-6859 | 4. Manifest Tracking Number: 002795654 FLE

5. Generator's Name and Mailing Address: NC Department Transportation
1000 Birch Ridge Dr
Raleigh, NC 27610
Generator's Phone: 919-707-6859

Generator's Site Address (if different than mailing address): NC. Dept. Transportation
90 Howell Mill Rd
Waynesville, NC 28786

6. Transporter 1 Company Name: OS Bulk | U.S. EPA ID Number: IND987341755

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: EQ Detroit, Inc
1923 Frederick St
Detroit, MI
Facility's Phone: 313-923-0080 | U.S. EPA ID Number: MID982099156

| 9a HM | 9b U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. UN3077, Hazardous, Waste Solid, NOS, PGIII (lead) | 1 | DT | est. 22 | T | D008 22.61 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: 148
EWO# 0814169 EQ-J14100IDET

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Bryan S. Wence, Agent for D.O.T. | Signature | Month 10 | Day 20 | Year 14

INTL
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: X Chris England | Signature | Month 10 | Day 20 | Year 14
Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY
18. Discrepancy
18a Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:
18c Signature of Alternate Facility (or Generator) | Month | Day | Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H110 | 2. | 3. | 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name | Signature | Month 10 | Day 21 | Year 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)



7537157

# Appendix VII: Statement of Qualifications

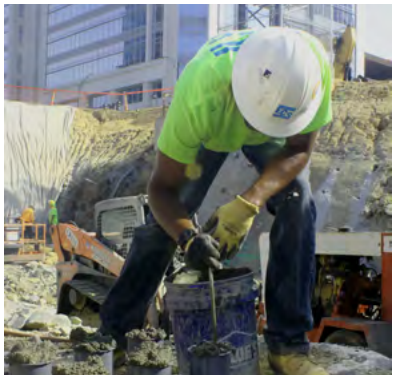
ECS Group of Companies

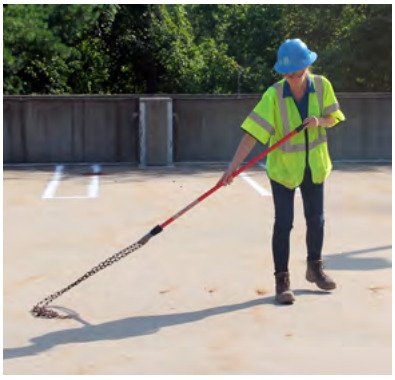
# Statement of Qualifications

2023

CONSTRUCTION MATERIALS

FACILITIES





GEOTECHNICAL

ENVIRONMENTAL

# COMPANY OVERVIEW

**2,200**
employees

**80+**
locations

**30+**
years' experience

## ABOUT OUR COMPANY

Engineering Consulting Services (ECS) is one of the largest and most rapidly growing engineering and consulting companies in the US. Founded in 1988, ECS is a leader in geotechnical, environmental, construction materials and facilities engineering. We are currently ranked 64 in *Engineering News-Record's* Top 500 Design Firms (April 2022) and 38 in Zweig Group's 2022 Hot Firms.

## ECS CORE SERVICES

- Geotechnical
- Construction Materials

## ECS FOOTPRINT

Whether your project requires local project management, specialty expertise or both, we have you covered. ECS provides the best of both worlds - the attention your projects deserve from our local team, coupled with abundant staffing and technical resources. With 2,200 employees, ECS has grown to more than 80 locations spread across the Mid-Atlantic, Midwest, Southeast and Southwest.

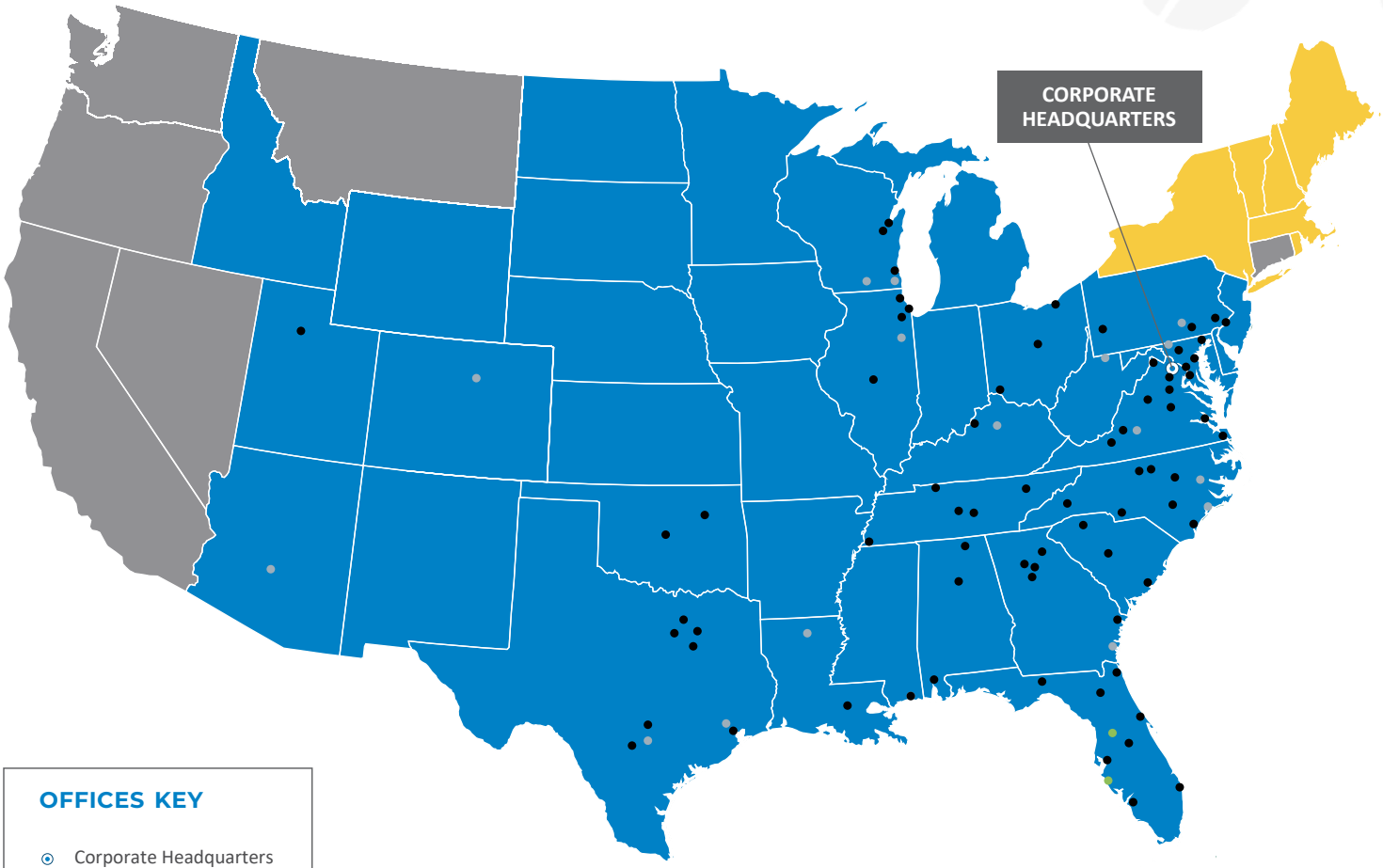
## WHY ECS? WE HAVE GRIT.

What does that mean for you? That one descriptive word defines our company culture. It sets just the right tone for what our clients can expect our team to deliver each and every day. At ECS, GRIT is made up of four characteristics: guts, resilience, initiative and tenacity. Our boots are made for working. Click here for an inside look at what we do, who we are and why we have GRIT.

As a culture of doers, we roll up our sleeves and use our skills to help solve problems. We hustle.

# WHEREVER YOUR PROJECT TAKES YOU, ECS HAS...

## BOOTS ON THE GROUND




### OFFICES KEY

- Corporate Headquarters
- Full Service Office
- Testing Services Office
- Drilling Services Office

### SERVICES KEY

*Materials Testing Service Area is approximately a 75-mile radius around each office.*

- Environmental and Facilities
- Geotechnical, Environmental, Materials Testing, and Facilities
- Geotechnical, Environmental, and Facilities

# DUE DILIGENCE

As part of typical commercial, industrial and residential real estate transactions, many services need to be completed prior to closing that should not be overlooked. ECS provides environmental and engineering due diligence services common to real estate transaction-driven work, including:

**Environmental Due Diligence Services:**

- Phase I Environmental Site Assessments (ESAs)
- Wetland and Stream Determination and Delineation Services
- Phase II Environmental Site Assessments (ESAs)
- Underground Storage Tank (UST) Assessments and Closures
- Environmental Transaction Screens (ETS)
- Regulatory Record Reviews
- HUD Assessments
- Endangered Species Assessments
- Historical and Cultural Surveys/Assessments
- Radon Assessment
- Asbestos Surveys and Abatement Design
- Lead-Based Paint Surveys and Abatement Design
- Microbial and Indoor Air Quality Assessments
- Vapor Intrusion Assessments
- Fannie Mae and Freddie Mac Assessments
- Contaminated soil management plans

**Facilities Due Diligence Services:**

- Accessibility Consulting
- Bank Draw Review
- Pre and Post Construction Surveys
- Property Condition Assessments (PCAs)
- Forensic Investigations
- GPR Surveys
- EIFS Services

**Engineering Due Diligence Services:**

- Subsurface Geotechnical Explorations
- Test Pit Evaluations
- Seismic Studies
- Cost estimating for construction
- Geologic Assessments

# OLIVIA RICHARD

ENVIRONMENTAL TECHNICIAN

## CERTIFICATIONS

40-Hour OSHA
WACEL Soils
ACI Concrete
Radiation Safety for NUKE
Portable Gauge/Hazmat

## SKILLS

Phase I Environmental Site Assessments
Lead-Based Paint Surveys
Mold Surveys
Asbestos Surveys

## EDUCATION

Bachelor of Science, Environmental Sciences, North Carolina State University, Raleigh, NC

## PROFESSIONAL PROFILE

Ms. Richard is an Environmental Technician for ECS. Her responsibilities include conducting Phase I Environmental Site Assessments (ESAs), Indoor Air Quality Assessments, Asbestos Assessments, and assistance on additional environmental services as needed. Ms. Richard has performed Phase I ESAs to determine environmental liabilities for numerous types of properties ranging from agricultural land to commercial land. She has also performed fieldwork for indoor air quality assessments, asbestos assessments and other environmental services.

## PROJECT EXPERIENCE

- Willow Creek North Ridge Asbestos Assessment, Raleigh, NC
- Polo Road Residences Asbestos and Lead Based Paint, Winston-Salem, NC
- Old Battleground Road Site Asbestos Assessment, Greensboro, NC
- Glenn Avenue Warehouse Hazardous Materials Assessment, Winston-Salem, NC
- ElectriCities Louisburg Industrial Park Phase I Environmental Site Assessment, Louisburg, NC
- Siler City Municipal Airport Phase I Environmental Site Assessment, Siler City, NC
- Take 5 Hillsborough Road Phase I Environmental Site Assessment, Durham, NC
- Civic Center Expansion Phase I Environmental Site Assessment, Lumberton, NC
- Proposed Bojangles Asbestos Assessment, Burlington, NC
- Legranger Road Site Phase I Environmental Site Assessment, Greensboro, NC

# LORI DAVENPORT-PARKER, CEM, CPESC

ENVIRONMENTAL PRINCIPAL

## REGISTRATIONS

ASTM Environmental Site Assessment for Commercial Real Estate

EAA Certified Environmental Manager

AL, KY and TN Licensed Asbestos Building Inspector

Hazardous Waste Operations-40 Hours, Supervisor

OSHA 10-Hr Construction Safety

Certified Professional in Erosion and Sediment Control (CPESC)

TDEC Level I Erosion Prevention & Sediment Control

Women in Commercial Real Estate Nashville-Executive Board of Directors 2008-2010, 2015-2022

## SKILLS

Phase I Environmental Site Assessments

Phase II Environmental Site Assessments

IAQ, Radon, Mold, Asbestos and Lead Testing

## EDUCATION

Associate of Science, Technical Art, Western Kentucky University

Bachelor of Arts, Management and Human Resources, Trevecca Nazarene University

## PROFESSIONAL PROFILE

Ms. Parker has over 25 years of comprehensive technical and regulatory experience in supervising and managing Phase I Environmental Site Assessments and Phase II samplings. Technical experience includes over 2,000 environmental site assessments for a variety of facilities, including industrial, manufacturing, gasoline stations, dry cleaners, office/retail complexes, various commercial establishments, new development sites, multi-site acquisitions, and cell tower projects. Additional areas of expertise include environmental permitting (storm water, SPCC, air), regulatory compliance, lead-based paint, asbestos mold and radon sampling. She currently serves as a Due Diligence Assistant Manager for Southeast operations.

## PROJECT EXPERIENCE

- Managed and performed Phase I ESA's and NEPA checklists including FCC Forms 620 and 621 for over 800 telecommunication towers.
- A project for a multi-million dollar property purchased by a large investment company for large multi-family residential apartment complexes.
- Maintains a volatile organic compound (VOC) and hazardous air pollutant (HAP) emission summary database and waste management reporting for a large packaging company since 2006.
- EPSC and QA/QC Inspections and preparation of Stormwater Pollution Prevention Plans (SWPPP) for the Tennessee Department of Transportation and industrial projects.
- Prepared pre-demolition and renovation asbestos surveys for various properties, including a Baseline Asbestos Survey for a multi-million square foot automotive manufacturing plant.
- Manages performance and oversight of large national medical office building/facility portfolios, including ESA's and PCA's.
- Manages various multi-site portfolio projects, i.e., senior living medical office, multi-family, grocery stores, fast food restaurants, etc.
- Management and oversight for multiple development projects in the TN Voluntary Cleanup, Oversight and Assistance Program, from application, assessment, construction soil management, regulatory coordination, to final return to beneficial use.

## AFFILIATIONS

- Commercial Real Estate (CREW) Nashville - 2021
  Past President
- Environmental Assessment Association
- International Erosion Control Association (IECA)
- Nashville Chamber of Commerce

# Appendix VIII: Acronyms

ACRONYMS

| | |
|---|---|
| AUL | Activity and Use Limitations |
| AST | Aboveground Storage Tank |
| ASTM | American Society for Testing and Materials |
| ACM | Asbestos Containing Materials |
| BER | Business Environmental Risk |
| CORRACTS | CERCLA Corrective Action List |
| NPL | CERCLA National Priorities List |
| NFRAP | CERCLA No Further Remedial Action Planned |
| CERCLA | Comprehensive Environmental Response Cleanup Liability Act |
| CESQG | Conditionally Exempt Small Quantity Generator |
| CREC | Controlled Recognized Environmental Condition |
| ERNS | Emergency Response Notification System |
| EC | Engineering Controls |
| HIST LF | Historical Landfill |
| HREC | Historical Recognized Environmental Condition |
| IC | Institutional Controls |
| LQG | Large Quantity Generator |
| LBP | Lead Based Paint |
| LTANKS | Leaking Tanks |
| LUST | Leaking Underground Storage Tank |
| REC | Recognized Environmental Condition |
| RCRA | Resource Conservation and Recovery Act |
| RCRIS | Resource Conservation and Recovery Information System |
| SQG | Small Quantity Generator |
| SWF/LF | Solid Waste Facility/Landfill |
| SHWS | State Hazardous Waste Sites |
| UST | Underground Storage Tank |
| USGS | United States Geological Survey |

# LIMITED UST CLOSURE ASSESSMENT REPORT

BALSAM EDGE SITE
333 HOWELL MILL ROAD, WAYNESVILLE
HAYWOOD COUNTY, NORTH CAROLINA

**Prepared For:**
Mountain Housing Opportunities, Inc.
64 Clingman Avenue, Suite 101
Asheville, NC 28801

BLE Project Number J23-20565-02

**August 30, 2023**

BUNNELL LAMMONS ENGINEERING
30 Park Ridge Drive, Fletcher, NC 28732
828.277.0100 828.277.0110 info@blecorp.com
BLECORP.COM

BUNNELL LAMMONS ENGINEERING

August 30, 2023

Mountain Housing Opportunities, Inc.
64 Clingman Avenue, Suite 101
Asheville, NC 28801

Attention: Ms. Adeline Wolfe

Subject: **Limited UST Closure Assessment Report**
Balsam Edge Site
333 Howell Mill Road
Waynesville, Haywood County, North Carolina
BLE Project No. J23-20565-02

Dear Ms. Wolfe:

Bunnell-Lammons Engineering, Inc. (BLE) is pleased to submit this summary report for limited underground storage tank (UST) closure assessment activities conducted at the property referenced above (herein referred to as "Site"). The assessment was conducted in general accordance with BLE's proposal P23-1389 dated August 17, 2023.

Sincerely,

**BUNNELL LAMMONS ENGINEERING INC.**
***NC FIRM REGISTRATION # C-1538***

K. Cahill

Kelsey Cahill
Environmental Scientist

NORTH CAROLINA PROFESSIONAL SEAL 028345 8/30/23 ENGINEER DAVID R. LOFTIS

David R. Loftis, P.E.
Asheville Branch Manager
Registered, North Carolina #028345

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## Appendix

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## 1.0 BACKGROUND INFORMATION

The Site is located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The Site consists of a portion of one current tax parcel identified with Haywood County PIN #8616-42-5402, which is 5.63 acres in total but in the process of being subdivided into seven smaller parcels. According to a survey completed by Owens Surveying, PLLC and dated January 25, 2021, the Site is identified as proposed Parcel 4, consisting of 0.888 acres, and is currently developed with one vacant residential dwelling, associated patios, sidewalks, a driveway, and a shed. The remainder of the Site consists of grassy and vegetated areas. According to MHO, the vacant dwelling was connected to the municipal water system. **Figures 1** and **2** depict the location of the Site.

Planning activities are underway for a US Department of Housing and Urban Development (HUD)-funded residential development project located at the Site. Based on correspondence with Ms. Adeline Wolfe of Mountain Housing Opportunities, Inc. (MHO), BLE understands that the dwelling on the Site was formerly heating using heating oil stored in an underground heating oil storage tank (UST). The UST is located exterior to a southwestern corner of the residence and was initially discovered by Engineering Consulting Services Southeast, LLP. (ECS). ECS also previously delineated the suspected limits of the UST via a subcontracted private utility locator, who used ground penetrating radar (GPR) to mark the suspected UST limits on the ground.

Based on HUD requirements, the soil around the UST must be evaluated for environmental quality to identify potential releases of petroleum products. Under typical circumstances, one soil sample should be collected from each side and each end of the UST (four total). However, the UST is in very close proximity to the residential dwelling and therefore, the collection of four soil samples in accordance with standard HUD requirements (one on each side of the UST) is not feasible.

As a result, on July 31, 2023, and under contract with MHO, BLE mobilized to the Site to complete a UST tightness test in efforts to identify the condition UST. During the test, negative pressure was not able to be achieved inside the tank, suspectedly due to an open line connected to the tank. Therefore, the tightness test was determined to be inconclusive. Due to the inconclusive test results, it became necessary to attempt to collect soil samples from around the UST as physically possible. In addition, since it was infeasible to collect the HUD-required four soil samples, a groundwater sample was proposed to identify potential impacts to the groundwater in the vicinity of the UST.

In accordance with these conditions and as authorized by the Client in BLE's Proposal No. P23-1389 dated August 17, 2023, BLE conducted the following assessment activities.

## 2.0 LIMITED UST CLOSURE ASSESSMENT

BLE mobilized to the Site on August 18, 2023 to assess the potential impacts of the UST to the soil and groundwater on-Site. The assessment consisted of completing a new GPR survey around the UST, identifying the limits of the UST, and completing three soil borings around the UST. Soil borings were installed to depths between 5 and 35 feet, one of which was then converted into a temporary groundwater monitoring well. **Figures 3, 4**, and **5** depict the on-Site sample locations and associated results.

### 2.1 Field Activities

UST Location

BLE subcontracted with Johnson, Mirmiran, & Thompson (JMT) to complete a GPR survey of the UST area and approximately 10 feet around the UST, as feasible. On August 18, 2023, JMT personnel identified the suspected UST limits and two additional suspected underground anomalies to the west and north of the UST. The GPR survey identified a much larger UST footprint than was previously marked. Specifically, markings depicted the tank area as being approximately 55 inches wide and 124 inches long. The eastern side of the UST was parallel with the brick wall of the dwelling, while the southern side of the UST was depicted approximately one foot from the raised brick deck to the south of the UST.

To confirm the extents of the UST, BLE penetrated and removed several of the brick pavers, within and outside of the GPR markings, and utilized a push rod to identify the buried tank. The top of the tank was encountered approximately 18 inches bgs, while the bottom of the UST is estimated to be located at approximately 5 feet bgs. BLE generally confirmed the southern, western, and northern limits of the UST, which is believed to be approximately 8 feet long and 3 feet wide. These dimensions would place the eastern side of the UST approximately 6 inches or less from the existing brick wall. Additionally, phone cables and electrical powerlines were located directly overhead of the UST, approximately 12-15 feet off the ground and 1-2 feet off the side of the dwelling. These conditions made it unsafe and infeasible to complete a soil boring via hand auger or drill rig from the eastern side of the UST.

Soil Assessment

Following the UST location on August 18, 2023, BLE completed three soil borings (B-1 through B-3) around the UST. Due to the proximity to the previously mentioned overhead utility lines, borings B-1 and B-3 were installed with a stainless-steel hand auger to the south and north of the UST, respectively. Each boring was installed to the maximum depth of 5 feet below ground surface (bgs). The auger was decontaminated between each boring using Alconox®/water mixture. Boring B-2 was installed with a track-mounted drill rig using direct push techniques on the western side of the UST. This boring was advanced to a depth of approximately 35 feet in efforts of reaching the groundwater table. During installation, groundwater was encountered approximately 19 feet bgs.

During the installation of the soil borings, soils were assessed, characterized, and screened for evidence of environmental impacts utilizing visual and olfactory observations. In addition, a photo-ionization detector (PID) was utilized to detect the presence of volatile organic vapors. Soil composition appeared to consist mainly of brown and reddish brown silts and clays above the water table, and brown/black/gray silty sands and mica below the water table.

Petroleum odors, staining, and elevated PID readings were observed in each soil boring between the approximate depths of 3.5 and 7 feet bgs. These depths would correspond generally with the bottom of the UST and soils directly beneath it. Elevated PID readings were also identified in boring B-2 up until 14 feet bgs. One soil sample was collected from each soil boring from the soil interval with the greatest degree of

petroleum impacts based on the field observations/screening. Samples B-1-4.5'-5' and B-3-4.5'-5' were each collected from a depth of 4.5 to 5 feet bgs, while sample B-2-6'-6.5' was collected from a depth of 6 to 6.5 feet bgs. Please reference the soil logs attached to this report for more details.

The samples were submitted to Pace Analytical Services, LLC (Pace) laboratory for analysis of volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, volatile petroleum hydrocarbons (VPH) by MADEP methods, extractable petroleum hydrocarbons (VPH) by MADEP methods, and total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO).

Groundwater Assessment

Following the completion of soil boring B-2, the boring was converted to a temporary groundwater monitoring well. The temporary monitoring well was set at 35 feet bgs and constructed of 20 feet of 1-inch diameter slotted screen PVC piping, and 15 feet of 1-inch diameter solid PVC riser. The riser extended approximately 4 inches above the grade in the area. Please reference soil log B-2 for further TMW-1 details.

Upon setting, the depth to groundwater was identified at approximately 32 feet bgs, measured from the top of the well riser. After approximately 15 minutes, the water table ascended to approximately 19 feet bgs. BLE utilized a peristaltic pump to purge and sample the groundwater within the well. It should be noted that even after purging an adequate amount of water from the well, groundwater was particularly turbid as a result of very fine silts at depth. One groundwater sample (TMW-1) was collected from the temporary monitoring well. The samples were submitted to Pace laboratory for analysis of VOCs by EPA Method 8260, SVOCs by EPA Method 8270, VPH and EPH by MADEP methods.

## 2.2 Laboratory Results

BLE consulted the following documents for regulatory standards and/or screening values in association with petroleum releases from USTs:

- North Carolina Department of Environmental Quality (NCDEQ) UST Section *Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement* dated May 17, 2021.
- NCDEQ UST Section *Comprehensive Tables for Corrective Action Guidelines* dated September 7, 2022.

Soil

According to analytical results, target petroleum constituents were identified in the three soil samples collected. Constituents were identified in trace concentrations below the NCDEQ UST Section Action Limits (Action Limits) and the NCDEQ Maximum Soil Contaminant Concentrations (MSCCs) in the soil-to-water (STW) category in sample B-3-6'-6.5'.

Target compound concentrations were present in both samples B-1-4.5'-5' and B-2-6'-6.5' in exceedance of the Action Limits and STW MSCCs. Specifically, TPH DRO was identified in soil sample B-1-4.5'-5' at 1,050 milligrams per kilogram (mg/kg), and in B-2-6'-6.5' at 2,850 mg/kg – exceeding the Action Limit for DRO of 100 mg/kg. TPH GRO was identified in B-1-4.5'-5' at 51.7 mg/kg, and in B-2-6'-6.5' at 265 mg/kg – exceeding the Action Limit for GRO of 50 mg/kg.

Additionally, several target EPH and VPH hydrocarbon fractions were identified in exceedance of their respective MSCCs in the Residential category in both samples B-1-4.5'-5' and B-2-6'-6.5'. Naphthalene

was also identified in exceedance of its Residential MSCC in sample B-2-6'-6.5'. Furthermore, several VOCs, SVOCs, and additional target hydrocarbon fractions, were identified in one or both of these samples above STW MSCCs. No target constituents were identified above their respective Industrial/Commercial MSCCs.

Please reference **Figure 4**, **Table 1**, and the laboratory report attached to this report for more details.

Groundwater

According to analytical results, several VOCs, including 1-methylnaphthalene, 2-methylnapthalene, and naphthalene were identified in groundwater sample TMW-1 in exceedance of the NCDEQ 2L Groundwater Quality Standards (2L Standards). Additionally, hydrocarbon fractions Aliphatics (C19-C36) and Aromatics (C09-C22) were identified in exceedance of their respective 2L Standards.

Please reference **Figure 5**, **Table 2**, and the laboratory report attached to this report for more details.

## 2.3 Limitations

- Soil borings B-1 and B-3 were advanced via hand auger due to their proximity to the dwelling preventing access via track-mounted drill rig.
- Due to the proximity of the UST to the dwelling, three sides of the UST were available for assessment. The fourth side of the UST was immediately adjacent to the exterior wall of the dwelling – preventing access with a hand auger or a drill rig. This limitation is not considered significant as the assessment activities were sufficient to confirm a release from the UST.

## 3.0 CONCLUSION

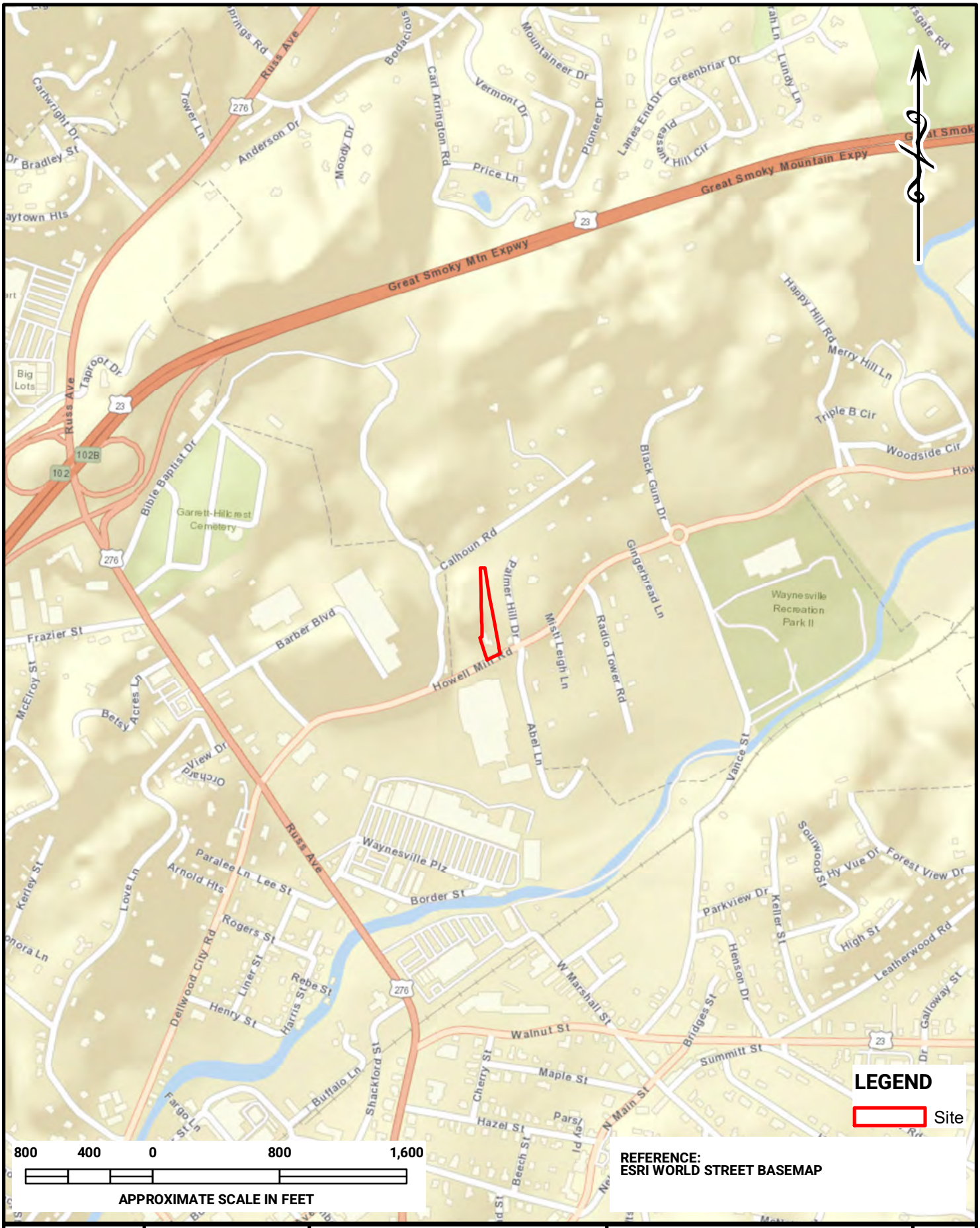
Based on the results of the soil and groundwater sampling conducted at the Site on August 18, 2023, it appears that a release has occurred from the existing heating oil UST on the southwestern side of the dwelling. Petroleum constituents were identified in soils on the western and southern side of the UST in exceedance of NCDEQ Action Limits and Residential MSCCs. In addition, contaminants were identified in the groundwater on-Site in exceedance of NCDEQ 2L Standards.

Due to the identified presence of limited soil and groundwater impacts, BLE recommends that the release incident and associated assessment data be reported to the NCDEQ UST Section. Removal of the UST and the abatement of grossly impacted soil will likely be requested by the NCDEQ. A Notice of Residual Petroleum (NRP) will also likely be required to address the groundwater contamination on the Site.

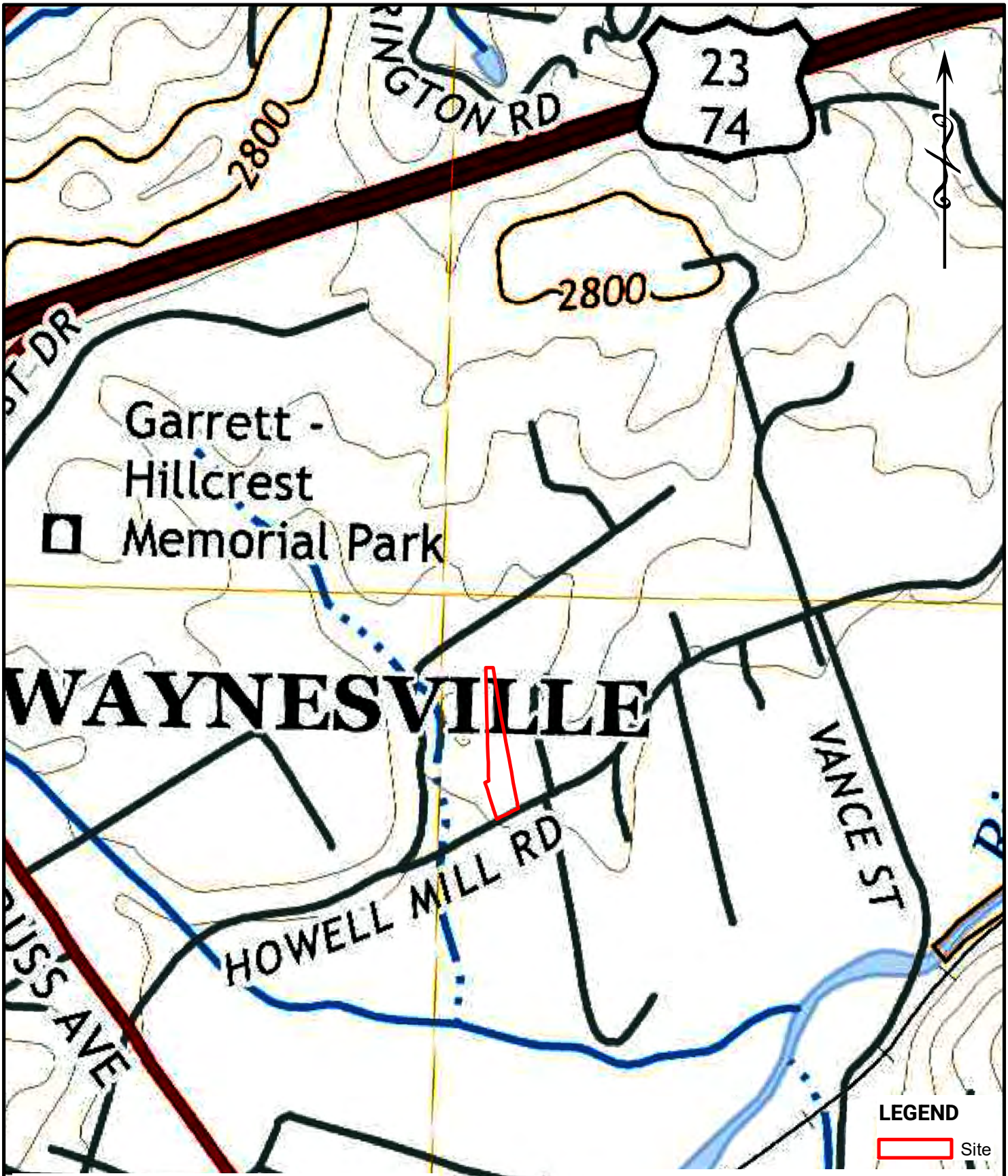
## 4.0 QUALIFICATION OF REPORT

The findings contained herein are based upon the data that was reviewed and documented in this report along with our experience on similar projects. The discovery of any additional information concerning the environmental conditions at the site should be reported to us for our review so that we can reassess potential environmental impacts and modify our recommendations, if necessary.

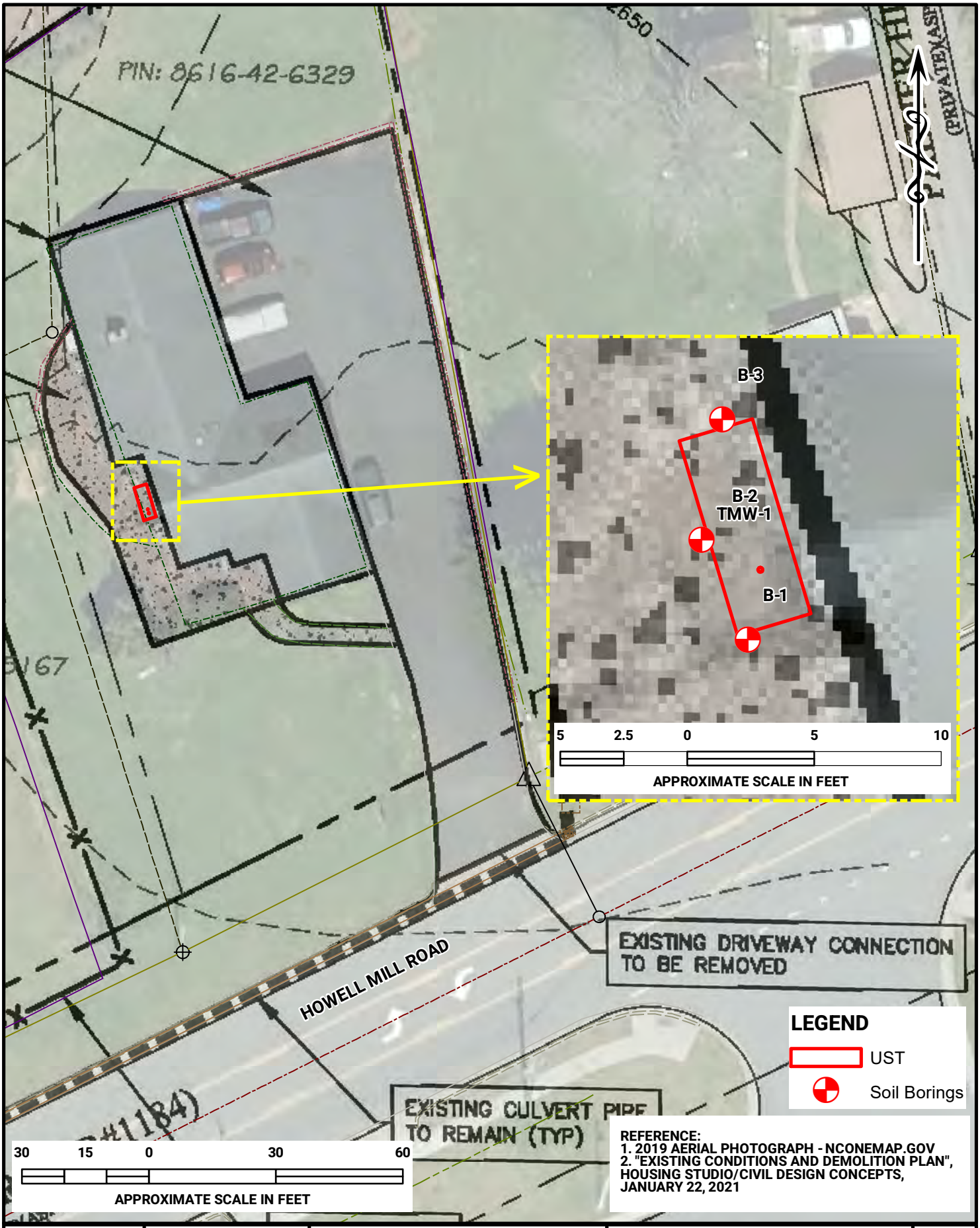
# APPENDIX A
Figures




| | | | |
|---|---|---|---|
| DRAWN BY: KLC | DATE: 8-21-23 | BUNNELL LAMMONS ENGINEERING | FIGURE 1 |
| CHECKED BY: DRL | FILE NAME: FIGURE 1.MXD | SITE LOCATION MAP<br>LIMITED UST CLOSURE ASSESSMENT<br>333 HOWELL MILL ROAD, WAYNESVILLE<br>HAYWOOD COUNTY, NORTH CAROLINA | |
| APPROVED BY: DRL | JOB NO: J23-20565-02 | | |

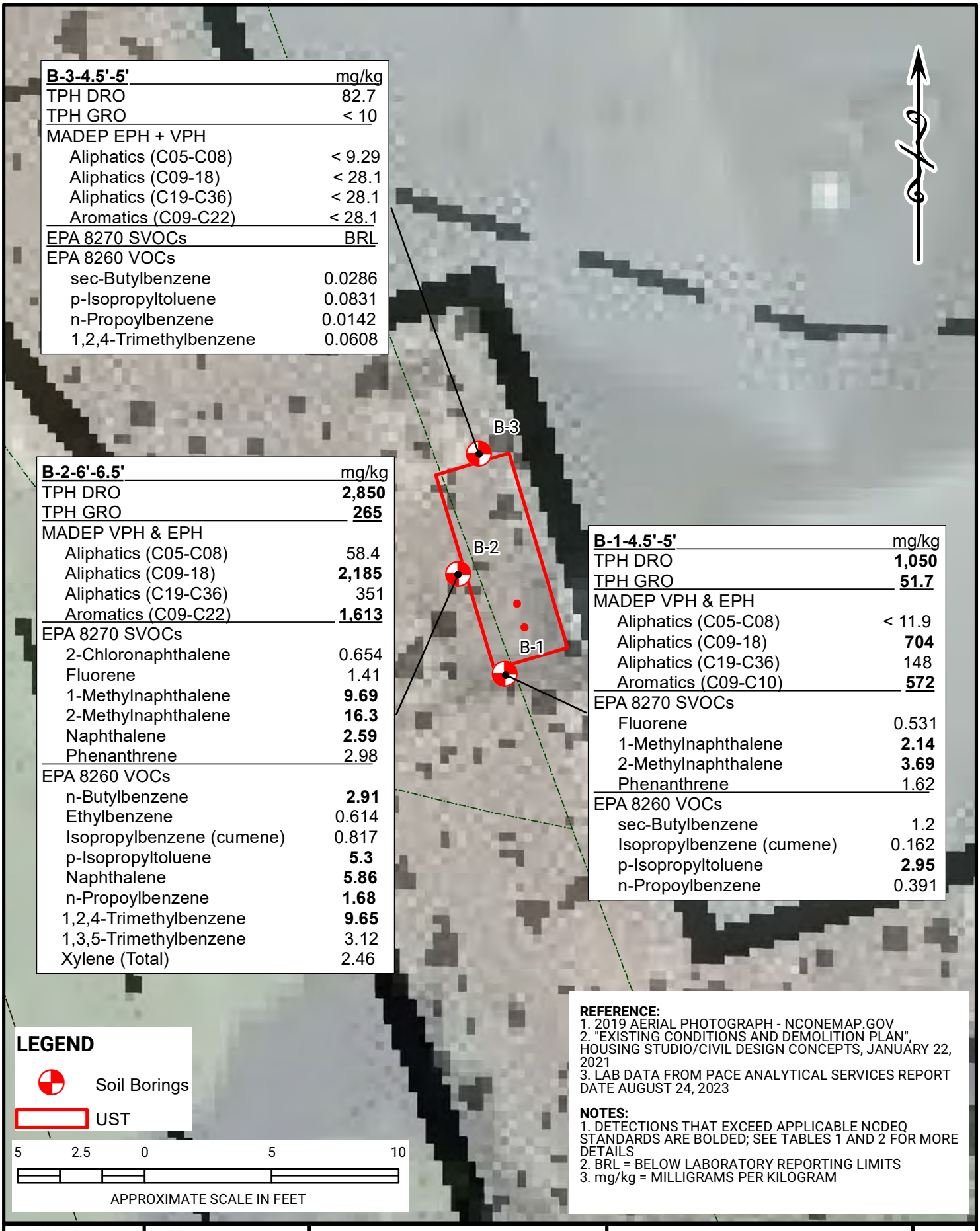



| | | | |
|---|---|---|---|
| DRAWN BY: KLC | DATE: 8-21-23 | BUNNELL LAMMONS ENGINEERING | 2022 USGS TOPOGRAPHIC MAP<br>LIMITED UST CLOSURE ASSESSMENT<br>333 HOWELL MILL ROAD, WAYNESVILLE<br>HAYWOOD COUNTY, NORTH CAROLINA |
| CHECKED BY: DRL | FILE NAME: FIGURE 2.MXD | | FIGURE 2 |
| APPROVED BY: DRL | JOB NO: J23-20565-02 | | |




REFERENCE:
1. 2019 AERIAL PHOTOGRAPH - NCONEMAP.GOV
2. "EXISTING CONDITIONS AND DEMOLITION PLAN", HOUSING STUDIO/CIVIL DESIGN CONCEPTS, JANUARY 22, 2021

| | | | |
|---|---|---|---|
| DRAWN BY: KLC | DATE: 8-24-23 | BUNNELL LAMMONS ENGINEERING | SITE MAP<br>LIMITED UST CLOSURE ASSESSMENT<br>333 HOWELL MILL ROAD, WAYNESVILLE<br>HAYWOOD COUNTY, NORTH CAROLINA |
| CHECKED BY: DRL | FILE NAME: FIGURE 3.MXD | | FIGURE 3 |
| APPROVED BY: DRL | JOB NO: J23-20565-02 | | |




| B-3-4.5'-5' | mg/kg |
|---|---|
| TPH DRO | 82.7 |
| TPH GRO | < 10 |
| MADEP EPH + VPH | |
| Aliphatics (C05-C08) | < 9.29 |
| Aliphatics (C09-18) | < 28.1 |
| Aliphatics (C19-C36) | < 28.1 |
| Aromatics (C09-C22) | < 28.1 |
| EPA 8270 SVOCs | BRL |
| EPA 8260 VOCs | |
| sec-Butylbenzene | 0.0286 |
| p-Isopropyltoluene | 0.0831 |
| n-Propoylbenzene | 0.0142 |
| 1,2,4-Trimethylbenzene | 0.0608 |

| B-2-6'-6.5' | mg/kg |
|---|---|
| TPH DRO | **2,850** |
| TPH GRO | **265** |
| MADEP VPH & EPH | |
| Aliphatics (C05-C08) | 58.4 |
| Aliphatics (C09-18) | **2,185** |
| Aliphatics (C19-C36) | 351 |
| Aromatics (C09-C22) | **1,613** |
| EPA 8270 SVOCs | |
| 2-Chloronaphthalene | 0.654 |
| Fluorene | 1.41 |
| 1-Methylnaphthalene | **9.69** |
| 2-Methylnaphthalene | **16.3** |
| Naphthalene | **2.59** |
| Phenanthrene | 2.98 |
| EPA 8260 VOCs | |
| n-Butylbenzene | **2.91** |
| Ethylbenzene | 0.614 |
| Isopropylbenzene (cumene) | 0.817 |
| p-Isopropyltoluene | **5.3** |
| Naphthalene | **5.86** |
| n-Propoylbenzene | **1.68** |
| 1,2,4-Trimethylbenzene | **9.65** |
| 1,3,5-Trimethylbenzene | 3.12 |
| Xylene (Total) | 2.46 |

| B-1-4.5'-5' | mg/kg |
|---|---|
| TPH DRO | **1,050** |
| TPH GRO | **51.7** |
| MADEP VPH & EPH | |
| Aliphatics (C05-C08) | < 11.9 |
| Aliphatics (C09-18) | **704** |
| Aliphatics (C19-C36) | 148 |
| Aromatics (C09-C10) | **572** |
| EPA 8270 SVOCs | |
| Fluorene | 0.531 |
| 1-Methylnaphthalene | **2.14** |
| 2-Methylnaphthalene | **3.69** |
| Phenanthrene | 1.62 |
| EPA 8260 VOCs | |
| sec-Butylbenzene | 1.2 |
| Isopropylbenzene (cumene) | 0.162 |
| p-Isopropyltoluene | **2.95** |
| n-Propoylbenzene | 0.391 |

**LEGEND**

Soil Borings

UST

5 2.5 0 5 10

APPROXIMATE SCALE IN FEET

**REFERENCE:**
1. 2019 AERIAL PHOTOGRAPH - NCONEMAP.GOV
2. "EXISTING CONDITIONS AND DEMOLITION PLAN", HOUSING STUDIO/CIVIL DESIGN CONCEPTS, JANUARY 22, 2021
3. LAB DATA FROM PACE ANALYTICAL SERVICES REPORT DATE AUGUST 24, 2023

**NOTES:**
1. DETECTIONS THAT EXCEED APPLICABLE NCDEQ STANDARDS ARE BOLDED; SEE TABLES 1 AND 2 FOR MORE DETAILS
2. BRL = BELOW LABORATORY REPORTING LIMITS
3. mg/kg = MILLIGRAMS PER KILOGRAM

| | | | |
|---|---|---|---|
| DRAWN BY: KLC | DATE: 8-30-23 | BUNNELL LAMMONS ENGINEERING | **SOIL SAMPLE RESULTS MAP**<br>LIMITED UST CLOSURE ASSESSMENT<br>333 HOWELL MILL ROAD, WAYNESVILLE<br>HAYWOOD COUNTY, NORTH CAROLINA |
| CHECKED BY: DRL | FILE NAME: FIGURE 4.MXD | | FIGURE **4** |
| APPROVED BY: DRL | JOB NO: J23-20565-02 | | |

| TMW-1 | ug/L |
|---|---|
| MADEP VPH & EPH | |
| Aliphatics (C05-C08) | < 100 |
| Aliphatics (C09-18) | 1,312 |
| Aliphatics (C19-C36) | **282** |
| Aromatics (C09-C22) | **1,933** |
| EPA 8270 SVOCs | |
| 1-Methylnaphthalene | **44.2** |
| 2-Methylnaphthalene | **73.2** |
| Naphthalene | **22.2** |
| EPA 8260 VOCs | |
| Ethylbenzene | 6.3 |
| Xylene (Total) | 14.9 |

**LEGEND**

Temporary Groundwater Monitoring Well

UST

5 2.5 0 5 10

APPROXIMATE SCALE IN FEET

**REFERENCE:**
1. 2019 AERIAL PHOTOGRAPH - NCONEMAP.GOV
2. "EXISTING CONDITIONS AND DEMOLITION PLAN", HOUSING STUDIO/CIVIL DESIGN CONCEPTS, JANUARY 22, 2021
3. LAB DATA FROM PACE ANALYTICAL SERVICES REPORT DATE AUGUST 24, 2023

**NOTES:**
1. DETECTIONS THAT EXCEED APPLICABLE NCDEQ STANDARDS ARE BOLDED; SEE TABLES 1 AND 2 FOR MORE DETAILS
2. u/L = MICROGRAMS PER LITER

| | | | |
|---|---|---|---|
| DRAWN BY: KLC | DATE: 8-30-23 | BUNNELL LAMMONS ENGINEERING | **GROUNDWATER SAMPLE RESULTS MAP**<br>LIMITED UST CLOSURE ASSESSMENT<br>333 HOWELL MILL ROAD, WAYNESVILLE<br>HAYWOOD COUNTY, NORTH CAROLINA |
| CHECKED BY: DRL | FILE NAME: FIGURE 5.MXD | | FIGURE **5** |
| APPROVED BY: DRL | JOB NO: J23-20565-02 | | |

# APPENDIX B
# Tables

**Table 1 - Soil Sampling Results**
Date Sampled: August 18, 2023
Balsam Edge Project Site
333 Howell Mill Road, Waynesvill, North Carolina
BLE Project No. 20565-02

| Analytical Method | Analyte* | Sample Depth / PID Reading | Sample Results B-1-4.5'-5' | B-2-6'-6.5' | B-3-4.5'-5' | Units | NCDEQ UST Action Limits | Maximum Soil Contaminant Concentrations September 7, 2022 Version Soil-to-Water | Residential | Industrial/Commercial |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Depth | 4.5'-5' | 6'-6.5' | 4.5'-5' | | | | | |
| | | PID Reading | 185 ppm | 166 ppm | 22 ppm | | | | | |
| TPH-DRO | TPH DRO | | 1,050 | 2,850 | 82.7 | mg/kg | 100 | NSE | NSE | NSE |
| TPH-GRO | TPH GRO | | 51.7 | 265 | < 10 | mg/kg | 50 | NSE | NSE | NSE |
| EPA 8270 SVOCs | 2-Chloronaphthalene | | < 0.425 | 0.654 | < 0.433 | mg/kg | N/A | NSE | NSE | NSE |
| | Fluorene | | 0.531 | 1.410 | < 0.433 | | | 55 | 625 | 9,340 |
| | 1-Methylnaphthalene | | **2.140** | **9.690** | < 0.433 | | | 0.054 | 22.8 | 112 |
| | 2-Methylnaphthalene | | **3.690** | **16.300** | < 0.433 | | | 1.5 | 62.5 | 934 |
| | Naphthalene | | < 0.425 | **2.590** | < 0.433 | | | 0.2 | 5.5 | 27 |
| | Phenanthrene | | 1.620 | 2.980 | < 0.433 | | | 64 | 469 | 7,000 |
| EPA 8260 VOCs | n-Butylbenzene | | < 0.0392 | **2.910** | < 0.0124 | mg/kg | N/A | 2.4 | 782 | 11,600 |
| | sec-Butylbenzene | | 1.200 | < 0.0134 | 0.0286 | | | 2.2 | 1,560 | 23,300 |
| | Ethylbenzene | | < 0.0392 | 0.614 | < 0.0124 | | | 8 | 60.3 | 297 |
| | Isopropylbenzene (cumene) | | 0.162 | 0.817 | < 0.0124 | | | 1.3 | 1,560 | 23,300 |
| | p-Isopropyltoluene | | **2.950** | **5.300** | 0.0831 | | | 0.12 | 1,560 | 23,300 |
| | Naphthalene | | < 0.0392 | **5.860** | < 0.0124 | | | 0.2 | 5.5 | 27 |
| | n-Propylbenzene | | 0.391 | **1.680** | 0.0142 | | | 1.4 | 1,560 | 23,300 |
| | 1,2,4-Trimethylbenzene | | < 0.0392 | **9.650** | 0.0608 | | | 6.6 | 156 | 2,330 |
| | 1,3,5-Trimethylbenzene | | < 0.0392 | 3.120 | < 0.0124 | | | 6.6 | 156 | 2,330 |
| | Xylene (total) | | < 0.0784 | 2.460 | < 0.0248 | | | 6 | 3,120 | 46,700 |
| Total MADEP EPH + VPH Hydrocarbon Fractions | Aliphatics (C05-C08) | | < 11.9 | 58.4 | < 9.29 | mg/kg | N/A | 68 | 625 | 9,340 |
| | Aliphatics (C09-C18) | | **704** | **2,185** | < 28.1 | | | 540 | 1,560 | 23,300 |
| | Aliphatics (C19-C36) | | 148 | 351 | < 28.1 | | | NSE | 31,200 | 467,000 |
| | Aromatics (C09-C22) | | **572** | **1,563** | < 28.1 | | | 31 | 469 | 7,000 |

*Only analytes that were detected in soil samples are included in Table 1

Underlined = NCDEQ UST Action Limits Exceedance
**Bold** = Soil-to-Water MSCC Exceedance
**Bold/Red** = Residential MSCC Exceedance
mg/kg = milligrams per kilogram
ppm = parts per million
NSE = No standard established
N/A = Not applicable

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics
EPA = Environmental Protection Agency (methodology)
8270 SVOCs = Semi Volatile Organic Compounds
8260 VOCs = Volatile Organic Compounds
MADEP = Massachussetts Department of Environmental Protection (methodology)
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons

**Table 2 - Groundwater Sampling Results**
Date Sampled: August 18, 2023
Balsam Edge Project Site
333 Howell Mill Road, Waynesville, North Carolina
BLE Project No. 20565-02

| Analytical Method | Analyte* | Sample Results | Units | NCDEQ Groundwater Standard September 7, 2022 Version | |
|---|---|---|---|---|---|
| | | TW-1 | | 2L GWQS | GCLs |
| EPA 8270 SVOCs | 1-Methylnaphtlalene | **44.2** | ug/L | 1 | 1,000 |
| | 2-Methylnaphthalene | **73.2** | | 30 | 12,000 |
| | Naphthalene | **22.2** | | 6 | 6000 |
| EPA 8260 VOCs | Ethylbenzene | 6.3 | ug/L | 600 | 80,000 |
| | Xylenes (total) | 14.9 | | 500 | 50,000 |
| Total MADEP EPH + VPH Hydrocarbon Fractions | Aliphatics (C05-C08) | < 100 | ug/L | 700 | N/A |
| | Aliphatics (C09-C18) | 1,312 | | 100,000 | N/A |
| | Aliphatics (C19-C36) | **282** | | 200 | N/A |
| | Aromatics (C09-C22) | **1,933** | | 400 | N/A |

*Only analytes that were detected in TW-1 are included in Table 2

2L GWQS = NCDEQ 15A NCAC 2L Groundwater Quality Standards
GCL = Gross Contaminant Levels
**Bold** = 2L GWQS Exceedance
ug/L = micrograms per liter
N/A = Not applicable

EPA = Environmental Protection Agency (methodology)
8270 SVOCs = Semi Volatile Organic Compounds
8260 VOCs = Volatile Organic Compounds
MADEP = Massachussetts Department of Environmental Protection (methodology)
EPH = Extractable Petroleum Hydrocarbons
VPH = Volatile Petroleum Hydrocarbons

# APPENDIX C
# Photo Log

**Photo 1: View of the UST area, looking southeast.**

**Photo 2: View of the UST as surveyed using GPR, looking east.**

**Photo 3: View of the UST vent and fill ports, looking south.**

**Photo 4: View of the drill rig in proximity to overhead powerlines.**

**Photo 5: View of the drill rig in proximity to overhead powerlines, looking southeast.**

**Photo 6: View of the final assessment area, looking southeast.**

# APPENDIX D
# Laboratory Analytical Data

**Pace Analytical Services, LLC**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

August 24, 2023

Kelsey Cahill
Bunnell Lammons Engineering
30 Park Ridge Drive
Fletcher, NC 28732

RE: Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

Dear Kelsey Cahill:

Enclosed are the analytical results for sample(s) received by the laboratory on August 18, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses were subcontracted outside of the Pace Network. The test report from the external subcontractor is attached to this report in its entirety.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Charlotte

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: David R. Loftis, PE, Bunnell Lammons Engineering



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**Pace Analytical Services, LLC**
9800 Kincey Ave.  Suite 100
Huntersville, NC 28078
(704)875-9092

## CERTIFICATIONS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Pace Analytical Services Charlotte**

South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, LLC**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## SAMPLE ANALYTE COUNT

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **92683612001** | **B-1-4.5'-5'** | EPA 8015C | HH | 2 | PASI-C |
| | | EPA 8015C | TEG | 2 | PASI-C |
| | | EPA 8270E | BPJ | 75 | PASI-C |
| | | EPA 8260D | SAS | 70 | PASI-C |
| | | SW-846 | KDF | 1 | PASI-C |
| **92683612002** | **B-2-6'-6.5'** | EPA 8015C | HH | 2 | PASI-C |
| | | EPA 8015C | TEG | 2 | PASI-C |
| | | EPA 8270E | BPJ | 75 | PASI-C |
| | | EPA 8260D | SAS | 70 | PASI-C |
| | | SW-846 | KDF | 1 | PASI-C |
| **92683612003** | **B-3-4.5'-5'** | EPA 8015C | BAJ | 2 | PASI-C |
| | | EPA 8015C | TEG | 2 | PASI-C |
| | | EPA 8270E | BPJ | 75 | PASI-C |
| | | EPA 8260D | SAS | 70 | PASI-C |
| | | SW-846 | KDF | 1 | PASI-C |
| **92683612004** | **TMW-1** | EPA 8270E | PKS | 74 | PASI-C |
| | | EPA 8260D | TMH | 63 | PASI-C |

PASI-C = Pace Analytical Services - Charlotte

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, LLC**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

# ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-1-4.5'-5'** **Lab ID: 92683612001** Collected: 08/18/23 12:00 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015C Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| Diesel Range Organics(C10-C28) | **1050** | mg/kg | 32.7 | 5 | 08/21/23 16:49 | 08/23/23 08:55 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 93 | % | 10-133 | 5 | 08/21/23 16:49 | 08/23/23 08:55 | 629-99-2 | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015C Preparation Method: EPA 5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Gas Range Organics (C6-C10) | **51.7** | mg/kg | 14.3 | 1 | 08/22/23 13:17 | 08/22/23 21:32 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 165 | % | 66-130 | 1 | 08/22/23 13:17 | 08/22/23 21:32 | 460-00-4 | S5 |
| **8270E MSSV Microwave** | Analytical Method: EPA 8270E Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acenaphthene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 208-96-8 | |
| Aniline | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 62-53-3 | |
| Anthracene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 111-44-4 | |
| 2-Chloronaphthalene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 534-52-1 | |

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# ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-1-4.5'-5'** **Lab ID: 92683612001** Collected: 08/18/23 12:00 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270E MSSV Microwave** | Analytical Method: EPA 8270E Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| 2,4-Dinitrophenol | ND | ug/kg | 2130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 206-44-0 | |
| Fluorene | **531** | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 193-39-5 | |
| Isophorone | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 78-59-1 | |
| 1-Methylnaphthalene | **2140** | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 90-12-0 | |
| 2-Methylnaphthalene | **3690** | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 15831-10-4 | |
| Naphthalene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 62-75-9 | v1 |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 86-30-6 | |
| 2,2'-Oxybis(1-chloropropane) | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 108-60-1 | |
| Pentachlorophenol | ND | ug/kg | 850 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 87-86-5 | |
| Phenanthrene | **1620** | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 85-01-8 | |
| Phenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 108-95-2 | |
| Pyrene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 129-00-0 | |
| Pyridine | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 110-86-1 | v1 |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 425 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| 2-Fluorobiphenyl (S) | 47 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 321-60-8 | |
| Terphenyl-d14 (S) | 78 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 1718-51-0 | |
| Phenol-d6 (S) | 58 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 13127-88-3 | |
| 2-Fluorophenol (S) | 58 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 104 | % | 10-131 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 118-79-6 | |
| Nitrobenzene-d5 (S) | 65 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:24 | 4165-60-0 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-1-4.5'-5'** **Lab ID: 92683612001** Collected: 08/18/23 12:00 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D/5035A/5030B Volatiles** | Analytical Method: EPA 8260D Preparation Method: EPA 5035A/5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acetone | ND | ug/kg | 784 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 67-64-1 | v2 |
| Benzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-27-4 | |
| Bromoform | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 157 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/kg | 784 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 78-93-3 | |
| n-Butylbenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 104-51-8 | |
| sec-Butylbenzene | **1200** | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-00-3 | v2 |
| Chloroform | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 107-06-2 | v2 |
| 1,1-Dichloroethene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 594-20-7 | v2 |
| 1,1-Dichloropropene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-20-3 | |
| Ethylbenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 87-68-3 | L1 |
| 2-Hexanone | ND | ug/kg | 392 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **162** | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 98-82-8 | |
| p-Isopropyltoluene | **2950** | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 157 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 392 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-10-1 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-1-4.5'-5'** **Lab ID: 92683612001** Collected: 08/18/23 12:00 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D/5035A/5030B Volatiles** | Analytical Method: EPA 8260D Preparation Method: EPA 5035A/5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Methyl-tert-butyl ether | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 91-20-3 | |
| n-Propylbenzene | **391** | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 103-65-1 | |
| Styrene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 127-18-4 | |
| Toluene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 392 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 78.4 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 39.2 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 99 | % | 70-130 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 86 | % | 70-130 | 2 | 08/22/23 16:07 | 08/23/23 20:07 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: SW-846<br>Pace Analytical Services - Charlotte | | | | | | | |
| Percent Moisture | **23.6** | % | 0.10 | 1 | | 08/21/23 15:29 | | N2 |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-2-6'-6.5'** **Lab ID: 92683612002** Collected: 08/18/23 13:45 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015C Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| Diesel Range Organics(C10-C28) | **2850** | mg/kg | 62.1 | 10 | 08/21/23 16:49 | 08/23/23 09:59 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 0 | % | 10-133 | 10 | 08/21/23 16:49 | 08/23/23 09:59 | 629-99-2 | S4 |
| **Gasoline Range Organics** | Analytical Method: EPA 8015C Preparation Method: EPA 5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Gas Range Organics (C6-C10) | **265** | mg/kg | 16.2 | 1 | 08/22/23 13:17 | 08/22/23 21:58 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 130 | % | 66-130 | 1 | 08/22/23 13:17 | 08/22/23 21:58 | 460-00-4 | |
| **8270E MSSV Microwave** | Analytical Method: EPA 8270E Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acenaphthene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 208-96-8 | |
| Aniline | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 62-53-3 | |
| Anthracene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2100 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 111-44-4 | |
| 2-Chloronaphthalene | **654** | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 534-52-1 | |



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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-2-6'-6.5'** **Lab ID: 92683612002** Collected: 08/18/23 13:45 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270E MSSV Microwave** | Analytical Method: EPA 8270E Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| 2,4-Dinitrophenol | ND | ug/kg | 2100 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 206-44-0 | |
| Fluorene | **1410** | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 193-39-5 | |
| Isophorone | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 78-59-1 | |
| 1-Methylnaphthalene | **9690** | ug/kg | 2100 | 5 | 08/22/23 14:22 | 08/23/23 13:15 | 90-12-0 | |
| 2-Methylnaphthalene | **16300** | ug/kg | 2100 | 5 | 08/22/23 14:22 | 08/23/23 13:15 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 15831-10-4 | |
| Naphthalene | **2590** | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2100 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2100 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2100 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 62-75-9 | v1 |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 86-30-6 | |
| 2,2'-Oxybis(1-chloropropane) | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 108-60-1 | |
| Pentachlorophenol | ND | ug/kg | 839 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 87-86-5 | |
| Phenanthrene | **2980** | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 85-01-8 | |
| Phenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 108-95-2 | |
| Pyrene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 129-00-0 | |
| Pyridine | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 110-86-1 | v1 |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 420 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| 2-Fluorobiphenyl (S) | 68 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 321-60-8 | |
| Terphenyl-d14 (S) | 83 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 1718-51-0 | |
| Phenol-d6 (S) | 63 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 13127-88-3 | |
| 2-Fluorophenol (S) | 63 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 114 | % | 10-131 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 118-79-6 | |
| Nitrobenzene-d5 (S) | 71 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 11:52 | 4165-60-0 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-2-6'-6.5'** **Lab ID: 92683612002** Collected: 08/18/23 13:45 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D/5035A/5030B Volatiles** | Analytical Method: EPA 8260D Preparation Method: EPA 5035A/5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acetone | ND | ug/kg | 268 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 67-64-1 | v2 |
| Benzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-27-4 | |
| Bromoform | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 53.6 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 74-83-9 | v2 |
| 2-Butanone (MEK) | ND | ug/kg | 268 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 78-93-3 | v2 |
| n-Butylbenzene | **2910** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-00-3 | v2 |
| Chloroform | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 107-06-2 | v2 |
| 1,1-Dichloroethene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-35-4 | v2 |
| cis-1,2-Dichloroethene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-20-3 | v2 |
| Ethylbenzene | **614** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 134 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 591-78-6 | |
| Isopropylbenzene (Cumene) | **817** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 98-82-8 | |
| p-Isopropyltoluene | **5300** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 53.6 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-09-2 | v2 |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 134 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-10-1 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-2-6'-6.5'** **Lab ID: 92683612002** Collected: 08/18/23 13:45 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D/5035A/5030B Volatiles** | Analytical Method: EPA 8260D Preparation Method: EPA 5035A/5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Methyl-tert-butyl ether | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 1634-04-4 | |
| Naphthalene | **5860** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 91-20-3 | |
| n-Propylbenzene | **1680** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 103-65-1 | |
| Styrene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 127-18-4 | |
| Toluene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **9650** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | **3120** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 134 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 75-01-4 | |
| Xylene (Total) | **2460** | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 1330-20-7 | |
| m&p-Xylene | **1460** | ug/kg | 26.8 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 179601-23-1 | |
| o-Xylene | **995** | ug/kg | 13.4 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 99 | % | 70-130 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 116 | % | 70-130 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 79 | % | 70-130 | 1 | 08/21/23 16:56 | 08/22/23 08:17 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: SW-846<br>Pace Analytical Services - Charlotte | | | | | | | |
| Percent Moisture | **20.8** | % | 0.10 | 1 | | 08/21/23 15:29 | | N2 |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-3-4.5'-5'** **Lab ID: 92683612003** Collected: 08/18/23 15:55 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8015 GCS THC-Diesel** | Analytical Method: EPA 8015C Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| Diesel Range Organics(C10-C28) | **82.7** | mg/kg | 6.5 | 1 | 08/21/23 16:49 | 08/22/23 16:46 | | |
| ***Surrogates*** | | | | | | | | |
| n-Pentacosane (S) | 89 | % | 10-133 | 1 | 08/21/23 16:49 | 08/22/23 16:46 | 629-99-2 | |
| **Gasoline Range Organics** | Analytical Method: EPA 8015C Preparation Method: EPA 5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Gas Range Organics (C6-C10) | ND | mg/kg | 16.9 | 1 | 08/23/23 12:03 | 08/24/23 00:25 | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 92 | % | 66-130 | 1 | 08/23/23 12:03 | 08/24/23 00:25 | 460-00-4 | |
| **8270E MSSV Microwave** | Analytical Method: EPA 8270E Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acenaphthene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 83-32-9 | |
| Acenaphthylene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 208-96-8 | |
| Aniline | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 62-53-3 | |
| Anthracene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 207-08-9 | |
| Benzoic Acid | ND | ug/kg | 2160 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 65-85-0 | |
| Benzyl alcohol | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 111-44-4 | |
| 2-Chloronaphthalene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 7005-72-3 | |
| Chrysene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 53-70-3 | |
| Dibenzofuran | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 120-83-2 | |
| Diethylphthalate | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 105-67-9 | |
| Dimethylphthalate | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 534-52-1 | |



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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-3-4.5'-5'** **Lab ID: 92683612003** Collected: 08/18/23 15:55 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270E MSSV Microwave** | Analytical Method: EPA 8270E Preparation Method: EPA 3546<br>Pace Analytical Services - Charlotte | | | | | | | |
| 2,4-Dinitrophenol | ND | ug/kg | 2160 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 117-81-7 | |
| Fluoranthene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 206-44-0 | |
| Fluorene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 77-47-4 | |
| Hexachloroethane | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 193-39-5 | |
| Isophorone | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 78-59-1 | |
| 1-Methylnaphthalene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 90-12-0 | |
| 2-Methylnaphthalene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 15831-10-4 | |
| Naphthalene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/kg | 2160 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/kg | 2160 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 100-01-6 | |
| Nitrobenzene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/kg | 2160 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 62-75-9 | v1 |
| N-Nitroso-di-n-propylamine | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 86-30-6 | |
| 2,2'-Oxybis(1-chloropropane) | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 108-60-1 | |
| Pentachlorophenol | ND | ug/kg | 865 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 87-86-5 | |
| Phenanthrene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 85-01-8 | |
| Phenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 108-95-2 | |
| Pyrene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 129-00-0 | |
| Pyridine | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 110-86-1 | v1 |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/kg | 433 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| 2-Fluorobiphenyl (S) | 62 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 321-60-8 | |
| Terphenyl-d14 (S) | 77 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 1718-51-0 | |
| Phenol-d6 (S) | 61 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 13127-88-3 | |
| 2-Fluorophenol (S) | 61 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 86 | % | 10-131 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 118-79-6 | |
| Nitrobenzene-d5 (S) | 72 | % | 10-130 | 1 | 08/22/23 14:22 | 08/23/23 12:20 | 4165-60-0 | |

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(704)875-9092

## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-3-4.5'-5'** **Lab ID: 92683612003** Collected: 08/18/23 15:55 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D/5035A/5030B Volatiles** | Analytical Method: EPA 8260D Preparation Method: EPA 5035A/5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acetone | ND | ug/kg | 248 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 67-64-1 | v2 |
| Benzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 71-43-2 | |
| Bromobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-86-1 | |
| Bromochloromethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 74-97-5 | |
| Bromodichloromethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-27-4 | |
| Bromoform | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-25-2 | |
| Bromomethane | ND | ug/kg | 49.5 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 74-83-9 | v2 |
| 2-Butanone (MEK) | ND | ug/kg | 248 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 78-93-3 | v2 |
| n-Butylbenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 104-51-8 | |
| sec-Butylbenzene | **28.6** | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 98-06-6 | |
| Carbon tetrachloride | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 56-23-5 | |
| Chlorobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-90-7 | |
| Chloroethane | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-00-3 | v2 |
| Chloroform | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 67-66-3 | |
| Chloromethane | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 96-12-8 | |
| Dibromochloromethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 106-93-4 | |
| Dibromomethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 107-06-2 | v2 |
| 1,1-Dichloroethene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-35-4 | v2 |
| cis-1,2-Dichloroethene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-20-3 | v2 |
| Ethylbenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 87-68-3 | |
| 2-Hexanone | ND | ug/kg | 124 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 98-82-8 | |
| p-Isopropyltoluene | **83.1** | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 99-87-6 | |
| Methylene Chloride | ND | ug/kg | 49.5 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-09-2 | v2 |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/kg | 124 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-10-1 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: B-3-4.5'-5'** **Lab ID: 92683612003** Collected: 08/18/23 15:55 Received: 08/18/23 16:54 Matrix: Solid

***Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.***

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D/5035A/5030B Volatiles** | Analytical Method: EPA 8260D Preparation Method: EPA 5035A/5030B<br>Pace Analytical Services - Charlotte | | | | | | | |
| Methyl-tert-butyl ether | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 1634-04-4 | |
| Naphthalene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 91-20-3 | |
| n-Propylbenzene | **14.2** | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 103-65-1 | |
| Styrene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 79-34-5 | |
| Tetrachloroethene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 127-18-4 | |
| Toluene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 79-00-5 | |
| Trichloroethene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | **60.8** | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-67-8 | |
| Vinyl acetate | ND | ug/kg | 124 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 108-05-4 | |
| Vinyl chloride | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 75-01-4 | |
| Xylene (Total) | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 1330-20-7 | |
| m&p-Xylene | ND | ug/kg | 24.8 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 179601-23-1 | |
| o-Xylene | ND | ug/kg | 12.4 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | |
| Toluene-d8 (S) | 98 | % | 70-130 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-130 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 79 | % | 70-130 | 1 | 08/21/23 16:56 | 08/22/23 05:28 | 17060-07-0 | |
| **Percent Moisture** | Analytical Method: SW-846<br>Pace Analytical Services - Charlotte | | | | | | | |
| Percent Moisture | **23.0** | % | 0.10 | 1 | | 08/21/23 15:29 | | N2 |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: TMW-1** **Lab ID: 92683612004** Collected: 08/18/23 15:05 Received: 08/18/23 16:54 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270E RVE** | Analytical Method: EPA 8270E Preparation Method: EPA 3510C<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acenaphthene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 83-32-9 | |
| Acenaphthylene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 208-96-8 | |
| Aniline | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 62-53-3 | |
| Anthracene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 120-12-7 | |
| Benzo(a)anthracene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 56-55-3 | |
| Benzo(a)pyrene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 205-99-2 | |
| Benzo(g,h,i)perylene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 191-24-2 | |
| Benzo(k)fluoranthene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 207-08-9 | |
| Benzoic Acid | ND | ug/L | 43.5 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 65-85-0 | |
| Benzyl alcohol | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 100-51-6 | |
| 4-Bromophenylphenyl ether | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 101-55-3 | |
| Butylbenzylphthalate | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 85-68-7 | |
| 4-Chloro-3-methylphenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 59-50-7 | |
| 4-Chloroaniline | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 106-47-8 | |
| bis(2-Chloroethoxy)methane | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 111-91-1 | |
| bis(2-Chloroethyl) ether | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 111-44-4 | |
| 2-Chloronaphthalene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 91-58-7 | |
| 2-Chlorophenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 95-57-8 | |
| 4-Chlorophenylphenyl ether | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 7005-72-3 | |
| Chrysene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 53-70-3 | |
| Dibenzofuran | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 132-64-9 | |
| 1,2-Dichlorobenzene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 106-46-7 | |
| 3,3'-Dichlorobenzidine | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 91-94-1 | |
| 2,4-Dichlorophenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 120-83-2 | |
| Diethylphthalate | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 84-66-2 | |
| 2,4-Dimethylphenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 105-67-9 | |
| Dimethylphthalate | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 131-11-3 | |
| Di-n-butylphthalate | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 84-74-2 | |
| 4,6-Dinitro-2-methylphenol | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 534-52-1 | |
| 2,4-Dinitrophenol | ND | ug/L | 43.5 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 51-28-5 | |
| 2,4-Dinitrotoluene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 121-14-2 | |
| 2,6-Dinitrotoluene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 606-20-2 | |
| Di-n-octylphthalate | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 117-84-0 | |
| bis(2-Ethylhexyl)phthalate | ND | ug/L | 5.2 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 117-81-7 | |
| Fluoranthene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 206-44-0 | |
| Fluorene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 86-73-7 | |
| Hexachloro-1,3-butadiene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 87-68-3 | |
| Hexachlorobenzene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 118-74-1 | |
| Hexachlorocyclopentadiene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 77-47-4 | |
| Hexachloroethane | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 67-72-1 | |
| Indeno(1,2,3-cd)pyrene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 193-39-5 | |
| Isophorone | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 78-59-1 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: TMW-1** **Lab ID: 92683612004** Collected: 08/18/23 15:05 Received: 08/18/23 16:54 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8270E RVE** | Analytical Method: EPA 8270E Preparation Method: EPA 3510C<br>Pace Analytical Services - Charlotte | | | | | | | |
| 1-Methylnaphthalene | **44.2** | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 90-12-0 | |
| 2-Methylnaphthalene | **73.2** | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 91-57-6 | |
| 2-Methylphenol(o-Cresol) | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 95-48-7 | |
| 3&4-Methylphenol(m&p Cresol) | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 15831-10-4 | |
| Naphthalene | **22.2** | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 91-20-3 | |
| 2-Nitroaniline | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 88-74-4 | |
| 3-Nitroaniline | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 99-09-2 | |
| 4-Nitroaniline | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 100-01-6 | |
| Nitrobenzene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 98-95-3 | |
| 2-Nitrophenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 88-75-5 | |
| 4-Nitrophenol | ND | ug/L | 43.5 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 100-02-7 | |
| N-Nitrosodimethylamine | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 62-75-9 | |
| N-Nitroso-di-n-propylamine | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 621-64-7 | |
| N-Nitrosodiphenylamine | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 86-30-6 | |
| 2,2'-Oxybis(1-chloropropane) | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 108-60-1 | |
| Pentachlorophenol | ND | ug/L | 17.4 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 87-86-5 | |
| Phenanthrene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 85-01-8 | |
| Phenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 108-95-2 | |
| Pyrene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 129-00-0 | |
| 1,2,4-Trichlorobenzene | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 120-82-1 | |
| 2,4,5-Trichlorophenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 95-95-4 | |
| 2,4,6-Trichlorophenol | ND | ug/L | 8.7 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 88-06-2 | |
| ***Surrogates*** | | | | | | | | |
| Nitrobenzene-d5 (S) | 88 | % | 10-138 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 69 | % | 10-130 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 321-60-8 | |
| Terphenyl-d14 (S) | 102 | % | 19-191 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 1718-51-0 | |
| Phenol-d6 (S) | 43 | % | 10-130 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 13127-88-3 | |
| 2-Fluorophenol (S) | 58 | % | 10-130 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 89 | % | 10-164 | 1 | 08/22/23 12:04 | 08/22/23 23:40 | 118-79-6 | |
| **8260D MSV Low Level** | Analytical Method: EPA 8260D<br>Pace Analytical Services - Charlotte | | | | | | | |
| Acetone | ND | ug/L | 25.0 | 1 | | 08/23/23 04:30 | 67-64-1 | |
| Benzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 71-43-2 | |
| Bromobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 108-86-1 | |
| Bromochloromethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-27-4 | |
| Bromoform | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-25-2 | |
| Bromomethane | ND | ug/L | 2.0 | 1 | | 08/23/23 04:30 | 74-83-9 | v2 |
| 2-Butanone (MEK) | ND | ug/L | 5.0 | 1 | | 08/23/23 04:30 | 78-93-3 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 108-90-7 | |
| Chloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-00-3 | |
| Chloroform | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 95-49-8 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: TMW-1** **Lab ID: 92683612004** Collected: 08/18/23 15:05 Received: 08/18/23 16:54 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D MSV Low Level** | Analytical Method: EPA 8260D<br>Pace Analytical Services - Charlotte | | | | | | | |
| 4-Chlorotoluene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 2.0 | 1 | | 08/23/23 04:30 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-71-8 | L2,v2 |
| 1,1-Dichloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 107-06-2 | |
| 1,1-Dichloroethene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 10061-02-6 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 108-20-3 | |
| Ethylbenzene | **6.3** | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/L | 2.0 | 1 | | 08/23/23 04:30 | 87-68-3 | |
| 2-Hexanone | ND | ug/L | 5.0 | 1 | | 08/23/23 04:30 | 591-78-6 | |
| p-Isopropyltoluene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 99-87-6 | |
| Methylene Chloride | ND | ug/L | 5.0 | 1 | | 08/23/23 04:30 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 5.0 | 1 | | 08/23/23 04:30 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 91-20-3 | |
| Styrene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-69-4 | v2 |
| 1,2,3-Trichloropropane | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 96-18-4 | |
| Vinyl acetate | ND | ug/L | 2.0 | 1 | | 08/23/23 04:30 | 108-05-4 | |
| Vinyl chloride | ND | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 75-01-4 | |
| Xylene (Total) | **14.9** | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 1330-20-7 | |
| m&p-Xylene | **8.6** | ug/L | 2.0 | 1 | | 08/23/23 04:30 | 179601-23-1 | |
| o-Xylene | **6.3** | ug/L | 1.0 | 1 | | 08/23/23 04:30 | 95-47-6 | |

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## ANALYTICAL RESULTS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**Sample: TMW-1** **Lab ID: 92683612004** Collected: 08/18/23 15:05 Received: 08/18/23 16:54 Matrix: Water

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|
| **8260D MSV Low Level** | Analytical Method: EPA 8260D<br>Pace Analytical Services - Charlotte | | | | | | | |
| ***Surrogates*** | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | 1 | | 08/23/23 04:30 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 94 | % | 70-130 | 1 | | 08/23/23 04:30 | 17060-07-0 | |
| Toluene-d8 (S) | 102 | % | 70-130 | 1 | | 08/23/23 04:30 | 2037-26-5 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 795171
QC Batch Method: EPA 5030B
Analysis Method: EPA 8015C
Analysis Description: Gasoline Range Organics
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92683612001, 92683612002

METHOD BLANK: 4120140 Matrix: Solid
Associated Lab Samples: 92683612001, 92683612002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | 6.0 | 08/22/23 16:21 | |
| 4-Bromofluorobenzene (S) | % | 92 | 66-130 | 08/22/23 16:21 | |

LABORATORY CONTROL SAMPLE: 4120141

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | 50.3 | 51.3 | 102 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 94 | 66-130 | |

MATRIX SPIKE SAMPLE: 4120143

| Parameter | Units | 92683375009 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | 92.1 | 89.5 | 96 | 57-154 | |
| 4-Bromofluorobenzene (S) | % | | | | 94 | 66-130 | |

SAMPLE DUPLICATE: 4120142

| Parameter | Units | 92683371007 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | ND | | |
| 4-Bromofluorobenzene (S) | % | 92 | 92 | | |

**Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.**

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 795412
QC Batch Method: EPA 5030B
Analysis Method: EPA 8015C
Analysis Description: Gasoline Range Organics
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92683612003

METHOD BLANK: 4121398 Matrix: Solid
Associated Lab Samples: 92683612003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | 6.1 | 08/23/23 14:58 | |
| 4-Bromofluorobenzene (S) | % | 91 | 66-130 | 08/23/23 14:58 | |

LABORATORY CONTROL SAMPLE: 4121399

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | 50.5 | 51.5 | 102 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 93 | 66-130 | |

MATRIX SPIKE SAMPLE: 4121401

| Parameter | Units | 92683870001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | 76.7 | 59.7 | 76 | 57-154 | |
| 4-Bromofluorobenzene (S) | % | | | | 93 | 66-130 | |

SAMPLE DUPLICATE: 4121400

| Parameter | Units | 92681093004 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Gas Range Organics (C6-C10) | mg/kg | ND | ND | | H1 |
| 4-Bromofluorobenzene (S) | % | 93 | 93 | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 795001
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8260D
Analysis Description: 8260D 5035A 5030B
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92683612002, 92683612003

METHOD BLANK: 4119418 Matrix: Solid
Associated Lab Samples: 92683612002, 92683612003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,1-Dichloroethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,1-Dichloroethene | ug/kg | ND | 5.0 | 08/22/23 01:44 | v2 |
| 1,1-Dichloropropene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,2-Dichloroethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | v2 |
| 1,2-Dichloropropane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,3-Dichloropropane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 2,2-Dichloropropane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 2-Butanone (MEK) | ug/kg | ND | 100 | 08/22/23 01:44 | v2 |
| 2-Chlorotoluene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 2-Hexanone | ug/kg | ND | 50.0 | 08/22/23 01:44 | |
| 4-Chlorotoluene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 50.0 | 08/22/23 01:44 | |
| Acetone | ug/kg | ND | 100 | 08/22/23 01:44 | v2 |
| Benzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Bromobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Bromochloromethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Bromodichloromethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Bromoform | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Bromomethane | ug/kg | ND | 20.0 | 08/22/23 01:44 | v2 |
| Carbon tetrachloride | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Chlorobenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Chloroethane | ug/kg | ND | 10.0 | 08/22/23 01:44 | v2 |
| Chloroform | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Chloromethane | ug/kg | ND | 10.0 | 08/22/23 01:44 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

METHOD BLANK: 4119418 Matrix: Solid
Associated Lab Samples: 92683612002, 92683612003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromochloromethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Dibromomethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Dichlorodifluoromethane | ug/kg | ND | 10.0 | 08/22/23 01:44 | |
| Diisopropyl ether | ug/kg | ND | 5.0 | 08/22/23 01:44 | v2 |
| Ethylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 10.0 | 08/22/23 01:44 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| m&p-Xylene | ug/kg | ND | 10.0 | 08/22/23 01:44 | |
| Methyl-tert-butyl ether | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Methylene Chloride | ug/kg | ND | 20.0 | 08/22/23 01:44 | v2 |
| n-Butylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| n-Propylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Naphthalene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| o-Xylene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| p-Isopropyltoluene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| sec-Butylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Styrene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| tert-Butylbenzene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Tetrachloroethene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Toluene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Trichloroethene | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Trichlorofluoromethane | ug/kg | ND | 5.0 | 08/22/23 01:44 | |
| Vinyl acetate | ug/kg | ND | 50.0 | 08/22/23 01:44 | |
| Vinyl chloride | ug/kg | ND | 10.0 | 08/22/23 01:44 | |
| Xylene (Total) | ug/kg | ND | 10.0 | 08/22/23 01:44 | |
| 1,2-Dichloroethane-d4 (S) | % | 79 | 70-130 | 08/22/23 01:44 | |
| 4-Bromofluorobenzene (S) | % | 94 | 70-130 | 08/22/23 01:44 | |
| Toluene-d8 (S) | % | 96 | 70-130 | 08/22/23 01:44 | |

LABORATORY CONTROL SAMPLE: 4119419

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | 500 | 558 | 112 | 70-130 | |
| 1,1,1-Trichloroethane | ug/kg | 500 | 454 | 91 | 70-130 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 500 | 552 | 110 | 70-130 | |
| 1,1,2-Trichloroethane | ug/kg | 500 | 526 | 105 | 70-130 | |
| 1,1-Dichloroethane | ug/kg | 500 | 451 | 90 | 70-130 | |
| 1,1-Dichloroethene | ug/kg | 500 | 443 | 89 | 70-132 | v3 |
| 1,1-Dichloropropene | ug/kg | 500 | 471 | 94 | 70-130 | |
| 1,2,3-Trichlorobenzene | ug/kg | 500 | 576 | 115 | 62-136 | |
| 1,2,3-Trichloropropane | ug/kg | 500 | 500 | 100 | 70-130 | |
| 1,2,4-Trichlorobenzene | ug/kg | 500 | 578 | 116 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4119419

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | ug/kg | 500 | 532 | 106 | 70-130 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | 500 | 549 | 110 | 65-130 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 500 | 551 | 110 | 70-130 | |
| 1,2-Dichlorobenzene | ug/kg | 500 | 576 | 115 | 70-130 | |
| 1,2-Dichloroethane | ug/kg | 500 | 392 | 78 | 70-130 | v3 |
| 1,2-Dichloropropane | ug/kg | 500 | 498 | 100 | 70-130 | |
| 1,3,5-Trimethylbenzene | ug/kg | 500 | 549 | 110 | 70-130 | |
| 1,3-Dichlorobenzene | ug/kg | 500 | 566 | 113 | 70-130 | |
| 1,3-Dichloropropane | ug/kg | 500 | 509 | 102 | 70-130 | |
| 1,4-Dichlorobenzene | ug/kg | 500 | 553 | 111 | 70-130 | |
| 2,2-Dichloropropane | ug/kg | 500 | 386 | 77 | 60-130 | |
| 2-Butanone (MEK) | ug/kg | 1000 | 870 | 87 | 66-130 | v3 |
| 2-Chlorotoluene | ug/kg | 500 | 518 | 104 | 70-130 | |
| 2-Hexanone | ug/kg | 1000 | 1010 | 101 | 68-130 | |
| 4-Chlorotoluene | ug/kg | 500 | 531 | 106 | 70-130 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | 1000 | 964 | 96 | 70-130 | |
| Acetone | ug/kg | 1000 | 798 | 80 | 60-130 | v3 |
| Benzene | ug/kg | 500 | 501 | 100 | 70-130 | |
| Bromobenzene | ug/kg | 500 | 604 | 121 | 70-130 | |
| Bromochloromethane | ug/kg | 500 | 543 | 109 | 70-130 | |
| Bromodichloromethane | ug/kg | 500 | 482 | 96 | 70-130 | |
| Bromoform | ug/kg | 500 | 640 | 128 | 70-130 | |
| Bromomethane | ug/kg | 500 | 435 | 87 | 43-175 | v3 |
| Carbon tetrachloride | ug/kg | 500 | 532 | 106 | 70-130 | |
| Chlorobenzene | ug/kg | 500 | 563 | 113 | 70-130 | |
| Chloroethane | ug/kg | 500 | 424 | 85 | 70-145 | v3 |
| Chloroform | ug/kg | 500 | 457 | 91 | 70-130 | |
| Chloromethane | ug/kg | 500 | 465 | 93 | 66-146 | |
| cis-1,2-Dichloroethene | ug/kg | 500 | 445 | 89 | 70-130 | |
| cis-1,3-Dichloropropene | ug/kg | 500 | 469 | 94 | 70-130 | |
| Dibromochloromethane | ug/kg | 500 | 575 | 115 | 70-130 | |
| Dibromomethane | ug/kg | 500 | 611 | 122 | 70-130 | |
| Dichlorodifluoromethane | ug/kg | 500 | 544 | 109 | 42-197 | |
| Diisopropyl ether | ug/kg | 500 | 420 | 84 | 68-130 | v3 |
| Ethylbenzene | ug/kg | 500 | 487 | 97 | 70-130 | |
| Hexachloro-1,3-butadiene | ug/kg | 500 | 618 | 124 | 70-130 | |
| Isopropylbenzene (Cumene) | ug/kg | 500 | 555 | 111 | 70-130 | |
| m&p-Xylene | ug/kg | 1000 | 1050 | 105 | 70-130 | |
| Methyl-tert-butyl ether | ug/kg | 500 | 423 | 85 | 70-130 | |
| Methylene Chloride | ug/kg | 500 | 412 | 82 | 65-130 | v3 |
| n-Butylbenzene | ug/kg | 500 | 511 | 102 | 70-130 | |
| n-Propylbenzene | ug/kg | 500 | 519 | 104 | 70-130 | |
| Naphthalene | ug/kg | 500 | 585 | 117 | 65-135 | |
| o-Xylene | ug/kg | 500 | 565 | 113 | 70-130 | |
| p-Isopropyltoluene | ug/kg | 500 | 550 | 110 | 70-130 | |
| sec-Butylbenzene | ug/kg | 500 | 524 | 105 | 70-130 | |
| Styrene | ug/kg | 500 | 579 | 116 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4119419

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butylbenzene | ug/kg | 500 | 529 | 106 | 70-130 | |
| Tetrachloroethene | ug/kg | 500 | 606 | 121 | 70-130 | |
| Toluene | ug/kg | 500 | 514 | 103 | 70-130 | |
| trans-1,2-Dichloroethene | ug/kg | 500 | 452 | 90 | 70-130 | |
| trans-1,3-Dichloropropene | ug/kg | 500 | 461 | 92 | 70-130 | |
| Trichloroethene | ug/kg | 500 | 570 | 114 | 70-130 | |
| Trichlorofluoromethane | ug/kg | 500 | 440 | 88 | 62-140 | |
| Vinyl acetate | ug/kg | 1000 | 830 | 83 | 70-140 | |
| Vinyl chloride | ug/kg | 500 | 414 | 83 | 70-152 | |
| Xylene (Total) | ug/kg | 1500 | 1620 | 108 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 74 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 94 | 70-130 | |
| Toluene-d8 (S) | % | | | 96 | 70-130 | |

MATRIX SPIKE SAMPLE: 4119420

| Parameter | Units | 92683612003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 1240 | 1290 | 104 | 22-166 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 1240 | 1150 | 93 | 23-172 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 1240 | 1190 | 96 | 21-158 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 1240 | 1170 | 94 | 25-160 | |
| 1,1-Dichloroethane | ug/kg | ND | 1240 | 1100 | 89 | 22-166 | |
| 1,1-Dichloroethene | ug/kg | ND | 1240 | 1170 | 94 | 18-183 | v3 |
| 1,1-Dichloropropene | ug/kg | ND | 1240 | 1190 | 96 | 20-181 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 1240 | 1210 | 98 | 10-161 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 1240 | 1010 | 82 | 21-147 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 1240 | 1270 | 103 | 10-159 | |
| 1,2,4-Trimethylbenzene | ug/kg | 60.8 | 1240 | 1280 | 99 | 17-170 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 1240 | 1000 | 81 | 10-135 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 1240 | 1210 | 98 | 30-154 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 1240 | 1260 | 102 | 26-162 | |
| 1,2-Dichloroethane | ug/kg | ND | 1240 | 941 | 76 | 23-161 | v3 |
| 1,2-Dichloropropane | ug/kg | ND | 1240 | 1170 | 94 | 29-165 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 1240 | 1270 | 103 | 20-172 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 1240 | 1320 | 107 | 22-164 | |
| 1,3-Dichloropropane | ug/kg | ND | 1240 | 1150 | 93 | 27-156 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 1240 | 1220 | 99 | 20-161 | |
| 2,2-Dichloropropane | ug/kg | ND | 1240 | 820 | 66 | 10-159 | |
| 2-Butanone (MEK) | ug/kg | ND | 2480 | 1780 | 72 | 13-143 | v3 |
| 2-Chlorotoluene | ug/kg | ND | 1240 | 1170 | 94 | 21-166 | |
| 2-Hexanone | ug/kg | ND | 2480 | 1890 | 76 | 19-145 | |
| 4-Chlorotoluene | ug/kg | ND | 1240 | 1190 | 96 | 19-163 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 2480 | 1930 | 78 | 21-151 | |
| Acetone | ug/kg | ND | 2480 | 1340 | 54 | 10-133 | v3 |
| Benzene | ug/kg | ND | 1240 | 1220 | 99 | 29-156 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE SAMPLE: 4119420

| Parameter | Units | 92683612003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Bromobenzene | ug/kg | ND | 1240 | 1340 | 108 | 25-161 | |
| Bromochloromethane | ug/kg | ND | 1240 | 1260 | 102 | 27-158 | |
| Bromodichloromethane | ug/kg | ND | 1240 | 1110 | 89 | 23-158 | |
| Bromoform | ug/kg | ND | 1240 | 1320 | 107 | 19-152 | |
| Bromomethane | ug/kg | ND | 1240 | 447 | 36 | 10-152 | v3 |
| Carbon tetrachloride | ug/kg | ND | 1240 | 1190 | 96 | 18-172 | |
| Chlorobenzene | ug/kg | ND | 1240 | 1310 | 106 | 26-166 | |
| Chloroethane | ug/kg | ND | 1240 | 392 | 32 | 10-130 | v3 |
| Chloroform | ug/kg | ND | 1240 | 1110 | 90 | 25-161 | |
| Chloromethane | ug/kg | ND | 1240 | 1320 | 107 | 27-197 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 1240 | 1080 | 87 | 28-165 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 1240 | 1060 | 86 | 23-159 | |
| Dibromochloromethane | ug/kg | ND | 1240 | 1250 | 101 | 21-151 | |
| Dibromomethane | ug/kg | ND | 1240 | 1360 | 110 | 38-158 | |
| Dichlorodifluoromethane | ug/kg | ND | 1240 | 2020 | 163 | 10-200 | |
| Diisopropyl ether | ug/kg | ND | 1240 | 1010 | 81 | 23-160 | v3 |
| Ethylbenzene | ug/kg | ND | 1240 | 1170 | 94 | 22-163 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 1240 | 2060 | 166 | 10-192 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 1240 | 1350 | 109 | 24-173 | |
| m&p-Xylene | ug/kg | ND | 2480 | 2530 | 102 | 22-171 | |
| Methyl-tert-butyl ether | ug/kg | ND | 1240 | 965 | 78 | 25-153 | |
| Methylene Chloride | ug/kg | ND | 1240 | 1100 | 89 | 10-165 | v3 |
| n-Butylbenzene | ug/kg | ND | 1240 | 1320 | 106 | 10-186 | |
| n-Propylbenzene | ug/kg | 14.2 | 1240 | 1230 | 98 | 16-171 | |
| Naphthalene | ug/kg | ND | 1240 | 1150 | 93 | 10-159 | |
| o-Xylene | ug/kg | ND | 1240 | 1320 | 107 | 23-171 | |
| p-Isopropyltoluene | ug/kg | 83.1 | 1240 | 1410 | 107 | 13-184 | |
| sec-Butylbenzene | ug/kg | 28.6 | 1240 | 1320 | 104 | 16-182 | |
| Styrene | ug/kg | ND | 1240 | 1330 | 108 | 25-169 | |
| tert-Butylbenzene | ug/kg | ND | 1240 | 1010 | 81 | 20-174 | |
| Tetrachloroethene | ug/kg | ND | 1240 | 1410 | 114 | 14-171 | |
| Toluene | ug/kg | ND | 1240 | 1240 | 100 | 24-166 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 1240 | 1120 | 90 | 24-170 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 1240 | 1030 | 83 | 22-157 | |
| Trichloroethene | ug/kg | ND | 1240 | 1410 | 114 | 23-176 | |
| Trichlorofluoromethane | ug/kg | ND | 1240 | 542 | 44 | 10-138 | |
| Vinyl acetate | ug/kg | ND | 2480 | 1720 | 69 | 11-166 | |
| Vinyl chloride | ug/kg | ND | 1240 | 1100 | 89 | 21-200 | |
| Xylene (Total) | ug/kg | ND | 3710 | 3850 | 104 | 23-170 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 80 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 94 | 70-130 | |
| Toluene-d8 (S) | % | | | | 96 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

SAMPLE DUPLICATE: 4119421

| Parameter | Units | 92683491001 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | ND | | |
| 1,1,1-Trichloroethane | ug/kg | ND | ND | | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | ND | | |
| 1,1,2-Trichloroethane | ug/kg | ND | ND | | |
| 1,1-Dichloroethane | ug/kg | ND | ND | | |
| 1,1-Dichloroethene | ug/kg | ND | ND | | v2 |
| 1,1-Dichloropropene | ug/kg | ND | ND | | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | ND | | |
| 1,2,3-Trichloropropane | ug/kg | ND | ND | | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | ND | | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | ND | | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | ND | | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | |
| 1,2-Dichloroethane | ug/kg | ND | ND | | v2 |
| 1,2-Dichloropropane | ug/kg | ND | ND | | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | ND | | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | |
| 1,3-Dichloropropane | ug/kg | ND | ND | | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | |
| 2,2-Dichloropropane | ug/kg | ND | ND | | |
| 2-Butanone (MEK) | ug/kg | ND | ND | | v2 |
| 2-Chlorotoluene | ug/kg | ND | ND | | |
| 2-Hexanone | ug/kg | ND | ND | | |
| 4-Chlorotoluene | ug/kg | ND | ND | | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | ND | | |
| Acetone | ug/kg | ND | ND | | v2 |
| Benzene | ug/kg | ND | ND | | |
| Bromobenzene | ug/kg | ND | ND | | |
| Bromochloromethane | ug/kg | ND | ND | | |
| Bromodichloromethane | ug/kg | ND | ND | | |
| Bromoform | ug/kg | ND | ND | | |
| Bromomethane | ug/kg | ND | ND | | v2 |
| Carbon tetrachloride | ug/kg | ND | ND | | |
| Chlorobenzene | ug/kg | ND | ND | | |
| Chloroethane | ug/kg | ND | ND | | v2 |
| Chloroform | ug/kg | ND | ND | | |
| Chloromethane | ug/kg | ND | ND | | |
| cis-1,2-Dichloroethene | ug/kg | ND | ND | | |
| cis-1,3-Dichloropropene | ug/kg | ND | ND | | |
| Dibromochloromethane | ug/kg | ND | ND | | |
| Dibromomethane | ug/kg | ND | ND | | |
| Dichlorodifluoromethane | ug/kg | ND | ND | | |
| Diisopropyl ether | ug/kg | ND | ND | | v2 |
| Ethylbenzene | ug/kg | ND | ND | | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | |
| Isopropylbenzene (Cumene) | ug/kg | ND | ND | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

SAMPLE DUPLICATE: 4119421

| Parameter | Units | 92683491001 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| m&p-Xylene | ug/kg | ND | ND | | |
| Methyl-tert-butyl ether | ug/kg | ND | ND | | |
| Methylene Chloride | ug/kg | ND | ND | | v2 |
| n-Butylbenzene | ug/kg | ND | ND | | |
| n-Propylbenzene | ug/kg | ND | ND | | |
| Naphthalene | ug/kg | ND | ND | | |
| o-Xylene | ug/kg | ND | ND | | |
| p-Isopropyltoluene | ug/kg | ND | ND | | |
| sec-Butylbenzene | ug/kg | ND | ND | | |
| Styrene | ug/kg | ND | ND | | |
| tert-Butylbenzene | ug/kg | ND | ND | | |
| Tetrachloroethene | ug/kg | ND | ND | | |
| Toluene | ug/kg | ND | ND | | |
| trans-1,2-Dichloroethene | ug/kg | ND | ND | | |
| trans-1,3-Dichloropropene | ug/kg | ND | ND | | |
| Trichloroethene | ug/kg | ND | ND | | |
| Trichlorofluoromethane | ug/kg | ND | ND | | |
| Vinyl acetate | ug/kg | ND | ND | | |
| Vinyl chloride | ug/kg | ND | ND | | |
| Xylene (Total) | ug/kg | ND | ND | | |
| 1,2-Dichloroethane-d4 (S) | % | 79 | 80 | | |
| 4-Bromofluorobenzene (S) | % | 97 | 95 | | |
| Toluene-d8 (S) | % | 96 | 95 | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 795242
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8260D
Analysis Description: 8260D 5035A 5030B
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92683612001

METHOD BLANK: 4120536 Matrix: Solid
Associated Lab Samples: 92683612001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,1-Dichloroethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,1-Dichloroethene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,1-Dichloropropene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,2-Dichloroethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | v2 |
| 1,2-Dichloropropane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,3-Dichloropropane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 2,2-Dichloropropane | ug/kg | ND | 5.0 | 08/23/23 11:25 | v2 |
| 2-Butanone (MEK) | ug/kg | ND | 100 | 08/23/23 11:25 | |
| 2-Chlorotoluene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 2-Hexanone | ug/kg | ND | 50.0 | 08/23/23 11:25 | |
| 4-Chlorotoluene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 50.0 | 08/23/23 11:25 | |
| Acetone | ug/kg | ND | 100 | 08/23/23 11:25 | v2 |
| Benzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Bromobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Bromochloromethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Bromodichloromethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Bromoform | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Bromomethane | ug/kg | ND | 20.0 | 08/23/23 11:25 | |
| Carbon tetrachloride | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Chlorobenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Chloroethane | ug/kg | ND | 10.0 | 08/23/23 11:25 | v2 |
| Chloroform | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Chloromethane | ug/kg | ND | 10.0 | 08/23/23 11:25 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

METHOD BLANK: 4120536 Matrix: Solid
Associated Lab Samples: 92683612001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dibromochloromethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Dibromomethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Dichlorodifluoromethane | ug/kg | ND | 10.0 | 08/23/23 11:25 | |
| Diisopropyl ether | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Ethylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 10.0 | 08/23/23 11:25 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| m&p-Xylene | ug/kg | ND | 10.0 | 08/23/23 11:25 | |
| Methyl-tert-butyl ether | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Methylene Chloride | ug/kg | ND | 20.0 | 08/23/23 11:25 | |
| n-Butylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| n-Propylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Naphthalene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| o-Xylene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| p-Isopropyltoluene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| sec-Butylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Styrene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| tert-Butylbenzene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Tetrachloroethene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Toluene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Trichloroethene | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Trichlorofluoromethane | ug/kg | ND | 5.0 | 08/23/23 11:25 | |
| Vinyl acetate | ug/kg | ND | 50.0 | 08/23/23 11:25 | |
| Vinyl chloride | ug/kg | ND | 10.0 | 08/23/23 11:25 | |
| Xylene (Total) | ug/kg | ND | 10.0 | 08/23/23 11:25 | |
| 1,2-Dichloroethane-d4 (S) | % | 80 | 70-130 | 08/23/23 11:25 | |
| 4-Bromofluorobenzene (S) | % | 95 | 70-130 | 08/23/23 11:25 | |
| Toluene-d8 (S) | % | 97 | 70-130 | 08/23/23 11:25 | |

LABORATORY CONTROL SAMPLE: 4120537

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | 500 | 569 | 114 | 70-130 | |
| 1,1,1-Trichloroethane | ug/kg | 500 | 466 | 93 | 70-130 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | 500 | 535 | 107 | 70-130 | |
| 1,1,2-Trichloroethane | ug/kg | 500 | 530 | 106 | 70-130 | |
| 1,1-Dichloroethane | ug/kg | 500 | 468 | 94 | 70-130 | |
| 1,1-Dichloroethene | ug/kg | 500 | 474 | 95 | 70-132 | |
| 1,1-Dichloropropene | ug/kg | 500 | 488 | 98 | 70-130 | |
| 1,2,3-Trichlorobenzene | ug/kg | 500 | 557 | 111 | 62-136 | |
| 1,2,3-Trichloropropane | ug/kg | 500 | 489 | 98 | 70-130 | |
| 1,2,4-Trichlorobenzene | ug/kg | 500 | 581 | 116 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4120537

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | ug/kg | 500 | 544 | 109 | 70-130 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | 500 | 504 | 101 | 65-130 | |
| 1,2-Dibromoethane (EDB) | ug/kg | 500 | 540 | 108 | 70-130 | |
| 1,2-Dichlorobenzene | ug/kg | 500 | 559 | 112 | 70-130 | |
| 1,2-Dichloroethane | ug/kg | 500 | 415 | 83 | 70-130 | v3 |
| 1,2-Dichloropropane | ug/kg | 500 | 506 | 101 | 70-130 | |
| 1,3,5-Trimethylbenzene | ug/kg | 500 | 550 | 110 | 70-130 | |
| 1,3-Dichlorobenzene | ug/kg | 500 | 562 | 112 | 70-130 | |
| 1,3-Dichloropropane | ug/kg | 500 | 509 | 102 | 70-130 | |
| 1,4-Dichlorobenzene | ug/kg | 500 | 553 | 111 | 70-130 | |
| 2,2-Dichloropropane | ug/kg | 500 | 443 | 89 | 60-130 | v3 |
| 2-Butanone (MEK) | ug/kg | 1000 | 848 | 85 | 66-130 | |
| 2-Chlorotoluene | ug/kg | 500 | 521 | 104 | 70-130 | |
| 2-Hexanone | ug/kg | 1000 | 959 | 96 | 68-130 | |
| 4-Chlorotoluene | ug/kg | 500 | 534 | 107 | 70-130 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | 1000 | 939 | 94 | 70-130 | |
| Acetone | ug/kg | 1000 | 783 | 78 | 60-130 | v3 |
| Benzene | ug/kg | 500 | 517 | 103 | 70-130 | |
| Bromobenzene | ug/kg | 500 | 588 | 118 | 70-130 | |
| Bromochloromethane | ug/kg | 500 | 534 | 107 | 70-130 | |
| Bromodichloromethane | ug/kg | 500 | 484 | 97 | 70-130 | |
| Bromoform | ug/kg | 500 | 599 | 120 | 70-130 | |
| Bromomethane | ug/kg | 500 | 461 | 92 | 43-175 | |
| Carbon tetrachloride | ug/kg | 500 | 559 | 112 | 70-130 | |
| Chlorobenzene | ug/kg | 500 | 561 | 112 | 70-130 | |
| Chloroethane | ug/kg | 500 | 451 | 90 | 70-145 | v3 |
| Chloroform | ug/kg | 500 | 468 | 94 | 70-130 | |
| Chloromethane | ug/kg | 500 | 497 | 99 | 66-146 | |
| cis-1,2-Dichloroethene | ug/kg | 500 | 462 | 92 | 70-130 | |
| cis-1,3-Dichloropropene | ug/kg | 500 | 485 | 97 | 70-130 | |
| Dibromochloromethane | ug/kg | 500 | 572 | 114 | 70-130 | |
| Dibromomethane | ug/kg | 500 | 600 | 120 | 70-130 | |
| Dichlorodifluoromethane | ug/kg | 500 | 793 | 159 | 42-197 | |
| Diisopropyl ether | ug/kg | 500 | 443 | 89 | 68-130 | |
| Ethylbenzene | ug/kg | 500 | 498 | 100 | 70-130 | |
| Hexachloro-1,3-butadiene | ug/kg | 500 | 653 | 131 | 70-130 | L1 |
| Isopropylbenzene (Cumene) | ug/kg | 500 | 557 | 111 | 70-130 | |
| m&p-Xylene | ug/kg | 1000 | 1080 | 108 | 70-130 | |
| Methyl-tert-butyl ether | ug/kg | 500 | 438 | 88 | 70-130 | |
| Methylene Chloride | ug/kg | 500 | 456 | 91 | 65-130 | |
| n-Butylbenzene | ug/kg | 500 | 545 | 109 | 70-130 | |
| n-Propylbenzene | ug/kg | 500 | 528 | 106 | 70-130 | |
| Naphthalene | ug/kg | 500 | 555 | 111 | 65-135 | |
| o-Xylene | ug/kg | 500 | 566 | 113 | 70-130 | |
| p-Isopropyltoluene | ug/kg | 500 | 567 | 113 | 70-130 | |
| sec-Butylbenzene | ug/kg | 500 | 536 | 107 | 70-130 | |
| Styrene | ug/kg | 500 | 585 | 117 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4120537

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butylbenzene | ug/kg | 500 | 431 | 86 | 70-130 | |
| Tetrachloroethene | ug/kg | 500 | 585 | 117 | 70-130 | |
| Toluene | ug/kg | 500 | 517 | 103 | 70-130 | |
| trans-1,2-Dichloroethene | ug/kg | 500 | 474 | 95 | 70-130 | |
| trans-1,3-Dichloropropene | ug/kg | 500 | 474 | 95 | 70-130 | |
| Trichloroethene | ug/kg | 500 | 573 | 115 | 70-130 | |
| Trichlorofluoromethane | ug/kg | 500 | 516 | 103 | 62-140 | |
| Vinyl acetate | ug/kg | 1000 | 887 | 89 | 70-140 | |
| Vinyl chloride | ug/kg | 500 | 439 | 88 | 70-152 | |
| Xylene (Total) | ug/kg | 1500 | 1650 | 110 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 75 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 94 | 70-130 | |
| Toluene-d8 (S) | % | | | 96 | 70-130 | |

MATRIX SPIKE SAMPLE: 4120538

| Parameter | Units | 92683408002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | 603 | 668 | 111 | 22-166 | |
| 1,1,1-Trichloroethane | ug/kg | ND | 603 | 600 | 99 | 23-172 | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | 603 | 579 | 96 | 21-158 | |
| 1,1,2-Trichloroethane | ug/kg | ND | 603 | 603 | 100 | 25-160 | |
| 1,1-Dichloroethane | ug/kg | ND | 603 | 581 | 96 | 22-166 | |
| 1,1-Dichloroethene | ug/kg | ND | 603 | 595 | 99 | 18-183 | |
| 1,1-Dichloropropene | ug/kg | ND | 603 | 614 | 102 | 20-181 | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | 603 | 533 | 88 | 10-161 | |
| 1,2,3-Trichloropropane | ug/kg | ND | 603 | 508 | 84 | 21-147 | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | 603 | 565 | 94 | 10-159 | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | 603 | 604 | 100 | 17-170 | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | 603 | 483 | 80 | 10-135 | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | 603 | 613 | 102 | 30-154 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 603 | 631 | 105 | 26-162 | |
| 1,2-Dichloroethane | ug/kg | ND | 603 | 504 | 84 | 23-161 | v3 |
| 1,2-Dichloropropane | ug/kg | ND | 603 | 618 | 103 | 29-165 | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | 603 | 615 | 102 | 20-172 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 603 | 636 | 106 | 22-164 | |
| 1,3-Dichloropropane | ug/kg | ND | 603 | 606 | 100 | 27-156 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 603 | 591 | 98 | 20-161 | |
| 2,2-Dichloropropane | ug/kg | ND | 603 | 381 | 63 | 10-159 | v3 |
| 2-Butanone (MEK) | ug/kg | ND | 1210 | 971 | 81 | 13-143 | |
| 2-Chlorotoluene | ug/kg | ND | 603 | 588 | 98 | 21-166 | |
| 2-Hexanone | ug/kg | ND | 1210 | 995 | 83 | 19-145 | |
| 4-Chlorotoluene | ug/kg | ND | 603 | 598 | 99 | 19-163 | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | 1210 | 1030 | 86 | 21-151 | |
| Acetone | ug/kg | ND | 1210 | 701 | 58 | 10-133 | v3 |
| Benzene | ug/kg | ND | 603 | 634 | 104 | 29-156 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE SAMPLE: 4120538

| Parameter | Units | 92683408002 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Bromobenzene | ug/kg | ND | 603 | 674 | 112 | 25-161 | |
| Bromochloromethane | ug/kg | ND | 603 | 648 | 107 | 27-158 | |
| Bromodichloromethane | ug/kg | ND | 603 | 575 | 95 | 23-158 | |
| Bromoform | ug/kg | ND | 603 | 661 | 110 | 19-152 | |
| Bromomethane | ug/kg | ND | 603 | 251 | 42 | 10-152 | |
| Carbon tetrachloride | ug/kg | ND | 603 | 585 | 97 | 18-172 | |
| Chlorobenzene | ug/kg | ND | 603 | 650 | 108 | 26-166 | |
| Chloroethane | ug/kg | ND | 603 | 226 | 37 | 10-130 | v3 |
| Chloroform | ug/kg | ND | 603 | 592 | 98 | 25-161 | |
| Chloromethane | ug/kg | ND | 603 | 690 | 114 | 27-197 | |
| cis-1,2-Dichloroethene | ug/kg | ND | 603 | 570 | 95 | 28-165 | |
| cis-1,3-Dichloropropene | ug/kg | ND | 603 | 535 | 89 | 23-159 | |
| Dibromochloromethane | ug/kg | ND | 603 | 643 | 107 | 21-151 | |
| Dibromomethane | ug/kg | ND | 603 | 690 | 114 | 38-158 | |
| Dichlorodifluoromethane | ug/kg | ND | 603 | 972 | 161 | 10-200 | |
| Diisopropyl ether | ug/kg | ND | 603 | 544 | 90 | 23-160 | |
| Ethylbenzene | ug/kg | ND | 603 | 587 | 97 | 22-163 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 603 | 641 | 106 | 10-192 | |
| Isopropylbenzene (Cumene) | ug/kg | ND | 603 | 660 | 109 | 24-173 | |
| m&p-Xylene | ug/kg | ND | 1210 | 1260 | 105 | 22-171 | |
| Methyl-tert-butyl ether | ug/kg | ND | 603 | 511 | 85 | 25-153 | |
| Methylene Chloride | ug/kg | ND | 603 | 539 | 89 | 10-165 | |
| n-Butylbenzene | ug/kg | ND | 603 | 572 | 95 | 10-186 | |
| n-Propylbenzene | ug/kg | ND | 603 | 591 | 98 | 16-171 | |
| Naphthalene | ug/kg | ND | 603 | 557 | 92 | 10-159 | |
| o-Xylene | ug/kg | ND | 603 | 667 | 111 | 23-171 | |
| p-Isopropyltoluene | ug/kg | ND | 603 | 625 | 104 | 13-184 | |
| sec-Butylbenzene | ug/kg | ND | 603 | 605 | 100 | 16-182 | |
| Styrene | ug/kg | ND | 603 | 663 | 110 | 25-169 | |
| tert-Butylbenzene | ug/kg | ND | 603 | 488 | 81 | 20-174 | |
| Tetrachloroethene | ug/kg | ND | 603 | 649 | 108 | 14-171 | |
| Toluene | ug/kg | ND | 603 | 635 | 105 | 24-166 | |
| trans-1,2-Dichloroethene | ug/kg | ND | 603 | 556 | 92 | 24-170 | |
| trans-1,3-Dichloropropene | ug/kg | ND | 603 | 513 | 85 | 22-157 | |
| Trichloroethene | ug/kg | ND | 603 | 692 | 115 | 23-176 | |
| Trichlorofluoromethane | ug/kg | ND | 603 | 325 | 54 | 10-138 | |
| Vinyl acetate | ug/kg | ND | 1210 | 908 | 75 | 11-166 | |
| Vinyl chloride | ug/kg | ND | 603 | 548 | 91 | 21-200 | |
| Xylene (Total) | ug/kg | ND | 1810 | 1930 | 107 | 23-170 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 95 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 95 | 70-130 | |
| Toluene-d8 (S) | % | | | | 98 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

SAMPLE DUPLICATE: 4120539

| Parameter | Units | 92683408003 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/kg | ND | ND | | |
| 1,1,1-Trichloroethane | ug/kg | ND | ND | | |
| 1,1,2,2-Tetrachloroethane | ug/kg | ND | ND | | |
| 1,1,2-Trichloroethane | ug/kg | ND | ND | | |
| 1,1-Dichloroethane | ug/kg | ND | ND | | |
| 1,1-Dichloroethene | ug/kg | ND | ND | | |
| 1,1-Dichloropropene | ug/kg | ND | ND | | |
| 1,2,3-Trichlorobenzene | ug/kg | ND | ND | | |
| 1,2,3-Trichloropropane | ug/kg | ND | ND | | |
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | |
| 1,2,4-Trimethylbenzene | ug/kg | ND | ND | | |
| 1,2-Dibromo-3-chloropropane | ug/kg | ND | ND | | |
| 1,2-Dibromoethane (EDB) | ug/kg | ND | ND | | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | |
| 1,2-Dichloroethane | ug/kg | ND | ND | | v2 |
| 1,2-Dichloropropane | ug/kg | ND | ND | | |
| 1,3,5-Trimethylbenzene | ug/kg | ND | ND | | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | |
| 1,3-Dichloropropane | ug/kg | ND | ND | | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | |
| 2,2-Dichloropropane | ug/kg | ND | ND | | v2 |
| 2-Butanone (MEK) | ug/kg | ND | ND | | |
| 2-Chlorotoluene | ug/kg | ND | ND | | |
| 2-Hexanone | ug/kg | ND | ND | | |
| 4-Chlorotoluene | ug/kg | ND | ND | | |
| 4-Methyl-2-pentanone (MIBK) | ug/kg | ND | ND | | |
| Acetone | ug/kg | ND | ND | | v2 |
| Benzene | ug/kg | ND | 9.8J | | |
| Bromobenzene | ug/kg | ND | ND | | |
| Bromochloromethane | ug/kg | ND | ND | | |
| Bromodichloromethane | ug/kg | ND | ND | | |
| Bromoform | ug/kg | ND | ND | | |
| Bromomethane | ug/kg | ND | ND | | |
| Carbon tetrachloride | ug/kg | ND | ND | | |
| Chlorobenzene | ug/kg | ND | ND | | |
| Chloroethane | ug/kg | ND | ND | | v2 |
| Chloroform | ug/kg | ND | ND | | |
| Chloromethane | ug/kg | ND | ND | | |
| cis-1,2-Dichloroethene | ug/kg | ND | ND | | |
| cis-1,3-Dichloropropene | ug/kg | ND | ND | | |
| Dibromochloromethane | ug/kg | ND | ND | | |
| Dibromomethane | ug/kg | ND | ND | | |
| Dichlorodifluoromethane | ug/kg | ND | ND | | |
| Diisopropyl ether | ug/kg | ND | ND | | |
| Ethylbenzene | ug/kg | ND | ND | | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | |
| Isopropylbenzene (Cumene) | ug/kg | ND | ND | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

SAMPLE DUPLICATE: 4120539

| Parameter | Units | 92683408003 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| m&p-Xylene | ug/kg | ND | 9.8J | | |
| Methyl-tert-butyl ether | ug/kg | ND | ND | | |
| Methylene Chloride | ug/kg | ND | ND | | |
| n-Butylbenzene | ug/kg | ND | ND | | |
| n-Propylbenzene | ug/kg | ND | ND | | |
| Naphthalene | ug/kg | ND | ND | | |
| o-Xylene | ug/kg | ND | ND | | |
| p-Isopropyltoluene | ug/kg | ND | ND | | |
| sec-Butylbenzene | ug/kg | ND | ND | | |
| Styrene | ug/kg | ND | ND | | |
| tert-Butylbenzene | ug/kg | ND | ND | | |
| Tetrachloroethene | ug/kg | ND | ND | | |
| Toluene | ug/kg | 10.7 | 12.2 | 13 | |
| trans-1,2-Dichloroethene | ug/kg | ND | ND | | |
| trans-1,3-Dichloropropene | ug/kg | ND | ND | | |
| Trichloroethene | ug/kg | ND | ND | | |
| Trichlorofluoromethane | ug/kg | ND | ND | | |
| Vinyl acetate | ug/kg | ND | ND | | |
| Vinyl chloride | ug/kg | ND | ND | | |
| Xylene (Total) | ug/kg | ND | ND | | |
| 1,2-Dichloroethane-d4 (S) | % | 88 | 82 | | |
| 4-Bromofluorobenzene (S) | % | 97 | 96 | | |
| Toluene-d8 (S) | % | 98 | 97 | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 795282
QC Batch Method: EPA 8260D
Analysis Method: EPA 8260D
Analysis Description: 8260D MSV Low Level
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92683612004

METHOD BLANK: 4120815 Matrix: Water
Associated Lab Samples: 92683612004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,1-Dichloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,1-Dichloroethene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,1-Dichloropropene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2,3-Trichlorobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2,3-Trichloropropane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 2.0 | 08/22/23 22:45 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2-Dichlorobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,3-Dichlorobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 2,2-Dichloropropane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 2-Butanone (MEK) | ug/L | ND | 5.0 | 08/22/23 22:45 | |
| 2-Chlorotoluene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 2-Hexanone | ug/L | ND | 5.0 | 08/22/23 22:45 | |
| 4-Chlorotoluene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 5.0 | 08/22/23 22:45 | |
| Acetone | ug/L | ND | 25.0 | 08/22/23 22:45 | |
| Benzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Bromobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Bromochloromethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Bromoform | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Bromomethane | ug/L | ND | 2.0 | 08/22/23 22:45 | v2 |
| Carbon tetrachloride | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Chlorobenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Chloroethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Chloroform | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Chloromethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| cis-1,2-Dichloroethene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Dibromochloromethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Dibromomethane | ug/L | ND | 1.0 | 08/22/23 22:45 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

METHOD BLANK: 4120815 Matrix: Water
Associated Lab Samples: 92683612004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Dichlorodifluoromethane | ug/L | ND | 1.0 | 08/22/23 22:45 | v2 |
| Diisopropyl ether | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Ethylbenzene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 2.0 | 08/22/23 22:45 | |
| m&p-Xylene | ug/L | ND | 2.0 | 08/22/23 22:45 | |
| Methyl-tert-butyl ether | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Methylene Chloride | ug/L | ND | 5.0 | 08/22/23 22:45 | |
| Naphthalene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| o-Xylene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| p-Isopropyltoluene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Styrene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Toluene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| trans-1,2-Dichloroethene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Trichloroethene | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 08/22/23 22:45 | v2 |
| Vinyl acetate | ug/L | ND | 2.0 | 08/22/23 22:45 | |
| Vinyl chloride | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| Xylene (Total) | ug/L | ND | 1.0 | 08/22/23 22:45 | |
| 1,2-Dichloroethane-d4 (S) | % | 92 | 70-130 | 08/22/23 22:45 | |
| 4-Bromofluorobenzene (S) | % | 98 | 70-130 | 08/22/23 22:45 | |
| Toluene-d8 (S) | % | 108 | 70-130 | 08/22/23 22:45 | |

LABORATORY CONTROL SAMPLE: 4120816

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | 20 | 17.8 | 89 | 70-130 | |
| 1,1,1-Trichloroethane | ug/L | 20 | 16.7 | 84 | 70-130 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 20 | 18.7 | 94 | 70-130 | |
| 1,1,2-Trichloroethane | ug/L | 20 | 18.9 | 95 | 70-130 | |
| 1,1-Dichloroethane | ug/L | 20 | 17.1 | 86 | 70-130 | |
| 1,1-Dichloroethene | ug/L | 20 | 16.3 | 82 | 70-130 | |
| 1,1-Dichloropropene | ug/L | 20 | 17.2 | 86 | 70-130 | |
| 1,2,3-Trichlorobenzene | ug/L | 20 | 18.9 | 94 | 70-130 | |
| 1,2,3-Trichloropropane | ug/L | 20 | 16.9 | 84 | 70-130 | |
| 1,2,4-Trichlorobenzene | ug/L | 20 | 18.3 | 92 | 70-130 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 20 | 18.8 | 94 | 70-131 | |
| 1,2-Dibromoethane (EDB) | ug/L | 20 | 18.4 | 92 | 70-130 | |
| 1,2-Dichlorobenzene | ug/L | 20 | 18.5 | 92 | 70-130 | |
| 1,2-Dichloroethane | ug/L | 20 | 17.1 | 85 | 70-130 | |
| 1,2-Dichloropropane | ug/L | 20 | 18.4 | 92 | 70-130 | |
| 1,3-Dichlorobenzene | ug/L | 20 | 18.0 | 90 | 70-130 | |
| 1,3-Dichloropropane | ug/L | 20 | 17.9 | 90 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4120816

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | ug/L | 20 | 18.0 | 90 | 70-130 | |
| 2,2-Dichloropropane | ug/L | 20 | 15.9 | 79 | 68-135 | |
| 2-Butanone (MEK) | ug/L | 40 | 35.0 | 88 | 70-134 | |
| 2-Chlorotoluene | ug/L | 20 | 18.1 | 91 | 70-130 | |
| 2-Hexanone | ug/L | 40 | 38.8 | 97 | 70-131 | |
| 4-Chlorotoluene | ug/L | 20 | 17.8 | 89 | 70-130 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 40 | 38.2 | 95 | 70-130 | |
| Acetone | ug/L | 40 | 36.5 | 91 | 70-133 | |
| Benzene | ug/L | 20 | 18.4 | 92 | 70-130 | |
| Bromobenzene | ug/L | 20 | 17.8 | 89 | 70-130 | |
| Bromochloromethane | ug/L | 20 | 17.9 | 89 | 70-130 | |
| Bromodichloromethane | ug/L | 20 | 17.8 | 89 | 70-130 | |
| Bromoform | ug/L | 20 | 16.7 | 84 | 70-130 | |
| Bromomethane | ug/L | 20 | 15.0 | 75 | 45-151 | v3 |
| Carbon tetrachloride | ug/L | 20 | 16.7 | 84 | 70-130 | |
| Chlorobenzene | ug/L | 20 | 17.7 | 89 | 70-130 | |
| Chloroethane | ug/L | 20 | 14.9 | 74 | 39-152 | |
| Chloroform | ug/L | 20 | 17.6 | 88 | 70-130 | |
| Chloromethane | ug/L | 20 | 15.9 | 80 | 58-130 | |
| cis-1,2-Dichloroethene | ug/L | 20 | 17.6 | 88 | 70-130 | |
| cis-1,3-Dichloropropene | ug/L | 20 | 18.7 | 94 | 70-130 | |
| Dibromochloromethane | ug/L | 20 | 17.4 | 87 | 70-130 | |
| Dibromomethane | ug/L | 20 | 17.7 | 88 | 70-130 | |
| Dichlorodifluoromethane | ug/L | 20 | 10.5 | 52 | 54-133 | L2,v3 |
| Diisopropyl ether | ug/L | 20 | 16.9 | 85 | 70-130 | |
| Ethylbenzene | ug/L | 20 | 17.5 | 88 | 70-130 | |
| Hexachloro-1,3-butadiene | ug/L | 20 | 16.0 | 80 | 70-135 | |
| m&p-Xylene | ug/L | 40 | 35.0 | 88 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 20 | 16.9 | 85 | 70-130 | |
| Methylene Chloride | ug/L | 20 | 17.6 | 88 | 66-130 | |
| Naphthalene | ug/L | 20 | 20.4 | 102 | 70-130 | |
| o-Xylene | ug/L | 20 | 17.6 | 88 | 70-130 | |
| p-Isopropyltoluene | ug/L | 20 | 18.1 | 90 | 70-130 | |
| Styrene | ug/L | 20 | 18.1 | 90 | 70-130 | |
| Tetrachloroethene | ug/L | 20 | 16.4 | 82 | 70-130 | |
| Toluene | ug/L | 20 | 17.7 | 88 | 70-130 | |
| trans-1,2-Dichloroethene | ug/L | 20 | 17.5 | 88 | 70-130 | |
| trans-1,3-Dichloropropene | ug/L | 20 | 18.1 | 91 | 70-130 | |
| Trichloroethene | ug/L | 20 | 17.3 | 86 | 70-130 | |
| Trichlorofluoromethane | ug/L | 20 | 12.4 | 62 | 62-130 | v3 |
| Vinyl acetate | ug/L | 40 | 33.5 | 84 | 70-144 | |
| Vinyl chloride | ug/L | 20 | 13.5 | 68 | 62-130 | |
| Xylene (Total) | ug/L | 60 | 52.7 | 88 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 98 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 101 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE SAMPLE: 4120818

| Parameter | Units | 92683415007 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 20 | 24.7 | 123 | 70-141 | |
| 1,1,1-Trichloroethane | ug/L | ND | 20 | 24.9 | 124 | 70-150 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 20 | 22.8 | 114 | 69-142 | |
| 1,1,2-Trichloroethane | ug/L | ND | 20 | 22.4 | 112 | 70-138 | |
| 1,1-Dichloroethane | ug/L | ND | 20 | 23.9 | 119 | 70-150 | |
| 1,1-Dichloroethene | ug/L | ND | 20 | 25.2 | 126 | 70-156 | |
| 1,1-Dichloropropene | ug/L | ND | 20 | 25.9 | 130 | 70-150 | |
| 1,2,3-Trichlorobenzene | ug/L | ND | 20 | 24.2 | 121 | 70-148 | |
| 1,2,3-Trichloropropane | ug/L | ND | 20 | 21.3 | 107 | 70-140 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 20 | 24.1 | 120 | 70-146 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 20 | 20.8 | 104 | 68-146 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 20 | 23.1 | 115 | 70-138 | |
| 1,2-Dichlorobenzene | ug/L | ND | 20 | 23.5 | 117 | 70-141 | |
| 1,2-Dichloroethane | ug/L | ND | 20 | 23.1 | 116 | 69-143 | |
| 1,2-Dichloropropane | ug/L | ND | 20 | 23.6 | 118 | 68-156 | |
| 1,3-Dichlorobenzene | ug/L | ND | 20 | 23.8 | 119 | 70-143 | |
| 1,3-Dichloropropane | ug/L | ND | 20 | 22.1 | 111 | 70-138 | |
| 1,4-Dichlorobenzene | ug/L | ND | 20 | 23.7 | 118 | 70-142 | |
| 2,2-Dichloropropane | ug/L | ND | 20 | 31.1 | 155 | 52-170 | |
| 2-Butanone (MEK) | ug/L | ND | 40 | 41.8 | 101 | 60-157 | |
| 2-Chlorotoluene | ug/L | ND | 20 | 23.8 | 119 | 70-147 | |
| 2-Hexanone | ug/L | ND | 40 | 42.9 | 107 | 68-146 | v3 |
| 4-Chlorotoluene | ug/L | ND | 20 | 24.4 | 122 | 70-142 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 40 | 42.4 | 106 | 70-141 | |
| Acetone | ug/L | ND | 40 | 45.5 | 114 | 58-157 | |
| Benzene | ug/L | ND | 20 | 24.3 | 121 | 70-142 | |
| Bromobenzene | ug/L | ND | 20 | 22.9 | 114 | 70-143 | |
| Bromochloromethane | ug/L | ND | 20 | 23.4 | 117 | 70-146 | |
| Bromodichloromethane | ug/L | ND | 20 | 23.5 | 118 | 70-139 | |
| Bromoform | ug/L | ND | 20 | 23.6 | 118 | 64-140 | |
| Bromomethane | ug/L | ND | 20 | 22.0 | 110 | 28-192 | |
| Carbon tetrachloride | ug/L | ND | 20 | 25.4 | 127 | 70-148 | |
| Chlorobenzene | ug/L | ND | 20 | 24.3 | 121 | 70-141 | |
| Chloroethane | ug/L | ND | 20 | 25.1 | 126 | 58-191 | |
| Chloroform | ug/L | ND | 20 | 24.9 | 124 | 70-148 | |
| Chloromethane | ug/L | ND | 20 | 19.9 | 100 | 43-162 | |
| cis-1,2-Dichloroethene | ug/L | ND | 20 | 24.0 | 120 | 68-151 | |
| cis-1,3-Dichloropropene | ug/L | ND | 20 | 24.7 | 123 | 70-139 | |
| Dibromochloromethane | ug/L | ND | 20 | 24.6 | 123 | 70-144 | |
| Dibromomethane | ug/L | ND | 20 | 22.3 | 111 | 70-139 | |
| Dichlorodifluoromethane | ug/L | ND | 20 | 22.5 | 113 | 39-171 | |
| Diisopropyl ether | ug/L | ND | 20 | 22.1 | 110 | 67-142 | |
| Ethylbenzene | ug/L | ND | 20 | 24.4 | 122 | 70-143 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 20 | 27.0 | 135 | 64-163 | |
| m&p-Xylene | ug/L | ND | 40 | 49.8 | 125 | 70-144 | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 22.7 | 112 | 65-143 | |
| Methylene Chloride | ug/L | ND | 20 | 23.2 | 116 | 62-149 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE SAMPLE: 4120818

| Parameter | Units | 92683415007 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Naphthalene | ug/L | ND | 20 | 22.4 | 112 | 67-147 | |
| o-Xylene | ug/L | ND | 20 | 24.0 | 120 | 70-145 | |
| p-Isopropyltoluene | ug/L | ND | 20 | 26.0 | 130 | 70-147 | |
| Styrene | ug/L | ND | 20 | 24.1 | 121 | 70-143 | |
| Tetrachloroethene | ug/L | ND | 20 | 22.5 | 112 | 70-145 | |
| Toluene | ug/L | ND | 20 | 23.3 | 117 | 70-142 | |
| trans-1,2-Dichloroethene | ug/L | ND | 20 | 24.7 | 124 | 70-151 | |
| trans-1,3-Dichloropropene | ug/L | ND | 20 | 24.1 | 120 | 70-139 | |
| Trichloroethene | ug/L | ND | 20 | 25.4 | 127 | 62-146 | |
| Trichlorofluoromethane | ug/L | ND | 20 | 25.0 | 125 | 63-153 | |
| Vinyl acetate | ug/L | ND | 40 | 49.1 | 123 | 61-162 | |
| Vinyl chloride | ug/L | ND | 20 | 22.1 | 111 | 61-163 | |
| Xylene (Total) | ug/L | ND | 60 | 73.8 | 123 | 70-143 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 96 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 101 | 70-130 | HS |
| Toluene-d8 (S) | % | | | | 100 | 70-130 | |

SAMPLE DUPLICATE: 4120817

| Parameter | Units | 92683415006 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | ND | | |
| 1,1,1-Trichloroethane | ug/L | ND | ND | | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | ND | | |
| 1,1,2-Trichloroethane | ug/L | ND | ND | | |
| 1,1-Dichloroethane | ug/L | ND | ND | | |
| 1,1-Dichloroethene | ug/L | ND | ND | | |
| 1,1-Dichloropropene | ug/L | ND | ND | | |
| 1,2,3-Trichlorobenzene | ug/L | ND | ND | | |
| 1,2,3-Trichloropropane | ug/L | ND | ND | | |
| 1,2,4-Trichlorobenzene | ug/L | ND | ND | | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | ND | | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | ND | | |
| 1,2-Dichlorobenzene | ug/L | ND | ND | | |
| 1,2-Dichloroethane | ug/L | ND | ND | | |
| 1,2-Dichloropropane | ug/L | ND | ND | | |
| 1,3-Dichlorobenzene | ug/L | ND | ND | | |
| 1,3-Dichloropropane | ug/L | ND | ND | | |
| 1,4-Dichlorobenzene | ug/L | ND | ND | | |
| 2,2-Dichloropropane | ug/L | ND | ND | | |
| 2-Butanone (MEK) | ug/L | ND | 4.7J | | |
| 2-Chlorotoluene | ug/L | ND | ND | | |
| 2-Hexanone | ug/L | ND | ND | | v2 |
| 4-Chlorotoluene | ug/L | ND | ND | | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | ND | | |
| Acetone | ug/L | ND | 17.7J | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

SAMPLE DUPLICATE: 4120817

| Parameter | Units | 92683415006 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Benzene | ug/L | ND | ND | | |
| Bromobenzene | ug/L | ND | ND | | |
| Bromochloromethane | ug/L | ND | ND | | |
| Bromodichloromethane | ug/L | ND | ND | | |
| Bromoform | ug/L | ND | ND | | |
| Bromomethane | ug/L | ND | ND | | |
| Carbon tetrachloride | ug/L | ND | ND | | |
| Chlorobenzene | ug/L | ND | ND | | |
| Chloroethane | ug/L | ND | ND | | |
| Chloroform | ug/L | ND | ND | | |
| Chloromethane | ug/L | ND | ND | | |
| cis-1,2-Dichloroethene | ug/L | ND | ND | | |
| cis-1,3-Dichloropropene | ug/L | ND | ND | | |
| Dibromochloromethane | ug/L | ND | ND | | |
| Dibromomethane | ug/L | ND | ND | | |
| Dichlorodifluoromethane | ug/L | ND | ND | | |
| Diisopropyl ether | ug/L | ND | ND | | |
| Ethylbenzene | ug/L | ND | ND | | |
| Hexachloro-1,3-butadiene | ug/L | ND | ND | | |
| m&p-Xylene | ug/L | ND | .96J | | |
| Methyl-tert-butyl ether | ug/L | ND | .89J | | |
| Methylene Chloride | ug/L | ND | ND | | |
| Naphthalene | ug/L | ND | ND | | |
| o-Xylene | ug/L | ND | .41J | | |
| p-Isopropyltoluene | ug/L | ND | ND | | |
| Styrene | ug/L | ND | ND | | |
| Tetrachloroethene | ug/L | ND | ND | | |
| Toluene | ug/L | ND | .27J | | |
| trans-1,2-Dichloroethene | ug/L | ND | ND | | |
| trans-1,3-Dichloropropene | ug/L | ND | ND | | |
| Trichloroethene | ug/L | ND | ND | | |
| Trichlorofluoromethane | ug/L | ND | ND | | |
| Vinyl acetate | ug/L | ND | ND | | |
| Vinyl chloride | ug/L | ND | ND | | |
| Xylene (Total) | ug/L | ND | ND | | |
| 1,2-Dichloroethane-d4 (S) | % | 92 | 100 | | |
| 4-Bromofluorobenzene (S) | % | 99 | 96 | | HS |
| Toluene-d8 (S) | % | 106 | 101 | | |

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# QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 794954
QC Batch Method: EPA 3546
Analysis Method: EPA 8015C
Analysis Description: 8015 Solid GCSV
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92683612001, 92683612002, 92683612003

METHOD BLANK: 4119079 Matrix: Solid
Associated Lab Samples: 92683612001, 92683612002, 92683612003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | ND | 5.1 | 08/22/23 15:35 | |
| n-Pentacosane (S) | % | 81 | 10-133 | 08/22/23 15:35 | |

LABORATORY CONTROL SAMPLE: 4119080

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | 67.1 | 54.6 | 81 | 43-130 | |
| n-Pentacosane (S) | % | | | 88 | 10-133 | |

MATRIX SPIKE SAMPLE: 4119291

| Parameter | Units | 92683438001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | 557 | 84.8 | 318 | -282 | 15-130 | M1 |
| n-Pentacosane (S) | % | | | | 149 | 10-133 | S2 |

SAMPLE DUPLICATE: 4119292

| Parameter | Units | 92683438002 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Diesel Range Organics(C10-C28) | mg/kg | 240 | 147 | 48 | D6 |
| n-Pentacosane (S) | % | 100 | 76 | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 794902
QC Batch Method: EPA 3510C
Analysis Method: EPA 8270E
Analysis Description: 8270E Water MSSV RVE
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92683612004

METHOD BLANK: 4118691 Matrix: Water
Associated Lab Samples: 92683612004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 1,2-Dichlorobenzene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 1,3-Dichlorobenzene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 1,4-Dichlorobenzene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 1-Methylnaphthalene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,2'-Oxybis(1-chloropropane) | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,4,5-Trichlorophenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,4,6-Trichlorophenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,4-Dichlorophenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,4-Dimethylphenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,4-Dinitrophenol | ug/L | ND | 50.0 | 08/22/23 15:41 | v1 |
| 2,4-Dinitrotoluene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,6-Dinitrotoluene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2-Chloronaphthalene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2-Chlorophenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2-Methylnaphthalene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2-Methylphenol(o-Cresol) | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2-Nitroaniline | ug/L | ND | 20.0 | 08/22/23 15:41 | |
| 2-Nitrophenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 3&4-Methylphenol(m&p Cresol) | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 3,3'-Dichlorobenzidine | ug/L | ND | 20.0 | 08/22/23 15:41 | |
| 3-Nitroaniline | ug/L | ND | 20.0 | 08/22/23 15:41 | |
| 4,6-Dinitro-2-methylphenol | ug/L | ND | 20.0 | 08/22/23 15:41 | v1 |
| 4-Bromophenylphenyl ether | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 4-Chloro-3-methylphenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 4-Chloroaniline | ug/L | ND | 20.0 | 08/22/23 15:41 | |
| 4-Chlorophenylphenyl ether | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 4-Nitroaniline | ug/L | ND | 20.0 | 08/22/23 15:41 | |
| 4-Nitrophenol | ug/L | ND | 50.0 | 08/22/23 15:41 | |
| Acenaphthene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Acenaphthylene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Aniline | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Anthracene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Benzo(a)anthracene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Benzo(a)pyrene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Benzo(b)fluoranthene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Benzo(g,h,i)perylene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Benzo(k)fluoranthene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Benzoic Acid | ug/L | ND | 50.0 | 08/22/23 15:41 | |
| Benzyl alcohol | ug/L | ND | 20.0 | 08/22/23 15:41 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

METHOD BLANK: 4118691 Matrix: Water
Associated Lab Samples: 92683612004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| bis(2-Chloroethoxy)methane | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| bis(2-Chloroethyl) ether | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| bis(2-Ethylhexyl)phthalate | ug/L | ND | 6.0 | 08/22/23 15:41 | |
| Butylbenzylphthalate | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Chrysene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Di-n-butylphthalate | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Di-n-octylphthalate | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Dibenz(a,h)anthracene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Dibenzofuran | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Diethylphthalate | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Dimethylphthalate | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Fluoranthene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Fluorene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Hexachlorobenzene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Hexachlorocyclopentadiene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Hexachloroethane | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Indeno(1,2,3-cd)pyrene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Isophorone | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| N-Nitroso-di-n-propylamine | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| N-Nitrosodimethylamine | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| N-Nitrosodiphenylamine | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Naphthalene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Nitrobenzene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Pentachlorophenol | ug/L | ND | 20.0 | 08/22/23 15:41 | v1 |
| Phenanthrene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Phenol | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| Pyrene | ug/L | ND | 10.0 | 08/22/23 15:41 | |
| 2,4,6-Tribromophenol (S) | % | 111 | 10-164 | 08/22/23 15:41 | |
| 2-Fluorobiphenyl (S) | % | 80 | 10-130 | 08/22/23 15:41 | |
| 2-Fluorophenol (S) | % | 76 | 10-130 | 08/22/23 15:41 | |
| Nitrobenzene-d5 (S) | % | 100 | 10-138 | 08/22/23 15:41 | |
| Phenol-d6 (S) | % | 57 | 10-130 | 08/22/23 15:41 | |
| Terphenyl-d14 (S) | % | 124 | 19-191 | 08/22/23 15:41 | |

LABORATORY CONTROL SAMPLE: 4118692

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/L | 50 | 29.8 | 60 | 11-130 | |
| 1,2-Dichlorobenzene | ug/L | 50 | 29.6 | 59 | 10-130 | |
| 1,3-Dichlorobenzene | ug/L | 50 | 28.3 | 57 | 10-130 | |
| 1,4-Dichlorobenzene | ug/L | 50 | 28.9 | 58 | 10-130 | |
| 1-Methylnaphthalene | ug/L | 50 | 37.2 | 74 | 23-130 | |
| 2,2'-Oxybis(1-chloropropane) | ug/L | 50 | 36.4 | 73 | 21-135 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4118692

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | ug/L | 50 | 51.8 | 104 | 38-147 | |
| 2,4,6-Trichlorophenol | ug/L | 50 | 51.3 | 103 | 34-142 | |
| 2,4-Dichlorophenol | ug/L | 50 | 49.6 | 99 | 36-136 | |
| 2,4-Dimethylphenol | ug/L | 50 | 46.8 | 94 | 38-134 | |
| 2,4-Dinitrophenol | ug/L | 250 | 308 | 123 | 10-169 | v1 |
| 2,4-Dinitrotoluene | ug/L | 50 | 56.1 | 112 | 44-154 | |
| 2,6-Dinitrotoluene | ug/L | 50 | 54.0 | 108 | 44-156 | |
| 2-Chloronaphthalene | ug/L | 50 | 37.8 | 76 | 25-130 | |
| 2-Chlorophenol | ug/L | 50 | 46.8 | 94 | 29-130 | |
| 2-Methylnaphthalene | ug/L | 50 | 34.9 | 70 | 23-130 | |
| 2-Methylphenol(o-Cresol) | ug/L | 50 | 41.5 | 83 | 31-130 | |
| 2-Nitroaniline | ug/L | 100 | 95.5 | 96 | 39-145 | |
| 2-Nitrophenol | ug/L | 50 | 53.6 | 107 | 29-142 | |
| 3&4-Methylphenol(m&p Cresol) | ug/L | 50 | 39.9 | 80 | 30-130 | |
| 3,3'-Dichlorobenzidine | ug/L | 100 | 98.5 | 98 | 44-158 | |
| 3-Nitroaniline | ug/L | 100 | 97.2 | 97 | 45-152 | |
| 4,6-Dinitro-2-methylphenol | ug/L | 100 | 128 | 128 | 39-158 | v1 |
| 4-Bromophenylphenyl ether | ug/L | 50 | 50.4 | 101 | 47-147 | |
| 4-Chloro-3-methylphenol | ug/L | 100 | 92.3 | 92 | 40-138 | |
| 4-Chloroaniline | ug/L | 100 | 74.2 | 74 | 35-130 | |
| 4-Chlorophenylphenyl ether | ug/L | 50 | 46.8 | 94 | 36-139 | |
| 4-Nitroaniline | ug/L | 100 | 104 | 104 | 46-157 | |
| 4-Nitrophenol | ug/L | 250 | 164 | 66 | 17-130 | |
| Acenaphthene | ug/L | 50 | 42.7 | 85 | 34-135 | |
| Acenaphthylene | ug/L | 50 | 43.0 | 86 | 35-137 | |
| Aniline | ug/L | 50 | 15.2 | 30 | 25-130 | |
| Anthracene | ug/L | 50 | 48.8 | 98 | 47-146 | |
| Benzo(a)anthracene | ug/L | 50 | 55.1 | 110 | 48-160 | |
| Benzo(a)pyrene | ug/L | 50 | 55.9 | 112 | 47-165 | |
| Benzo(b)fluoranthene | ug/L | 50 | 57.3 | 115 | 49-171 | |
| Benzo(g,h,i)perylene | ug/L | 50 | 56.3 | 113 | 46-166 | |
| Benzo(k)fluoranthene | ug/L | 50 | 57.7 | 115 | 55-162 | |
| Benzoic Acid | ug/L | 250 | 163 | 65 | 10-130 | |
| Benzyl alcohol | ug/L | 100 | 85.9 | 86 | 29-132 | |
| bis(2-Chloroethoxy)methane | ug/L | 50 | 45.5 | 91 | 33-136 | |
| bis(2-Chloroethyl) ether | ug/L | 50 | 41.8 | 84 | 30-142 | |
| bis(2-Ethylhexyl)phthalate | ug/L | 50 | 54.1 | 108 | 46-173 | |
| Butylbenzylphthalate | ug/L | 50 | 52.7 | 105 | 53-169 | |
| Chrysene | ug/L | 50 | 55.4 | 111 | 54-152 | |
| Di-n-butylphthalate | ug/L | 50 | 51.1 | 102 | 49-161 | |
| Di-n-octylphthalate | ug/L | 50 | 53.8 | 108 | 50-166 | |
| Dibenz(a,h)anthracene | ug/L | 50 | 56.3 | 113 | 46-166 | |
| Dibenzofuran | ug/L | 50 | 44.5 | 89 | 37-136 | |
| Diethylphthalate | ug/L | 50 | 46.7 | 93 | 45-149 | |
| Dimethylphthalate | ug/L | 50 | 46.3 | 93 | 43-145 | |
| Fluoranthene | ug/L | 50 | 54.4 | 109 | 50-153 | |
| Fluorene | ug/L | 50 | 47.4 | 95 | 42-142 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4118692

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Hexachloro-1,3-butadiene | ug/L | 50 | 29.9 | 60 | 10-130 | |
| Hexachlorobenzene | ug/L | 50 | 49.0 | 98 | 44-138 | |
| Hexachlorocyclopentadiene | ug/L | 50 | 27.0 | 54 | 10-130 | |
| Hexachloroethane | ug/L | 50 | 27.5 | 55 | 10-130 | |
| Indeno(1,2,3-cd)pyrene | ug/L | 50 | 54.2 | 108 | 46-166 | |
| Isophorone | ug/L | 50 | 43.0 | 86 | 36-135 | |
| N-Nitroso-di-n-propylamine | ug/L | 50 | 41.3 | 83 | 33-140 | |
| N-Nitrosodimethylamine | ug/L | 50 | 33.4 | 67 | 24-130 | |
| N-Nitrosodiphenylamine | ug/L | 50 | 50.5 | 101 | 46-144 | |
| Naphthalene | ug/L | 50 | 34.0 | 68 | 20-130 | |
| Nitrobenzene | ug/L | 50 | 43.0 | 86 | 33-133 | |
| Pentachlorophenol | ug/L | 100 | 134 | 134 | 21-163 | v1 |
| Phenanthrene | ug/L | 50 | 52.9 | 106 | 47-146 | |
| Phenol | ug/L | 50 | 30.2 | 60 | 19-130 | |
| Pyrene | ug/L | 50 | 53.1 | 106 | 53-155 | |
| 2,4,6-Tribromophenol (S) | % | | | 154 | 10-164 | |
| 2-Fluorobiphenyl (S) | % | | | 110 | 10-130 | |
| 2-Fluorophenol (S) | % | | | 91 | 10-130 | |
| Nitrobenzene-d5 (S) | % | | | 117 | 10-138 | |
| Phenol-d6 (S) | % | | | 69 | 10-130 | |
| Terphenyl-d14 (S) | % | | | 139 | 19-191 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4119446 4119447

| Parameter | Units | 92683516019 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/L | ND | 83.3 | 83.3 | 56.0 | 56.1 | 67 | 67 | 10-130 | 0 | |
| 1,2-Dichlorobenzene | ug/L | ND | 83.3 | 83.3 | 48.9 | 53.2 | 59 | 64 | 10-130 | 8 | |
| 1,3-Dichlorobenzene | ug/L | ND | 83.3 | 83.3 | 48.9 | 53.3 | 59 | 64 | 10-130 | 9 | |
| 1,4-Dichlorobenzene | ug/L | ND | 83.3 | 83.3 | 48.9 | 53.3 | 59 | 64 | 10-130 | 8 | |
| 1-Methylnaphthalene | ug/L | ND | 83.3 | 83.3 | 71.1 | 72.6 | 85 | 87 | 10-131 | 2 | |
| 2,2'-Oxybis(1-chloropropane) | ug/L | ND | 83.3 | 83.3 | 69.9 | 74.6 | 84 | 90 | 11-143 | 7 | |
| 2,4,5-Trichlorophenol | ug/L | ND | 83.3 | 83.3 | 90.0 | 93.8 | 108 | 113 | 10-170 | 4 | |
| 2,4,6-Trichlorophenol | ug/L | ND | 83.3 | 83.3 | 94.2 | 98.9 | 113 | 119 | 10-166 | 5 | |
| 2,4-Dichlorophenol | ug/L | ND | 83.3 | 83.3 | 79.3 | 85.0 | 95 | 102 | 10-153 | 7 | |
| 2,4-Dimethylphenol | ug/L | ND | 83.3 | 83.3 | 84.3 | 90.9 | 101 | 109 | 20-147 | 8 | |
| 2,4-Dinitrophenol | ug/L | ND | 417 | 417 | 424 | 429 | 102 | 103 | 10-172 | 1 | |
| 2,4-Dinitrotoluene | ug/L | ND | 83.3 | 83.3 | 88.2 | 85.7 | 106 | 103 | 30-164 | 3 | |
| 2,6-Dinitrotoluene | ug/L | ND | 83.3 | 83.3 | 85.0 | 91.6 | 102 | 110 | 31-163 | 7 | |
| 2-Chloronaphthalene | ug/L | ND | 83.3 | 83.3 | 73.5 | 75.7 | 88 | 91 | 15-134 | 3 | |
| 2-Chlorophenol | ug/L | ND | 83.3 | 83.3 | 78.4 | 84.9 | 94 | 102 | 10-139 | 8 | |
| 2-Methylnaphthalene | ug/L | ND | 83.3 | 83.3 | 65.7 | 68.3 | 79 | 82 | 12-130 | 4 | |
| 2-Methylphenol(o-Cresol) | ug/L | ND | 83.3 | 83.3 | 75.9 | 81.3 | 91 | 98 | 19-132 | 7 | |
| 2-Nitroaniline | ug/L | ND | 167 | 167 | 169 | 173 | 102 | 104 | 23-154 | 2 | |
| 2-Nitrophenol | ug/L | ND | 83.3 | 83.3 | 91.5 | 97.7 | 110 | 117 | 10-159 | 6 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4119446 4119447

| Parameter | Units | 92683516019 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3&4-Methylphenol(m&p Cresol) | ug/L | ND | 83.3 | 83.3 | 66.7 | 74.3 | 80 | 89 | 13-136 | 11 | |
| 3,3'-Dichlorobenzidine | ug/L | ND | 167 | 167 | 124 | 145 | 74 | 87 | 10-178 | 16 | |
| 3-Nitroaniline | ug/L | ND | 167 | 167 | 170 | 175 | 102 | 105 | 20-166 | 3 | |
| 4,6-Dinitro-2-methylphenol | ug/L | ND | 167 | 167 | 183 | 195 | 110 | 117 | 10-187 | 6 | |
| 4-Bromophenylphenyl ether | ug/L | ND | 83.3 | 83.3 | 86.7 | 89.3 | 104 | 107 | 31-157 | 3 | |
| 4-Chloro-3-methylphenol | ug/L | ND | 167 | 167 | 168 | 172 | 101 | 103 | 27-146 | 3 | |
| 4-Chloroaniline | ug/L | ND | 167 | 167 | 71.2 | 111 | 43 | 66 | 13-143 | 43 | R1 |
| 4-Chlorophenylphenyl ether | ug/L | ND | 83.3 | 83.3 | 81.5 | 83.8 | 98 | 101 | 23-149 | 3 | |
| 4-Nitroaniline | ug/L | ND | 167 | 167 | 136 | 134 | 82 | 80 | 24-171 | 2 | |
| 4-Nitrophenol | ug/L | ND | 417 | 417 | 250 | 251 | 60 | 60 | 10-130 | 0 | |
| Acenaphthene | ug/L | ND | 83.3 | 83.3 | 78.4 | 83.1 | 94 | 100 | 21-147 | 6 | |
| Acenaphthylene | ug/L | ND | 83.3 | 83.3 | 79.6 | 81.2 | 95 | 97 | 19-150 | 2 | |
| Aniline | ug/L | ND | 83.3 | 83.3 | 12.7J | 26.5 | 15 | 32 | 10-130 | | |
| Anthracene | ug/L | ND | 83.3 | 83.3 | 80.1 | 80.8 | 96 | 97 | 36-152 | 1 | |
| Benzo(a)anthracene | ug/L | ND | 83.3 | 83.3 | 92.7 | 92.7 | 111 | 111 | 42-163 | 0 | |
| Benzo(a)pyrene | ug/L | ND | 83.3 | 83.3 | 94.7 | 99.6 | 114 | 120 | 40-169 | 5 | |
| Benzo(b)fluoranthene | ug/L | ND | 83.3 | 83.3 | 95.8 | 99.6 | 115 | 120 | 40-177 | 4 | |
| Benzo(g,h,i)perylene | ug/L | ND | 83.3 | 83.3 | 107 | 110 | 128 | 133 | 38-174 | 3 | |
| Benzo(k)fluoranthene | ug/L | ND | 83.3 | 83.3 | 97.5 | 103 | 117 | 123 | 41-171 | 5 | |
| Benzoic Acid | ug/L | ND | 417 | 417 | 248 | 286 | 59 | 69 | 10-130 | 14 | |
| Benzyl alcohol | ug/L | ND | 167 | 167 | 143 | 166 | 86 | 100 | 18-141 | 15 | |
| bis(2-Chloroethoxy)methane | ug/L | ND | 83.3 | 83.3 | 84.3 | 93.2 | 101 | 112 | 19-146 | 10 | |
| bis(2-Chloroethyl) ether | ug/L | ND | 83.3 | 83.3 | 84.4 | 92.0 | 101 | 110 | 19-151 | 9 | |
| bis(2-Ethylhexyl)phthalate | ug/L | ND | 83.3 | 83.3 | 97.9 | 96.7 | 117 | 116 | 42-168 | 1 | |
| Butylbenzylphthalate | ug/L | ND | 83.3 | 83.3 | 103 | 98.1 | 124 | 118 | 42-177 | 5 | |
| Chrysene | ug/L | ND | 83.3 | 83.3 | 95.2 | 96.2 | 114 | 115 | 43-159 | 1 | |
| Di-n-butylphthalate | ug/L | ND | 83.3 | 83.3 | 85.7 | 87.6 | 103 | 105 | 42-160 | 2 | |
| Di-n-octylphthalate | ug/L | ND | 83.3 | 83.3 | 99.4 | 103 | 119 | 123 | 42-171 | 3 | |
| Dibenz(a,h)anthracene | ug/L | ND | 83.3 | 83.3 | 102 | 103 | 122 | 123 | 40-171 | 1 | |
| Dibenzofuran | ug/L | ND | 83.3 | 83.3 | 77.7 | 80.5 | 93 | 97 | 23-147 | 4 | |
| Diethylphthalate | ug/L | ND | 83.3 | 83.3 | 80.1 | 79.6 | 96 | 95 | 33-157 | 1 | |
| Dimethylphthalate | ug/L | ND | 83.3 | 83.3 | 78.1 | 80.8 | 94 | 97 | 27-154 | 3 | |
| Fluoranthene | ug/L | ND | 83.3 | 83.3 | 87.1 | 85.7 | 104 | 103 | 42-157 | 2 | |
| Fluorene | ug/L | ND | 83.3 | 83.3 | 80.2 | 85.0 | 96 | 102 | 25-155 | 6 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 83.3 | 83.3 | 52.6 | 54.0 | 63 | 65 | 10-130 | 3 | |
| Hexachlorobenzene | ug/L | ND | 83.3 | 83.3 | 85.1 | 88.3 | 102 | 106 | 32-145 | 4 | |
| Hexachlorocyclopentadiene | ug/L | ND | 83.3 | 83.3 | 50.3 | 49.7 | 60 | 60 | 10-130 | 1 | |
| Hexachloroethane | ug/L | ND | 83.3 | 83.3 | 50.0 | 55.7 | 60 | 67 | 10-130 | 11 | |
| Indeno(1,2,3-cd)pyrene | ug/L | ND | 83.3 | 83.3 | 100 | 102 | 120 | 122 | 39-174 | 2 | |
| Isophorone | ug/L | ND | 83.3 | 83.3 | 88.9 | 93.6 | 107 | 112 | 19-146 | 5 | |
| N-Nitroso-di-n-propylamine | ug/L | ND | 83.3 | 83.3 | 88.8 | 97.1 | 107 | 117 | 20-150 | 9 | |
| N-Nitrosodimethylamine | ug/L | ND | 83.3 | 83.3 | 66.0 | 74.2 | 79 | 89 | 13-130 | 12 | |
| N-Nitrosodiphenylamine | ug/L | ND | 83.3 | 83.3 | 85.9 | 88.8 | 103 | 107 | 33-149 | 3 | |
| Naphthalene | ug/L | ND | 83.3 | 83.3 | 63.7 | 63.7 | 76 | 76 | 10-128 | 0 | |
| Nitrobenzene | ug/L | ND | 83.3 | 83.3 | 86.7 | 91.6 | 104 | 110 | 19-145 | 5 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4119446 4119447

| Parameter | Units | 92683516019 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pentachlorophenol | ug/L | ND | 167 | 167 | 190 | 200 | 114 | 120 | 10-188 | 5 | |
| Phenanthrene | ug/L | ND | 83.3 | 83.3 | 86.6 | 87.8 | 104 | 105 | 38-150 | 1 | |
| Phenol | ug/L | ND | 83.3 | 83.3 | 50.1 | 59.7 | 60 | 72 | 10-130 | 17 | |
| Pyrene | ug/L | ND | 83.3 | 83.3 | 96.7 | 98.1 | 116 | 118 | 42-163 | 1 | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 127 | 133 | 10-164 | | |
| 2-Fluorobiphenyl (S) | % | | | | | | 102 | 105 | 10-130 | | |
| 2-Fluorophenol (S) | % | | | | | | 77 | 86 | 10-130 | | |
| Nitrobenzene-d5 (S) | % | | | | | | 117 | 126 | 10-138 | | |
| Phenol-d6 (S) | % | | | | | | 61 | 69 | 10-130 | | |
| Terphenyl-d14 (S) | % | | | | | | 127 | 129 | 19-191 | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 795181 | Analysis Method: EPA 8270E
QC Batch Method: EPA 3546 | Analysis Description: 8270E Solid MSSV Microwave
Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92683612001, 92683612002, 92683612003

METHOD BLANK: 4120195 Matrix: Solid
Associated Lab Samples: 92683612001, 92683612002, 92683612003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 1-Methylnaphthalene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,2'-Oxybis(1-chloropropane) | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,4,5-Trichlorophenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,4,6-Trichlorophenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,4-Dichlorophenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,4-Dimethylphenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,4-Dinitrophenol | ug/kg | ND | 1670 | 08/23/23 10:46 | |
| 2,4-Dinitrotoluene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2,6-Dinitrotoluene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2-Chloronaphthalene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2-Chlorophenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2-Methylnaphthalene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 2-Nitroaniline | ug/kg | ND | 1670 | 08/23/23 10:46 | |
| 2-Nitrophenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 3,3'-Dichlorobenzidine | ug/kg | ND | 669 | 08/23/23 10:46 | |
| 3-Nitroaniline | ug/kg | ND | 1670 | 08/23/23 10:46 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | 669 | 08/23/23 10:46 | |
| 4-Bromophenylphenyl ether | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 4-Chloro-3-methylphenol | ug/kg | ND | 669 | 08/23/23 10:46 | |
| 4-Chloroaniline | ug/kg | ND | 669 | 08/23/23 10:46 | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | 334 | 08/23/23 10:46 | |
| 4-Nitroaniline | ug/kg | ND | 669 | 08/23/23 10:46 | |
| 4-Nitrophenol | ug/kg | ND | 1670 | 08/23/23 10:46 | |
| Acenaphthene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Acenaphthylene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Aniline | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Anthracene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Benzo(a)anthracene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Benzo(a)pyrene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Benzo(b)fluoranthene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Benzo(g,h,i)perylene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Benzo(k)fluoranthene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Benzoic Acid | ug/kg | ND | 1670 | 08/23/23 10:46 | |
| Benzyl alcohol | ug/kg | ND | 669 | 08/23/23 10:46 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

METHOD BLANK: 4120195 Matrix: Solid
Associated Lab Samples: 92683612001, 92683612002, 92683612003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| bis(2-Chloroethoxy)methane | ug/kg | ND | 334 | 08/23/23 10:46 | |
| bis(2-Chloroethyl) ether | ug/kg | ND | 334 | 08/23/23 10:46 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Butylbenzylphthalate | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Chrysene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Di-n-butylphthalate | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Di-n-octylphthalate | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Dibenz(a,h)anthracene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Dibenzofuran | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Diethylphthalate | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Dimethylphthalate | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Fluoranthene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Fluorene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Hexachlorobenzene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Hexachlorocyclopentadiene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Hexachloroethane | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Isophorone | ug/kg | ND | 334 | 08/23/23 10:46 | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | 334 | 08/23/23 10:46 | |
| N-Nitrosodimethylamine | ug/kg | ND | 334 | 08/23/23 10:46 | v1 |
| N-Nitrosodiphenylamine | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Naphthalene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Nitrobenzene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Pentachlorophenol | ug/kg | ND | 669 | 08/23/23 10:46 | |
| Phenanthrene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Phenol | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Pyrene | ug/kg | ND | 334 | 08/23/23 10:46 | |
| Pyridine | ug/kg | ND | 334 | 08/23/23 10:46 | v1 |
| 2,4,6-Tribromophenol (S) | % | 65 | 10-131 | 08/23/23 10:46 | |
| 2-Fluorobiphenyl (S) | % | 67 | 10-130 | 08/23/23 10:46 | |
| 2-Fluorophenol (S) | % | 70 | 10-130 | 08/23/23 10:46 | |
| Nitrobenzene-d5 (S) | % | 71 | 10-130 | 08/23/23 10:46 | |
| Phenol-d6 (S) | % | 71 | 10-130 | 08/23/23 10:46 | |
| Terphenyl-d14 (S) | % | 87 | 10-130 | 08/23/23 10:46 | |

LABORATORY CONTROL SAMPLE: 4120196

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 1650 | 1000 | 61 | 43-130 | |
| 1,2-Dichlorobenzene | ug/kg | 1650 | 979 | 59 | 43-130 | |
| 1,3-Dichlorobenzene | ug/kg | 1650 | 934 | 57 | 43-130 | |
| 1,4-Dichlorobenzene | ug/kg | 1650 | 936 | 57 | 44-130 | |
| 1-Methylnaphthalene | ug/kg | 1650 | 1180 | 71 | 47-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4120196

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 2,2'-Oxybis(1-chloropropane) | ug/kg | 1650 | 1090 | 66 | 29-130 | |
| 2,4,5-Trichlorophenol | ug/kg | 1650 | 1160 | 70 | 47-130 | |
| 2,4,6-Trichlorophenol | ug/kg | 1650 | 1160 | 71 | 47-130 | |
| 2,4-Dichlorophenol | ug/kg | 1650 | 1140 | 69 | 45-130 | |
| 2,4-Dimethylphenol | ug/kg | 1650 | 1240 | 75 | 45-130 | |
| 2,4-Dinitrophenol | ug/kg | 8250 | 6630 | 80 | 27-140 | |
| 2,4-Dinitrotoluene | ug/kg | 1650 | 1310 | 79 | 46-130 | |
| 2,6-Dinitrotoluene | ug/kg | 1650 | 1300 | 79 | 48-130 | |
| 2-Chloronaphthalene | ug/kg | 1650 | 1100 | 67 | 46-130 | |
| 2-Chlorophenol | ug/kg | 1650 | 1180 | 71 | 43-130 | |
| 2-Methylnaphthalene | ug/kg | 1650 | 1180 | 72 | 47-130 | |
| 2-Methylphenol(o-Cresol) | ug/kg | 1650 | 1180 | 72 | 42-130 | |
| 2-Nitroaniline | ug/kg | 3300 | 2810 | 85 | 41-130 | |
| 2-Nitrophenol | ug/kg | 1650 | 1170 | 71 | 48-130 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | 1650 | 1220 | 74 | 39-130 | |
| 3,3'-Dichlorobenzidine | ug/kg | 3300 | 2800 | 85 | 41-130 | |
| 3-Nitroaniline | ug/kg | 3300 | 2870 | 87 | 37-130 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | 3300 | 2870 | 87 | 38-141 | |
| 4-Bromophenylphenyl ether | ug/kg | 1650 | 1250 | 76 | 47-130 | |
| 4-Chloro-3-methylphenol | ug/kg | 3300 | 2500 | 76 | 44-130 | |
| 4-Chloroaniline | ug/kg | 3300 | 2630 | 80 | 41-130 | |
| 4-Chlorophenylphenyl ether | ug/kg | 1650 | 1280 | 78 | 45-130 | |
| 4-Nitroaniline | ug/kg | 3300 | 2870 | 87 | 42-130 | |
| 4-Nitrophenol | ug/kg | 8250 | 7040 | 85 | 39-131 | |
| Acenaphthene | ug/kg | 1650 | 1230 | 74 | 49-130 | |
| Acenaphthylene | ug/kg | 1650 | 1210 | 74 | 50-130 | |
| Aniline | ug/kg | 1650 | 1150 | 70 | 38-130 | |
| Anthracene | ug/kg | 1650 | 1280 | 77 | 49-130 | |
| Benzo(a)anthracene | ug/kg | 1650 | 1460 | 89 | 51-130 | |
| Benzo(a)pyrene | ug/kg | 1650 | 1410 | 86 | 51-130 | |
| Benzo(b)fluoranthene | ug/kg | 1650 | 1660 | 100 | 49-130 | |
| Benzo(g,h,i)perylene | ug/kg | 1650 | 1390 | 84 | 48-140 | |
| Benzo(k)fluoranthene | ug/kg | 1650 | 1450 | 88 | 51-130 | |
| Benzoic Acid | ug/kg | 8250 | 4280 | 52 | 22-130 | |
| Benzyl alcohol | ug/kg | 3300 | 2420 | 73 | 43-130 | |
| bis(2-Chloroethoxy)methane | ug/kg | 1650 | 1210 | 74 | 43-130 | |
| bis(2-Chloroethyl) ether | ug/kg | 1650 | 1080 | 66 | 42-130 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | 1650 | 1670 | 101 | 43-130 | |
| Butylbenzylphthalate | ug/kg | 1650 | 1650 | 100 | 44-131 | |
| Chrysene | ug/kg | 1650 | 1310 | 79 | 51-130 | |
| Di-n-butylphthalate | ug/kg | 1650 | 1390 | 84 | 46-130 | |
| Di-n-octylphthalate | ug/kg | 1650 | 1450 | 88 | 45-130 | |
| Dibenz(a,h)anthracene | ug/kg | 1650 | 1350 | 82 | 48-130 | |
| Dibenzofuran | ug/kg | 1650 | 1180 | 71 | 10-130 | |
| Diethylphthalate | ug/kg | 1650 | 1310 | 80 | 48-130 | |
| Dimethylphthalate | ug/kg | 1650 | 1270 | 77 | 48-130 | |
| Fluoranthene | ug/kg | 1650 | 1260 | 76 | 48-130 | |

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(704)875-9092

## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

LABORATORY CONTROL SAMPLE: 4120196

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Fluorene | ug/kg | 1650 | 1310 | 79 | 48-130 | |
| Hexachloro-1,3-butadiene | ug/kg | 1650 | 972 | 59 | 39-130 | |
| Hexachlorobenzene | ug/kg | 1650 | 1170 | 71 | 47-130 | |
| Hexachlorocyclopentadiene | ug/kg | 1650 | 1000 | 61 | 17-130 | |
| Hexachloroethane | ug/kg | 1650 | 976 | 59 | 40-130 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | 1650 | 1340 | 81 | 50-130 | |
| Isophorone | ug/kg | 1650 | 1220 | 74 | 41-130 | |
| N-Nitroso-di-n-propylamine | ug/kg | 1650 | 1280 | 77 | 36-130 | |
| N-Nitrosodimethylamine | ug/kg | 1650 | 1090 | 66 | 34-130 | v1 |
| N-Nitrosodiphenylamine | ug/kg | 1650 | 1330 | 80 | 48-130 | |
| Naphthalene | ug/kg | 1650 | 1160 | 70 | 46-130 | |
| Nitrobenzene | ug/kg | 1650 | 1110 | 67 | 39-130 | |
| Pentachlorophenol | ug/kg | 3300 | 2820 | 85 | 42-130 | |
| Phenanthrene | ug/kg | 1650 | 1310 | 79 | 50-130 | |
| Phenol | ug/kg | 1650 | 1190 | 72 | 42-130 | |
| Pyrene | ug/kg | 1650 | 1410 | 86 | 50-130 | |
| Pyridine | ug/kg | 1650 | 962 | 58 | 26-130 | v1 |
| 2,4,6-Tribromophenol (S) | % | | | 78 | 10-131 | |
| 2-Fluorobiphenyl (S) | % | | | 66 | 10-130 | |
| 2-Fluorophenol (S) | % | | | 68 | 10-130 | |
| Nitrobenzene-d5 (S) | % | | | 69 | 10-130 | |
| Phenol-d6 (S) | % | | | 70 | 10-130 | |
| Terphenyl-d14 (S) | % | | | 78 | 10-130 | |

MATRIX SPIKE SAMPLE: 4120197

| Parameter | Units | 92682861008 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | 2410 | 1340 | 56 | 16-130 | |
| 1,2-Dichlorobenzene | ug/kg | ND | 2410 | 1380 | 57 | 19-130 | |
| 1,3-Dichlorobenzene | ug/kg | ND | 2410 | 1330 | 55 | 19-130 | |
| 1,4-Dichlorobenzene | ug/kg | ND | 2410 | 1310 | 54 | 20-130 | |
| 1-Methylnaphthalene | ug/kg | ND | 2410 | 1650 | 69 | 19-130 | |
| 2,2'-Oxybis(1-chloropropane) | ug/kg | ND | 2410 | 1510 | 63 | 10-130 | |
| 2,4,5-Trichlorophenol | ug/kg | ND | 2410 | 1560 | 65 | 19-130 | |
| 2,4,6-Trichlorophenol | ug/kg | ND | 2410 | 1540 | 64 | 18-130 | |
| 2,4-Dichlorophenol | ug/kg | ND | 2410 | 1530 | 64 | 16-130 | |
| 2,4-Dimethylphenol | ug/kg | ND | 2410 | 935 | 39 | 10-130 | |
| 2,4-Dinitrophenol | ug/kg | ND | 12000 | 9140 | 76 | 10-143 | |
| 2,4-Dinitrotoluene | ug/kg | ND | 2410 | 1640 | 68 | 19-130 | |
| 2,6-Dinitrotoluene | ug/kg | ND | 2410 | 1690 | 70 | 22-130 | |
| 2-Chloronaphthalene | ug/kg | ND | 2410 | 1530 | 64 | 18-130 | |
| 2-Chlorophenol | ug/kg | ND | 2410 | 1540 | 64 | 20-130 | |
| 2-Methylnaphthalene | ug/kg | ND | 2410 | 1640 | 68 | 18-130 | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | 2410 | 1190 | 50 | 13-130 | |
| 2-Nitroaniline | ug/kg | ND | 4820 | 3700 | 77 | 18-130 | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE SAMPLE: 4120197

| Parameter | Units | 92682861008 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | ug/kg | ND | 2410 | 1670 | 69 | 19-130 | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | 2410 | 1340 | 56 | 13-130 | |
| 3,3'-Dichlorobenzidine | ug/kg | ND | 4820 | 2880 | 60 | 10-130 | |
| 3-Nitroaniline | ug/kg | ND | 4820 | 3610 | 75 | 22-130 | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | 4820 | 3750 | 78 | 10-144 | |
| 4-Bromophenylphenyl ether | ug/kg | ND | 2410 | 1530 | 63 | 18-130 | |
| 4-Chloro-3-methylphenol | ug/kg | ND | 4820 | 3170 | 66 | 16-130 | |
| 4-Chloroaniline | ug/kg | ND | 4820 | 3210 | 67 | 17-130 | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | 2410 | 1630 | 68 | 17-130 | |
| 4-Nitroaniline | ug/kg | ND | 4820 | 3710 | 77 | 21-130 | |
| 4-Nitrophenol | ug/kg | ND | 12000 | 8570 | 71 | 13-131 | |
| Acenaphthene | ug/kg | ND | 2410 | 1690 | 70 | 20-130 | |
| Acenaphthylene | ug/kg | ND | 2410 | 1660 | 69 | 21-130 | |
| Aniline | ug/kg | ND | 2410 | 863 | 36 | 10-130 | |
| Anthracene | ug/kg | ND | 2410 | 1600 | 67 | 19-130 | |
| Benzo(a)anthracene | ug/kg | ND | 2410 | 1840 | 76 | 17-130 | |
| Benzo(a)pyrene | ug/kg | ND | 2410 | 1870 | 78 | 14-130 | |
| Benzo(b)fluoranthene | ug/kg | ND | 2410 | 2100 | 87 | 11-134 | |
| Benzo(g,h,i)perylene | ug/kg | ND | 2410 | 1940 | 81 | 12-130 | |
| Benzo(k)fluoranthene | ug/kg | ND | 2410 | 1920 | 80 | 15-130 | |
| Benzoic Acid | ug/kg | ND | 12000 | 7360 | 61 | 10-130 | |
| Benzyl alcohol | ug/kg | ND | 4820 | 3280 | 68 | 20-130 | |
| bis(2-Chloroethoxy)methane | ug/kg | ND | 2410 | 1710 | 71 | 16-130 | |
| bis(2-Chloroethyl) ether | ug/kg | ND | 2410 | 1540 | 64 | 18-130 | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | 2410 | 2110 | 88 | 11-130 | |
| Butylbenzylphthalate | ug/kg | ND | 2410 | 1950 | 81 | 10-130 | |
| Chrysene | ug/kg | ND | 2410 | 1650 | 69 | 17-130 | |
| Di-n-butylphthalate | ug/kg | ND | 2410 | 1720 | 71 | 16-130 | |
| Di-n-octylphthalate | ug/kg | ND | 2410 | 1920 | 80 | 16-130 | |
| Dibenz(a,h)anthracene | ug/kg | ND | 2410 | 1750 | 73 | 13-130 | |
| Dibenzofuran | ug/kg | ND | 2410 | 1590 | 66 | 19-130 | |
| Diethylphthalate | ug/kg | ND | 2410 | 1680 | 70 | 22-130 | |
| Dimethylphthalate | ug/kg | ND | 2410 | 1670 | 69 | 23-130 | |
| Fluoranthene | ug/kg | ND | 2410 | 1600 | 67 | 14-130 | |
| Fluorene | ug/kg | ND | 2410 | 1720 | 71 | 19-130 | |
| Hexachloro-1,3-butadiene | ug/kg | ND | 2410 | 1310 | 55 | 12-130 | |
| Hexachlorobenzene | ug/kg | ND | 2410 | 1390 | 58 | 17-130 | |
| Hexachlorocyclopentadiene | ug/kg | ND | 2410 | 1290 | 54 | 10-130 | |
| Hexachloroethane | ug/kg | ND | 2410 | 1370 | 57 | 14-130 | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | 2410 | 1890 | 79 | 13-130 | |
| Isophorone | ug/kg | ND | 2410 | 1730 | 72 | 17-130 | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | 2410 | 1800 | 75 | 10-130 | |
| N-Nitrosodimethylamine | ug/kg | ND | 2410 | 1570 | 65 | 16-130 | v1 |
| N-Nitrosodiphenylamine | ug/kg | ND | 2410 | 1630 | 68 | 19-130 | |
| Naphthalene | ug/kg | ND | 2410 | 1640 | 68 | 18-130 | |
| Nitrobenzene | ug/kg | ND | 2410 | 1530 | 64 | 15-130 | |
| Pentachlorophenol | ug/kg | ND | 4820 | 3430 | 71 | 10-130 | |

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Huntersville, NC 28078
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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

MATRIX SPIKE SAMPLE: 4120197

| Parameter | Units | 92682861008 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Phenanthrene | ug/kg | ND | 2410 | 1640 | 68 | 17-130 | |
| Phenol | ug/kg | ND | 2410 | 1470 | 61 | 15-130 | |
| Pyrene | ug/kg | ND | 2410 | 1820 | 76 | 31-130 | |
| Pyridine | ug/kg | ND | 2410 | 1270 | 53 | 10-130 | v1 |
| 2,4,6-Tribromophenol (S) | % | | | | 60 | 10-131 | |
| 2-Fluorobiphenyl (S) | % | | | | 58 | 10-130 | |
| 2-Fluorophenol (S) | % | | | | 53 | 10-130 | |
| Nitrobenzene-d5 (S) | % | | | | 64 | 10-130 | |
| Phenol-d6 (S) | % | | | | 57 | 10-130 | |
| Terphenyl-d14 (S) | % | | | | 62 | 10-130 | |

SAMPLE DUPLICATE: 4120198

| Parameter | Units | 92682861009 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | ND | ND | | |
| 1,2-Dichlorobenzene | ug/kg | ND | ND | | |
| 1,3-Dichlorobenzene | ug/kg | ND | ND | | |
| 1,4-Dichlorobenzene | ug/kg | ND | ND | | |
| 1-Methylnaphthalene | ug/kg | ND | ND | | |
| 2,2'-Oxybis(1-chloropropane) | ug/kg | ND | ND | | |
| 2,4,5-Trichlorophenol | ug/kg | ND | ND | | |
| 2,4,6-Trichlorophenol | ug/kg | ND | ND | | |
| 2,4-Dichlorophenol | ug/kg | ND | ND | | |
| 2,4-Dimethylphenol | ug/kg | ND | ND | | |
| 2,4-Dinitrophenol | ug/kg | ND | ND | | |
| 2,4-Dinitrotoluene | ug/kg | ND | ND | | |
| 2,6-Dinitrotoluene | ug/kg | ND | ND | | |
| 2-Chloronaphthalene | ug/kg | ND | ND | | |
| 2-Chlorophenol | ug/kg | ND | ND | | |
| 2-Methylnaphthalene | ug/kg | ND | ND | | |
| 2-Methylphenol(o-Cresol) | ug/kg | ND | ND | | |
| 2-Nitroaniline | ug/kg | ND | ND | | |
| 2-Nitrophenol | ug/kg | ND | ND | | |
| 3&4-Methylphenol(m&p Cresol) | ug/kg | ND | ND | | |
| 3,3'-Dichlorobenzidine | ug/kg | ND | ND | | |
| 3-Nitroaniline | ug/kg | ND | ND | | |
| 4,6-Dinitro-2-methylphenol | ug/kg | ND | ND | | |
| 4-Bromophenylphenyl ether | ug/kg | ND | ND | | |
| 4-Chloro-3-methylphenol | ug/kg | ND | ND | | |
| 4-Chloroaniline | ug/kg | ND | ND | | |
| 4-Chlorophenylphenyl ether | ug/kg | ND | ND | | |
| 4-Nitroaniline | ug/kg | ND | ND | | |
| 4-Nitrophenol | ug/kg | ND | ND | | |
| Acenaphthene | ug/kg | ND | ND | | |
| Acenaphthylene | ug/kg | ND | ND | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

SAMPLE DUPLICATE: 4120198

| Parameter | Units | 92682861009 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Aniline | ug/kg | ND | ND | | |
| Anthracene | ug/kg | ND | ND | | |
| Benzo(a)anthracene | ug/kg | ND | ND | | |
| Benzo(a)pyrene | ug/kg | ND | ND | | |
| Benzo(b)fluoranthene | ug/kg | ND | ND | | |
| Benzo(g,h,i)perylene | ug/kg | ND | ND | | |
| Benzo(k)fluoranthene | ug/kg | ND | ND | | |
| Benzoic Acid | ug/kg | ND | ND | | |
| Benzyl alcohol | ug/kg | ND | ND | | |
| bis(2-Chloroethoxy)methane | ug/kg | ND | ND | | |
| bis(2-Chloroethyl) ether | ug/kg | ND | ND | | |
| bis(2-Ethylhexyl)phthalate | ug/kg | ND | ND | | |
| Butylbenzylphthalate | ug/kg | ND | ND | | |
| Chrysene | ug/kg | ND | ND | | |
| Di-n-butylphthalate | ug/kg | ND | ND | | |
| Di-n-octylphthalate | ug/kg | ND | ND | | |
| Dibenz(a,h)anthracene | ug/kg | ND | ND | | |
| Dibenzofuran | ug/kg | ND | ND | | |
| Diethylphthalate | ug/kg | ND | ND | | |
| Dimethylphthalate | ug/kg | ND | ND | | |
| Fluoranthene | ug/kg | ND | ND | | |
| Fluorene | ug/kg | ND | ND | | |
| Hexachloro-1,3-butadiene | ug/kg | ND | ND | | |
| Hexachlorobenzene | ug/kg | ND | ND | | |
| Hexachlorocyclopentadiene | ug/kg | ND | ND | | |
| Hexachloroethane | ug/kg | ND | ND | | |
| Indeno(1,2,3-cd)pyrene | ug/kg | ND | ND | | |
| Isophorone | ug/kg | ND | ND | | |
| N-Nitroso-di-n-propylamine | ug/kg | ND | ND | | |
| N-Nitrosodimethylamine | ug/kg | ND | ND | | v1 |
| N-Nitrosodiphenylamine | ug/kg | ND | ND | | |
| Naphthalene | ug/kg | ND | ND | | |
| Nitrobenzene | ug/kg | ND | ND | | |
| Pentachlorophenol | ug/kg | ND | ND | | |
| Phenanthrene | ug/kg | ND | ND | | |
| Phenol | ug/kg | ND | ND | | |
| Pyrene | ug/kg | ND | ND | | |
| Pyridine | ug/kg | ND | ND | | v1 |
| 2,4,6-Tribromophenol (S) | % | 67 | 64 | | |
| 2-Fluorobiphenyl (S) | % | 58 | 60 | | |
| 2-Fluorophenol (S) | % | 71 | 70 | | |
| Nitrobenzene-d5 (S) | % | 78 | 77 | | |
| Phenol-d6 (S) | % | 73 | 73 | | |
| Terphenyl-d14 (S) | % | 67 | 73 | | |

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## QUALITY CONTROL DATA

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

QC Batch: 794982
QC Batch Method: SW-846
Analysis Method: SW-846
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92683612001, 92683612002, 92683612003

SAMPLE DUPLICATE: 4119248

| Parameter | Units | 92682920008 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Percent Moisture | % | 12.8 | 11.9 | 7 | N2 |

SAMPLE DUPLICATE: 4119249

| Parameter | Units | 92683620001 Result | Dup Result | RPD | Qualifiers |
|---|---|---|---|---|---|
| Percent Moisture | % | 18.0 | 18.1 | 1 | N2 |

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# QUALIFIERS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## ANALYTE QUALIFIERS

| | |
|---|---|
| D6 | The precision between the sample and sample duplicate exceeded laboratory control limits. |
| H1 | Analysis conducted outside the EPA method holding time. |
| HS | Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter). |
| L1 | Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high. |
| L2 | Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low. |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery. |
| N2 | The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request. |
| R1 | RPD value was outside control limits. |
| S2 | Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis). |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution. |
| S5 | Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis). |
| v1 | The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias. |



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# QUALIFIERS

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

**ANALYTE QUALIFIERS**

| | |
|---|---|
| v2 | The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard. |
| v3 | The continuing calibration verification was below the method acceptance limit. Any detection for the analyte in the associated samples may have low bias. |



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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20565-02 333 HOWELL MILL RD
Pace Project No.: 92683612

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92683612001** | **B-1-4.5'-5'** | EPA 3546 | 794954 | EPA 8015C | 795050 |
| **92683612002** | **B-2-6'-6.5'** | EPA 3546 | 794954 | EPA 8015C | 795050 |
| **92683612003** | **B-3-4.5'-5'** | EPA 3546 | 794954 | EPA 8015C | 795050 |
| **92683612001** | **B-1-4.5'-5'** | EPA 5030B | 795171 | EPA 8015C | 795226 |
| **92683612002** | **B-2-6'-6.5'** | EPA 5030B | 795171 | EPA 8015C | 795226 |
| **92683612003** | **B-3-4.5'-5'** | EPA 5030B | 795412 | EPA 8015C | 795436 |
| **92683612004** | **TMW-1** | EPA 3510C | 794902 | EPA 8270E | 795237 |
| **92683612001** | **B-1-4.5'-5'** | EPA 3546 | 795181 | EPA 8270E | 795342 |
| **92683612002** | **B-2-6'-6.5'** | EPA 3546 | 795181 | EPA 8270E | 795342 |
| **92683612003** | **B-3-4.5'-5'** | EPA 3546 | 795181 | EPA 8270E | 795342 |
| **92683612001** | **B-1-4.5'-5'** | EPA 5035A/5030B | 795242 | EPA 8260D | 795372 |
| **92683612002** | **B-2-6'-6.5'** | EPA 5035A/5030B | 795001 | EPA 8260D | 795099 |
| **92683612003** | **B-3-4.5'-5'** | EPA 5035A/5030B | 795001 | EPA 8260D | 795099 |
| **92683612004** | **TMW-1** | EPA 8260D | 795282 | | |
| **92683612001** | **B-1-4.5'-5'** | SW-846 | 794982 | | |
| **92683612002** | **B-2-6'-6.5'** | SW-846 | 794982 | | |
| **92683612003** | **B-3-4.5'-5'** | SW-846 | 794982 | | |



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Pace

DC#_Title: ENV-FRM-HUN1-0083 v02_Sample Condition Upon Receipt

Effective Date: 11/14/2022

**Laboratory receiving samples:**

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

**Sample Condition Upon Receipt**

Client Name: Burnell-Lammons Engineering Project #:

**WO# : 92683612**

92683612

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:____

Custody Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☑ No

Date/Initials Person Examining Contents: JC 8/21/23

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☐ IR Gun ID: 92D070

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 2.7, 3.4 Correction Factor: Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): JC 8/21/23 2.7, 3.4

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil ( ☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

| | | | | Comments/Discrepancy: |
|---|---|---|---|---|
| Chain of Custody Present? | ☑ Yes | ☐ No | ☐ N/A | 1. |
| Samples Arrived within Hold Time? | ☑ Yes | ☐ No | ☐ N/A | 2. |
| **Short Hold Time Analysis (<72 hr.)?** | ☐ Yes | ☑ No | ☐ N/A | 3. |
| **Rush Turn Around Time Requested?** | ☐ Yes | ☑ No | ☐ N/A | 4. |
| Sufficient Volume? | ☑ Yes | ☐ No | ☐ N/A | 5. |
| Correct Containers Used? | ☑ Yes | ☐ No | ☐ N/A | 6. |
| -Pace Containers Used? | ☑ Yes | ☐ No | ☐ N/A | |
| Containers Intact? | ☑ Yes | ☐ No | ☐ N/A | 7. |
| Dissolved analysis: Samples Field Filtered? | ☐ Yes | ☐ No | ☑ N/A | 8. |
| Sample Labels Match COC? | ☑ Yes | ☐ No | ☐ N/A | 9. |
| -Includes Date/Time/ID/Analysis Matrix: JC 8/21/23 SL/WT | | | | |
| Headspace in VOA Vials (>5-6mm)? | ☐ Yes | ☑ No | ☐ N/A | 10. |
| Trip Blank Present? | ☐ Yes | ☑ No | ☐ N/A | 11. |
| Trip Blank Custody Seals Present? | ☐ Yes | ☑ No | ☐ N/A | |

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # **WO#: 92683612**
PM: TMC Due Date: 08/28/23
CLIENT: 92-BLE-NC

| Item# | BP4U-125 mL Plastic Unpreserved (N/A) (Cl-) | BP3U-250 mL Plastic Unpreserved (N/A) | BP2U-500 mL Plastic Unpreserved (N/A) | BP1U-1 liter Plastic Unpreserved (N/A) | BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-) | BP3N-250 mL plastic HNO3 (pH < 2) | BP4Z-125 mL Plastic ZN Acetate & NaOH (>9) | BP4B-125 mL Plastic NaOH (pH > 12) (Cl-) | WGFU-Wide-mouthed Glass jar Unpreserved | AG1U-1 liter Amber Unpreserved (N/A) (Cl-) | AG1H-1 liter Amber HCl (pH < 2) | AG3U-250 mL Amber Unpreserved (N/A) (Cl-) | AG1S-1 liter Amber H2SO4 (pH < 2) | AG3S-250 mL Amber H2SO4 (pH < 2) | DG94-40 mL Amber NH4Cl (N/A)(Cl-) | DG9H-40 mL VOA HCl (N/A) | VG9T-40 mL VOA Na2S2O3 (N/A) | VG9U-40 mL VOA Unpreserved (N/A) | DG9V-40 mL VOA H3PO4 (N/A) | KP7U-50 mL Plastic Unpreserved (N/A) | V/GK (3 vials per kit)-VPH/Gas kit (N/A) | SPST-125 mL Sterile Plastic (N/A – lab) | SP2T-250 mL Sterile Plastic (N/A – lab) | ZPLC | BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7) | AG0U-100 mL Amber Unpreserved (N/A) (Cl-) | VSGU-20 mL Scintillation vials (N/A) | DG9U-40 mL Amber Unpreserved vials (N/A) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | 3 | | | | | | | | | | | | | 9 | | | 1 | | | | |
| 2 | | | | | | | | | 3 | | | | | | | | | | | | | 9 | | | | | | | |
| 3 | | | | | | | | | 3 | | | | | | | | | | | | | 9 | | | | | | | |
| 4 | | | | | | | | | | | 2 | | | | | 6 | | | | | | | | | | | 2 | | |
| 5 | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

## pH Adjustment Log for Preserved Samples

| Sample ID | Type of Preservative | pH upon receipt | Date preservation adjusted | Time preservation adjusted | Amount of Preservative added | Lot # |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Page : 1 Of 1

| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
|---|---|---|---|---|---|
| Company: | Bunnell-Lammons Engineering | Report To: | Kelsey Cahill | Attention: | Kelsey Cahill |
| Address: | 30 Park Ridge Drive | Copy To: | | Company Name: | BLE |
| Fletcher, NC 28732 | | | | Address: | |
| Email: | kelsey.cahill@blecorp.com | Purchase Order #: | | Pace Quote: | |
| Phone: | 828-230-8027 Fax | Project Name: | 20565-02 333 Howell Mill Rd | Pace Project Manager: | taylor.cannon@pacelabs.com, |
| Requested Due Date: | | Project #: | | Pace Profile #: | 15424-1/2 |

| Regulatory Agency | |
|---|---|
| State / Location | NC |

| ITEM # | SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique) | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other | Analyses Test Y/N | VOC by 8260 | SVOC 8270 | EPH | VPH | GRO 8015 | DRO by 8015 | VOC by 8260 | SVOC 8270 | EPH | VPH | GRO 8015 | DRO by 8015 | Residual Chlorine (Y/N) | 92643612 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-1-4.5'-5' | SL | G | 8/18 | 12:00 | | | | 3 | | | | | | | 6 | | | X | X | X | X | X | X | | | | | | | 001 |
| 2 | B-2-6'-6.5' | | | | 13:45 | | | | 3 | | | | | | | 6 | | | X | X | X | X | X | X | | | | | | | 002 |
| 3 | B-3-4.5'-5' | | | | 15:55 | | | | 3 | | | | | | | 6 | | | X | X | X | X | X | X | | | | | | | 003 |
| 4 | TMW-1 | WT | | | 15:05 | | | | 2 | | | | | | | | | | X | X | X | X | | | | | | | | | 004 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| BLE/ | Jennifer Von Stauffenberg | 8/18 | 4:54 | A.Rucker/PACE/AVL | 8-18-23 | 1654 | 5.8 | Y | N | Y |
| | | | | | | | 5.8 | Y | N | Y |
| | A.Rucker/PACE/AVL | 8-19-23 | 1830 | X Pace MVL | 8-21-23 | 0830 | 2.7 | Y | N | Y |
| | | | | | | | 3.4 | | | |

| SAMPLER NAME AND SIGNATURE | | | TEMP °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|
| PRINT Name of SAMPLER: | Kelsey Cahill / Jennifer Von Stauffenberg | | | | | |
| SIGNATURE of SAMPLER: | | DATE Signed: | | | | |

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2348541 |
| Client: | Pace Analytical Services<br>9800 Kincey Ave.<br>Suite 100<br>Huntersville, NC 28078 |
| ATTN: | Taylor Cannon |
| Phone: | (704) 977-0943 |
| Project Name: | 333 HOWELL MILL RD |
| Project Number: | 92683612 |
| Report Date: | 08/24/23 |

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2348541-01 | B-1-4.5'-5' | SOLID | 20565-02 | 08/18/23 12:00 | 08/22/23 |
| L2348541-02 | B-2-6'-6.5' | SOLID | 20565-02 | 08/18/23 13:45 | 08/22/23 |
| L2348541-03 | B-3-4.5'-5' | SOLID | 20565-02 | 08/18/23 15:55 | 08/22/23 |
| L2348541-04 | TMW-1 | WATER | 20565-02 | 08/18/23 15:05 | 08/22/23 |

| | | | |
|---|---|---|---|
| **Project Name:** | 333 HOWELL MILL RD | **Lab Number:** | L2348541 |
| **Project Number:** | 92683612 | **Report Date:** | 08/24/23 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | 333 HOWELL MILL RD | **Lab Number:** | L2348541 |
| **Project Number:** | 92683612 | **Report Date:** | 08/24/23 |

**Case Narrative (continued)**

VPH

L2348541-01: The surrogate recoveries are outside the acceptance criteria for 2,5-dibromotoluene-pid (63%) and 2,5-dibromotoluene-fid (34%); however, the sample was not re-analyzed due to coelution with an unresolved complex mixture (UCM). A copy of the chromatogram is included as an attachment to this report. The results are not considered to be biased.

L2348541-03: The surrogate recoveries are below the acceptance criteria for 2,5-dibromotoluene-pid (59%) and 2,5-dibromotoluene-fid (61%); however, the moisture content exceeds 25%. Re-analysis was not required; however, all associated compounds are considered to have a potentially low bias.

EPH

L2348541-01, -02, and -03: The sample has elevated detection limits due to limited sample volume available for analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 08/24/23

# ORGANICS

# PETROLEUM HYDROCARBONS

**Project Name:** 333 HOWELL MILL RD
**Lab Number:** L2348541
**Project Number:** 92683612
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-01 | Date Collected: | 08/18/23 12:00 |
| Client ID: | B-1-4.5'-5' | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Solid | | |
| Analytical Method: | 131,VPH-18-2.1 | | |
| Analytical Date: | 08/23/23 12:49 | | |
| Analyst: | BAD | | |
| Percent Solids: | 71% | | |

| | | | |
|---|---|---|---|
| Trap: | EST, Carbopack B/Carboxen 1000&1001 | Analytical Column: | Restek, RTX-502.2, 105m, 0.53ID, 3um |

### Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Sample Temperature upon receipt: | Received on Ice |
| Were samples received in methanol? | Covering the Soil |
| Methanol ratio: | 1.4:1 |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C5-C8 Aliphatics | ND | | mg/kg | 11.9 | -- | 1 |
| C9-C12 Aliphatics | 373 | | mg/kg | 11.9 | -- | 1 |
| C9-C10 Aromatics | 220 | | mg/kg | 11.9 | -- | 1 |
| C5-C8 Aliphatics, Adjusted | ND | | mg/kg | 11.9 | -- | 1 |
| C9-C12 Aliphatics, Adjusted | 153 | | mg/kg | 11.9 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 2,5-Dibromotoluene-PID | **63** | Q | 70-130 |
| 2,5-Dibromotoluene-FID | **34** | Q | 70-130 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-01 | Date Collected: | 08/18/23 12:00 |
| Client ID: | B-1-4.5'-5' | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Solid | Extraction Method: | EPA 3540C |
| Analytical Method: | 135,EPH-19-2.1 | Extraction Date: | 08/22/23 15:10 |
| Analytical Date: | 08/24/23 10:05 | Cleanup Method1: | EPH-19-2.1 |
| Analyst: | MTC | Cleanup Date1: | 08/23/23 |
| Percent Solids: | 71% | | |

## Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Sample Temperature upon receipt: | Received on Ice |
| Sample Extraction method: | Extracted Per the Method |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Extractable Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C9-C18 Aliphatics | 551 | | mg/kg | 27.6 | -- | 1 |
| C19-C36 Aliphatics | 148 | | mg/kg | 27.6 | -- | 1 |
| C11-C22 Aromatics | 356 | | mg/kg | 27.6 | -- | 1 |
| C11-C22 Aromatics, Adjusted | 352 | | mg/kg | 27.6 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Chloro-Octadecane | 70 | | 40-140 |
| o-Terphenyl | 61 | | 40-140 |
| 2-Fluorobiphenyl | 68 | | 40-140 |
| 2-Bromonaphthalene | 67 | | 40-140 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-02 | Date Collected: | 08/18/23 13:45 |
| Client ID: | B-2-6'-6.5' | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Solid | Extraction Method: | EPA 3540C |
| Analytical Method: | 135,EPH-19-2.1 | Extraction Date: | 08/22/23 15:10 |
| Analytical Date: | 08/24/23 10:30 | Cleanup Method1: | EPH-19-2.1 |
| Analyst: | MTC | Cleanup Date1: | 08/23/23 |
| Percent Solids: | 76% | | |

## Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Sample Temperature upon receipt: | Received on Ice |
| Sample Extraction method: | Extracted Per the Method |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Extractable Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C9-C18 Aliphatics | 1840 | | mg/kg | 24.5 | -- | 1 |
| C19-C36 Aliphatics | 351 | | mg/kg | 24.5 | -- | 1 |
| C11-C22 Aromatics | 1110 | | mg/kg | 24.5 | -- | 1 |
| C11-C22 Aromatics, Adjusted | 1060 | | mg/kg | 24.5 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Chloro-Octadecane | 62 | | 40-140 |
| o-Terphenyl | 78 | | 40-140 |
| 2-Fluorobiphenyl | 90 | | 40-140 |
| 2-Bromonaphthalene | 72 | | 40-140 |

**Project Name:** 333 HOWELL MILL RD **Lab Number:** L2348541

**Project Number:** 92683612 **Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | | |
|---|---|---|---|---|
| Lab ID: | L2348541-02 | D | Date Collected: | 08/18/23 13:45 |
| Client ID: | B-2-6'-6.5' | | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | | Field Prep: | Not Specified |
| Sample Depth: | | | | |
| Matrix: | Solid | | | |
| Analytical Method: | 131,VPH-18-2.1 | | | |
| Analytical Date: | 08/23/23 13:49 | | | |
| Analyst: | BAD | | | |
| Percent Solids: | 76% | | | |

| | | | |
|---|---|---|---|
| Trap: | EST, Carbopack B/Carboxen 1000&1001 | Analytical Column: | Restek, RTX-502.2, 105m, 0.53ID, 3um |

### Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Sample Temperature upon receipt: | Received on Ice |
| Were samples received in methanol? | Covering the Soil |
| Methanol ratio: | 1.5:1 |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C5-C8 Aliphatics | 58.4 | | mg/kg | 45.8 | -- | 4 |
| C9-C12 Aliphatics | 852 | | mg/kg | 45.8 | -- | 4 |
| C9-C10 Aromatics | 503 | | mg/kg | 45.8 | -- | 4 |
| C5-C8 Aliphatics, Adjusted | 58.4 | | mg/kg | 45.8 | -- | 4 |
| C9-C12 Aliphatics, Adjusted | 345 | | mg/kg | 45.8 | -- | 4 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 2,5-Dibromotoluene-PID | 86 | | 70-130 |
| 2,5-Dibromotoluene-FID | 79 | | 70-130 |

**Project Name:** 333 HOWELL MILL RD
**Lab Number:** L2348541
**Project Number:** 92683612
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-03 | Date Collected: | 08/18/23 15:55 |
| Client ID: | B-3-4.5'-5' | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Solid | | |
| Analytical Method: | 131,VPH-18-2.1 | | |
| Analytical Date: | 08/23/23 14:49 | | |
| Analyst: | BAD | | |
| Percent Solids: | 70% | | |

| | | | |
|---|---|---|---|
| Trap: | EST, Carbopack B/Carboxen 1000&1001 | Analytical Column: | Restek, RTX-502.2, 105m, 0.53ID, 3um |

### Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Sample Temperature upon receipt: | Received on Ice |
| Were samples received in methanol? | Covering the Soil |
| Methanol ratio: | 1:1 +/- 25% |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C5-C8 Aliphatics | ND | | mg/kg | 9.29 | -- | 1 |
| C9-C12 Aliphatics | ND | | mg/kg | 9.29 | -- | 1 |
| C9-C10 Aromatics | ND | | mg/kg | 9.29 | -- | 1 |
| C5-C8 Aliphatics, Adjusted | ND | | mg/kg | 9.29 | -- | 1 |
| C9-C12 Aliphatics, Adjusted | ND | | mg/kg | 9.29 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 2,5-Dibromotoluene-PID | 59 | Q | 70-130 |
| 2,5-Dibromotoluene-FID | 61 | Q | 70-130 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-03 | Date Collected: | 08/18/23 15:55 |
| Client ID: | B-3-4.5'-5' | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Solid | Extraction Method: | EPA 3540C |
| Analytical Method: | 135,EPH-19-2.1 | Extraction Date: | 08/22/23 15:10 |
| Analytical Date: | 08/24/23 10:55 | Cleanup Method1: | EPH-19-2.1 |
| Analyst: | MTC | Cleanup Date1: | 08/23/23 |
| Percent Solids: | 70% | | |

## Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Sample Temperature upon receipt: | Received on Ice |
| Sample Extraction method: | Extracted Per the Method |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Extractable Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C9-C18 Aliphatics | ND | | mg/kg | 28.1 | -- | 1 |
| C19-C36 Aliphatics | ND | | mg/kg | 28.1 | -- | 1 |
| C11-C22 Aromatics | ND | | mg/kg | 28.1 | -- | 1 |
| C11-C22 Aromatics, Adjusted | ND | | mg/kg | 28.1 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Chloro-Octadecane | 64 | | 40-140 |
| o-Terphenyl | 52 | | 40-140 |
| 2-Fluorobiphenyl | 65 | | 40-140 |
| 2-Bromonaphthalene | 65 | | 40-140 |

**Project Name:** 333 HOWELL MILL RD
**Lab Number:** L2348541
**Project Number:** 92683612
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-04 | Date Collected: | 08/18/23 15:05 |
| Client ID: | TMW-1 | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Water | | |
| Analytical Method: | 131,VPH-18-2.1 | | |
| Analytical Date: | 08/24/23 07:07 | | |
| Analyst: | BAD | | |

| | | | |
|---|---|---|---|
| Trap: | EST, Carbopack B/Carboxen 1000&1001 | Analytical Column: | Restek, RTX-502.2, 105m, 0.53ID, 3um |

### Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Aqueous Preservative: | Laboratory Provided Preserved Container |
| Sample Temperature upon receipt: | Received on Ice |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Volatile Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C5-C8 Aliphatics | ND | | ug/l | 100 | -- | 1 |
| C9-C12 Aliphatics | 524 | | ug/l | 100 | -- | 1 |
| C9-C10 Aromatics | 403 | | ug/l | 100 | -- | 1 |
| C5-C8 Aliphatics, Adjusted | ND | | ug/l | 100 | -- | 1 |
| C9-C12 Aliphatics, Adjusted | 102 | | ug/l | 100 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 2,5-Dibromotoluene-PID | 97 | | 70-130 |
| 2,5-Dibromotoluene-FID | 80 | | 70-130 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

| | | | |
|---|---|---|---|
| Lab ID: | L2348541-04 | Date Collected: | 08/18/23 15:05 |
| Client ID: | TMW-1 | Date Received: | 08/22/23 |
| Sample Location: | 20565-02 | Field Prep: | Not Specified |
| Sample Depth: | | | |
| Matrix: | Water | Extraction Method: | EPA 3510C |
| Analytical Method: | 135,EPH-19-2.1 | Extraction Date: | 08/22/23 14:22 |
| Analytical Date: | 08/23/23 09:26 | Cleanup Method1: | EPH-19-2.1 |
| Analyst: | SC | Cleanup Date1: | 08/23/23 |

## Quality Control Information

| | |
|---|---|
| Condition of sample received: | Satisfactory |
| Aqueous Preservative: | Laboratory Provided Preserved Container |
| Sample Temperature upon receipt: | Received on Ice |
| Sample Extraction method: | Extracted Per the Method |

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor |
|---|---|---|---|---|---|---|
| **Extractable Petroleum Hydrocarbons - Westborough Lab** | | | | | | |
| C9-C18 Aliphatics | 1210 | | ug/l | 100 | -- | 1 |
| C19-C36 Aliphatics | 282 | | ug/l | 100 | -- | 1 |
| C11-C22 Aromatics | 1730 | | ug/l | 100 | -- | 1 |
| C11-C22 Aromatics, Adjusted | 1530 | | ug/l | 100 | -- | 1 |

| Surrogate | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Chloro-Octadecane | 41 | | 40-140 |
| o-Terphenyl | 77 | | 40-140 |
| 2-Fluorobiphenyl | 90 | | 40-140 |
| 2-Bromonaphthalene | 69 | | 40-140 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 135,EPH-19-2.1
Analytical Date: 08/23/23 08:52
Analyst: SC

Extraction Method: EPA 3510C
Extraction Date: 08/22/23 14:22
Cleanup Method: EPH-19-2.1
Cleanup Date: 08/23/23

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 04 Batch: WG1818768-1 | | | | | |
| C9-C18 Aliphatics | ND | | ug/l | 100 | -- |
| C19-C36 Aliphatics | ND | | ug/l | 100 | -- |
| C11-C22 Aromatics | ND | | ug/l | 100 | -- |
| C11-C22 Aromatics, Adjusted | ND | | ug/l | 100 | -- |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Chloro-Octadecane | 59 | | 40-140 |
| o-Terphenyl | 68 | | 40-140 |
| 2-Fluorobiphenyl | 69 | | 40-140 |
| 2-Bromonaphthalene | 69 | | 40-140 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 135,EPH-19-2.1
Analytical Date: 08/24/23 09:40
Analyst: MTC

Extraction Method: EPA 3540C
Extraction Date: 08/22/23 15:10
Cleanup Method: EPH-19-2.1
Cleanup Date: 08/23/23

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03 Batch: WG1818771-1 | | | | | |
| C9-C18 Aliphatics | ND | | mg/kg | 19.2 | -- |
| C19-C36 Aliphatics | ND | | mg/kg | 19.2 | -- |
| C11-C22 Aromatics | ND | | mg/kg | 19.2 | -- |
| C11-C22 Aromatics, Adjusted | ND | | mg/kg | 19.2 | -- |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| Chloro-Octadecane | 74 | | 40-140 |
| o-Terphenyl | 68 | | 40-140 |
| 2-Fluorobiphenyl | 81 | | 40-140 |
| 2-Bromonaphthalene | 82 | | 40-140 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 131,VPH-18-2.1
Analytical Date: 08/23/23 11:30
Analyst: BAD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03 Batch: WG1819664-4 | | | | | |
| C5-C8 Aliphatics | ND | | mg/kg | 5.00 | -- |
| C9-C12 Aliphatics | ND | | mg/kg | 5.00 | -- |
| C9-C10 Aromatics | ND | | mg/kg | 5.00 | -- |
| C5-C8 Aliphatics, Adjusted | ND | | mg/kg | 5.00 | -- |
| C9-C12 Aliphatics, Adjusted | ND | | mg/kg | 5.00 | -- |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 2,5-Dibromotoluene-PID | 97 | | 70-130 |
| 2,5-Dibromotoluene-FID | 98 | | 70-130 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 131,VPH-18-2.1
Analytical Date: 08/23/23 22:04
Analyst: BAD

| Parameter | Result | Qualifier | Units | RL | MDL |
|---|---|---|---|---|---|
| Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 04 Batch: WG1819727-4 | | | | | |
| C5-C8 Aliphatics | ND | | ug/l | 100 | -- |
| C9-C12 Aliphatics | ND | | ug/l | 100 | -- |
| C9-C10 Aromatics | ND | | ug/l | 100 | -- |
| C5-C8 Aliphatics, Adjusted | ND | | ug/l | 100 | -- |
| C9-C12 Aliphatics, Adjusted | ND | | ug/l | 100 | -- |

| Surrogate | %Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 2,5-Dibromotoluene-PID | 79 | | 70-130 |
| 2,5-Dibromotoluene-FID | 81 | | 70-130 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612
**Lab Number:** L2348541
**Report Date:** 08/24/23

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 04 Batch: WG1818768-2 WG1818768-3 | | | | | | | | |
| C9-C18 Aliphatics | 52 | | 60 | | 40-140 | 14 | | 25 |
| C19-C36 Aliphatics | 61 | | 66 | | 40-140 | 8 | | 25 |
| C11-C22 Aromatics | 71 | | 69 | | 40-140 | 3 | | 25 |
| Naphthalene | 62 | | 60 | | 40-140 | 3 | | 25 |
| 2-Methylnaphthalene | 66 | | 65 | | 40-140 | 2 | | 25 |
| Acenaphthylene | 62 | | 62 | | 40-140 | 0 | | 25 |
| Acenaphthene | 66 | | 66 | | 40-140 | 0 | | 25 |
| Fluorene | 69 | | 68 | | 40-140 | 1 | | 25 |
| Phenanthrene | 71 | | 68 | | 40-140 | 4 | | 25 |
| Anthracene | 72 | | 69 | | 40-140 | 4 | | 25 |
| Fluoranthene | 70 | | 66 | | 40-140 | 6 | | 25 |
| Pyrene | 73 | | 68 | | 40-140 | 7 | | 25 |
| Benzo(a)anthracene | 72 | | 68 | | 40-140 | 6 | | 25 |
| Chrysene | 74 | | 71 | | 40-140 | 4 | | 25 |
| Benzo(b)fluoranthene | 67 | | 64 | | 40-140 | 5 | | 25 |
| Benzo(k)fluoranthene | 65 | | 63 | | 40-140 | 3 | | 25 |
| Benzo(a)pyrene | 72 | | 70 | | 40-140 | 3 | | 25 |
| Indeno(1,2,3-cd)Pyrene | 63 | | 64 | | 40-140 | 2 | | 25 |
| Dibenzo(a,h)anthracene | 60 | | 61 | | 40-140 | 2 | | 25 |
| Benzo(ghi)perylene | 59 | | 61 | | 40-140 | 3 | | 25 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 333 HOWELL MILL RD

**Project Number:** 92683612

**Lab Number:** L2348541

**Report Date:** 08/24/23

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 04 Batch: WG1818768-2 WG1818768-3 | | | | | | | | |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Chloro-Octadecane | 48 | | 55 | | 40-140 |
| o-Terphenyl | 69 | | 65 | | 40-140 |
| 2-Fluorobiphenyl | 73 | | 68 | | 40-140 |
| 2-Bromonaphthalene | 73 | | 68 | | 40-140 |
| % Naphthalene Breakthrough | 0 | | 0 | | |
| % 2-Methylnaphthalene Breakthrough | 0 | | 0 | | |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 333 HOWELL MILL RD

**Project Number:** 92683612

**Lab Number:** L2348541

**Report Date:** 08/24/23

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1818771-2 WG1818771-3 | | | | | | | | |
| C9-C18 Aliphatics | 67 | | 73 | | 40-140 | 9 | | 25 |
| C19-C36 Aliphatics | 84 | | 99 | | 40-140 | 16 | | 25 |
| C11-C22 Aromatics | 87 | | 86 | | 40-140 | 1 | | 25 |
| Naphthalene | 77 | | 76 | | 40-140 | 1 | | 25 |
| 2-Methylnaphthalene | 78 | | 76 | | 40-140 | 3 | | 25 |
| Acenaphthylene | 75 | | 73 | | 40-140 | 3 | | 25 |
| Acenaphthene | 79 | | 79 | | 40-140 | 0 | | 25 |
| Fluorene | 80 | | 80 | | 40-140 | 0 | | 25 |
| Phenanthrene | 82 | | 81 | | 40-140 | 1 | | 25 |
| Anthracene | 82 | | 80 | | 40-140 | 2 | | 25 |
| Fluoranthene | 83 | | 81 | | 40-140 | 2 | | 25 |
| Pyrene | 85 | | 83 | | 40-140 | 2 | | 25 |
| Benzo(a)anthracene | 86 | | 84 | | 40-140 | 2 | | 25 |
| Chrysene | 85 | | 83 | | 40-140 | 2 | | 25 |
| Benzo(b)fluoranthene | 85 | | 83 | | 40-140 | 2 | | 25 |
| Benzo(k)fluoranthene | 83 | | 81 | | 40-140 | 2 | | 25 |
| Benzo(a)pyrene | 88 | | 85 | | 40-140 | 3 | | 25 |
| Indeno(1,2,3-cd)Pyrene | 88 | | 85 | | 40-140 | 3 | | 25 |
| Dibenzo(a,h)anthracene | 79 | | 77 | | 40-140 | 3 | | 25 |
| Benzo(ghi)perylene | 82 | | 80 | | 40-140 | 2 | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1818771-2 WG1818771-3 | | | | | | | | |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| Chloro-Octadecane | 45 | | 80 | | 40-140 |
| o-Terphenyl | 69 | | 66 | | 40-140 |
| 2-Fluorobiphenyl | 77 | | 74 | | 40-140 |
| 2-Bromonaphthalene | 77 | | 76 | | 40-140 |
| % Naphthalene Breakthrough | 0 | | 0 | | |
| % 2-Methylnaphthalene Breakthrough | 0 | | 0 | | |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1819664-2 WG1819664-3 | | | | | | | | |
| C5-C8 Aliphatics | 103 | | 103 | | 70-130 | 0 | | 25 |
| C9-C12 Aliphatics | 102 | | 101 | | 70-130 | 1 | | 25 |
| C9-C10 Aromatics | 100 | | 97 | | 70-130 | 3 | | 25 |
| Benzene | 100 | | 98 | | 70-130 | 2 | | 25 |
| Toluene | 101 | | 98 | | 70-130 | 3 | | 25 |
| Ethylbenzene | 101 | | 98 | | 70-130 | 3 | | 25 |
| p/m-Xylene | 100 | | 98 | | 70-130 | 2 | | 25 |
| o-Xylene | 99 | | 96 | | 70-130 | 3 | | 25 |
| Methyl tert butyl ether | 97 | | 92 | | 70-130 | 5 | | 25 |
| Naphthalene | 98 | | 96 | | 70-130 | 3 | | 25 |
| 1,2,4-Trimethylbenzene | 100 | | 97 | | 70-130 | 3 | | 25 |
| Pentane | 101 | | 102 | | 70-130 | 1 | | 25 |
| 2-Methylpentane | 105 | | 104 | | 70-130 | 1 | | 25 |
| 2,2,4-Trimethylpentane | 103 | | 103 | | 70-130 | 0 | | 25 |
| n-Nonane | 102 | | 101 | | 30-130 | 1 | | 25 |
| n-Decane | 103 | | 102 | | 70-130 | 1 | | 25 |
| n-Butylcyclohexane | 102 | | 101 | | 70-130 | 1 | | 25 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 2,5-Dibromotoluene-PID | 98 | | 94 | | 70-130 |
| 2,5-Dibromotoluene-FID | 97 | | 94 | | 70-130 |

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** 333 HOWELL MILL RD

**Project Number:** 92683612

**Lab Number:** L2348541

**Report Date:** 08/24/23

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 04 Batch: WG1819727-2 WG1819727-3 | | | | | | | | |
| C5-C8 Aliphatics | 107 | | 109 | | 70-130 | 2 | | 25 |
| C9-C12 Aliphatics | 99 | | 103 | | 70-130 | 4 | | 25 |
| C9-C10 Aromatics | 89 | | 97 | | 70-130 | 8 | | 25 |
| Benzene | 94 | | 100 | | 70-130 | 6 | | 25 |
| Toluene | 96 | | 102 | | 70-130 | 6 | | 25 |
| Ethylbenzene | 97 | | 103 | | 70-130 | 6 | | 25 |
| p/m-Xylene | 96 | | 101 | | 70-130 | 5 | | 25 |
| o-Xylene | 94 | | 101 | | 70-130 | 7 | | 25 |
| Methyl tert butyl ether | 83 | | 92 | | 70-130 | 10 | | 25 |
| Naphthalene | 86 | | 97 | | 70-130 | 12 | | 25 |
| 1,2,4-Trimethylbenzene | 89 | | 97 | | 70-130 | 8 | | 25 |
| Pentane | 109 | | 111 | | 70-130 | 2 | | 25 |
| 2-Methylpentane | 108 | | 110 | | 70-130 | 2 | | 25 |
| 2,2,4-Trimethylpentane | 103 | | 106 | | 70-130 | 3 | | 25 |
| n-Nonane | 99 | | 102 | | 30-130 | 3 | | 25 |
| n-Decane | 97 | | 101 | | 70-130 | 4 | | 25 |
| n-Butylcyclohexane | 102 | | 106 | | 70-130 | 4 | | 25 |

| Surrogate | LCS %Recovery | Qual | LCSD %Recovery | Qual | Acceptance Criteria |
|---|---|---|---|---|---|
| 2,5-Dibromotoluene-PID | 81 | | 89 | | 70-130 |
| 2,5-Dibromotoluene-FID | 80 | | 88 | | 70-130 |

# INORGANICS
# &
# MISCELLANEOUS

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

Lab ID: L2348541-01
Client ID: B-1-4.5'-5'
Sample Location: 20565-02

Date Collected: 08/18/23 12:00
Date Received: 08/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry - Westborough Lab** | | | | | | | | | | |
| Solids, Total | 71.1 | | % | 0.100 | NA | 1 | - | 08/22/23 14:41 | 121,2540G | RJF |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

Lab ID: L2348541-02
Client ID: B-2-6'-6.5'
Sample Location: 20565-02

Date Collected: 08/18/23 13:45
Date Received: 08/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry - Westborough Lab** | | | | | | | | | | |
| Solids, Total | 75.7 | | % | 0.100 | NA | 1 | - | 08/22/23 14:41 | 121,2540G | RJF |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

## SAMPLE RESULTS

Lab ID: L2348541-03
Client ID: B-3-4.5'-5'
Sample Location: 20565-02

Date Collected: 08/18/23 15:55
Date Received: 08/22/23
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| **General Chemistry - Westborough Lab** | | | | | | | | | | |
| Solids, Total | 69.9 | | % | 0.100 | NA | 1 | - | 08/22/23 14:41 | 121,2540G | RJF |

# Lab Duplicate Analysis

***Batch Quality Control***

**Project Name:** 333 HOWELL MILL RD

**Project Number:** 92683612

***Lab Number:*** L2348541

***Report Date:*** 08/24/23

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1818777-1 QC Sample: L2348519-01 Client ID: DUP Sample | | | | | | |
| Solids, Total | 80.8 | 79.9 | % | 1 | | 20 |

**Project Name:** 333 HOWELL MILL RD
**Project Number:** 92683612

**Lab Number:** L2348541
**Report Date:** 08/24/23

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| A | Absent |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L2348541-01A | Vial MeOH preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(28) |
| L2348541-01B | Vial MeOH preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(28) |
| L2348541-01C | Unpreserved Centrifuge Tube | A | NA | | 3.4 | Y | Absent | | TS(7) |
| L2348541-01D | Glass 120ml/4oz unpreserved | A | NA | | 3.4 | Y | Absent | | EPH-DELUX-20(14) |
| L2348541-02A | Vial MeOH preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(28) |
| L2348541-02B | Vial MeOH preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(28) |
| L2348541-02C | Unpreserved Centrifuge Tube | A | NA | | 3.4 | Y | Absent | | TS(7) |
| L2348541-02D | Glass 120ml/4oz unpreserved | A | NA | | 3.4 | Y | Absent | | EPH-DELUX-20(14) |
| L2348541-03A | Vial MeOH preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(28) |
| L2348541-03B | Vial MeOH preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(28) |
| L2348541-03C | Unpreserved Centrifuge Tube | A | NA | | 3.4 | Y | Absent | | TS(7) |
| L2348541-03D | Glass 120ml/4oz unpreserved | A | NA | | 3.4 | Y | Absent | | EPH-DELUX-20(14) |
| L2348541-04A | Vial HCl preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(14) |
| L2348541-04B | Vial HCl preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(14) |
| L2348541-04C | Vial HCl preserved | A | NA | | 3.4 | Y | Absent | | VPH-DELUX-18(14) |
| L2348541-04D | Amber 1000ml HCl preserved | A | <2 | <2 | 3.4 | Y | Absent | | EPH-DELUX-20(14) |
| L2348541-04E | Amber 1000ml HCl preserved | A | <2 | <2 | 3.4 | Y | Absent | | EPH-DELUX-20(14) |



*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | 333 HOWELL MILL RD | **Lab Number:** | L2348541 |
| **Project Number:** | 92683612 | **Report Date:** | 08/24/23 |

## GLOSSARY

***Acronyms***

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | 333 HOWELL MILL RD | **Lab Number:** | L2348541 |
| **Project Number:** | 92683612 | **Report Date:** | 08/24/23 |

***Footnotes***

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

***Terms***

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

***Data Qualifiers***

**A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

**B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | 333 HOWELL MILL RD | **Lab Number:** | L2348541 |
| **Project Number:** | 92683612 | **Report Date:** | 08/24/23 |

***Data Qualifiers***

**ND** - Not detected at the reporting limit (RL) for the sample.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

**V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

**Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

*Report Format: Data Usability Report*

| | | | |
|---|---|---|---|
| **Project Name:** | 333 HOWELL MILL RD | **Lab Number:** | L2348541 |
| **Project Number:** | 92683612 | **Report Date:** | 08/24/23 |

## REFERENCES


121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

131 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, February 2018, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, June 1, 2018.

135 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, December 2019, Revision 2.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, March 1, 2020.


## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene
**EPA 625.1:** alpha-Terpineol
**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270E:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**SM4500**: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
**EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
**EPA 624.1**: Volatile Halocarbons & Aromatics,
**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625.1**: SVOC (Acid/Base/Neutral Extractables).
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522, EPA 537.1.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2398541

# Chain of Custody

PASI Charlotte Laboratory

Pace

**Workorder:** 92683612 **Workorder Name:** 20565-02 333 HOWELL MILL RD **Results Requested By:** 8/24/2023

| Report / Invoice To | Subcontract To |
|---|---|
| Taylor M Cannon<br>Pace Analytical Charlotte<br>9800 Kincey Ave. Suite 100<br>Huntersville, NC 28078<br>Phone (704)875-9092<br>Email: taylor.cannon@pacelabs.com | Alpha<br>Sample LOGIN<br>8 Walkup Drive<br>Westborough, MA 01581<br>P.O. TC-92683612 |

**State of Sample Origin:** NC

| Item | Sample ID | Collect Date/Time | Lab ID | Matrix | Preserved Containers: HCL | Unpreserved | Other | | | | Requested Analysis: NC EPH | NC VPH | | | | | | | | | | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B-1-4.5'-5' | 8/18/2023 12:00 | 92683612001 | Solid | | 1 | 3 | | | | X | X | | | | | | | | | | |
| 2 | B-2-6'-6.5' | 8/18/2023 13:45 | 92683612002 | Solid | | 1 | 3 | | | | X | X | | | | | | | | | | |
| 3 | B-3-4.5'-5' | 8/18/2023 15:55 | 92683612003 | Solid | | 1 | 3 | | | | X | X | | | | | | | | | | |
| 4 | TMW-1 | 8/18/2023 15:05 | 92683612004 | Water | 5 | | | | | | X | X | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | |

| Transfers | Released By | Date/Time | Received By | Date/Time |
|---|---|---|---|---|
| 1 | FedEx Pace | 8/21/23 15:00 | [illegible] | 8/22/23 11:00 |
| 2 | | | | |
| 3 | | | | |

**Comments**

**2-day RUSH**

**Cooler Temperature on Receipt** ____ °C | **Custody Seal** Y or N | **Received on Ice** Y or N | **Samples Intact** Y or N

ORIGIN ID:SRWA (704) 875-9092
SAMPLE RECEIVING
PACE ANALYTICAL SERVICES
9800 KINCEY AVE, SUITE 100
HUNTERSVILLE, NC 28078
UNITED STATES US
SHIP DATE: 21AUG23
ACTWGT: 43.45 LB
CAD: 0863711/CAFE3708
BILL SENDER
TO
ALPHA WESTBORO
8 WALKUP DRIVE
WESTBORO MA 01581
(508) 898-9220
DEPT: SR
RCVD
10:30
AM
FedEx
Express
E
TUE - 22 AUG 10:30A
PRIORITY OVERNIGHT
TRK# 0201 6824 8091 7851
G7 BBFA
01581
MA-US BOS

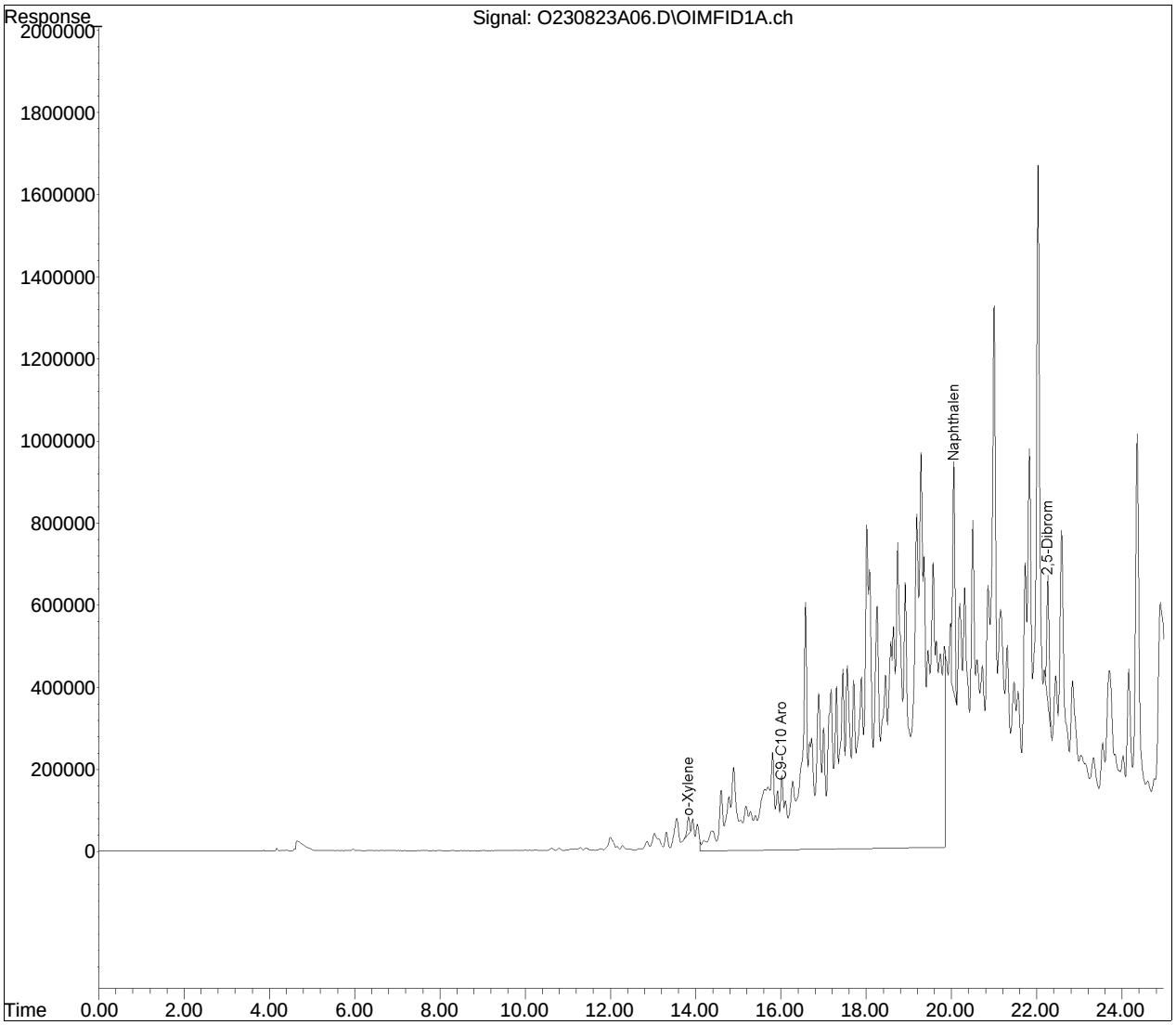
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES_GC\OVPH\2023\230823Aaro\
Data File : O230823A06.D
Signal(s) : OIMFID1A.ch
Acq On : 23 Aug 2023 12:49 pm
Operator : OVPH:BAD
Sample : l2348541-01,41,10,7.11,0.100,,a,r3b
Misc : WG1819664,ICAL20207,VPH-50
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 24 09:41:29 2023
Quant Method : I:\VOLATILES_GC\OVPH\2023\230823Aaro\vph-aro230726B.m
Quant Title : VPH AROMATIC
QLast Update : Thu Jul 27 09:56:12 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Sub List : Default - All compounds listed



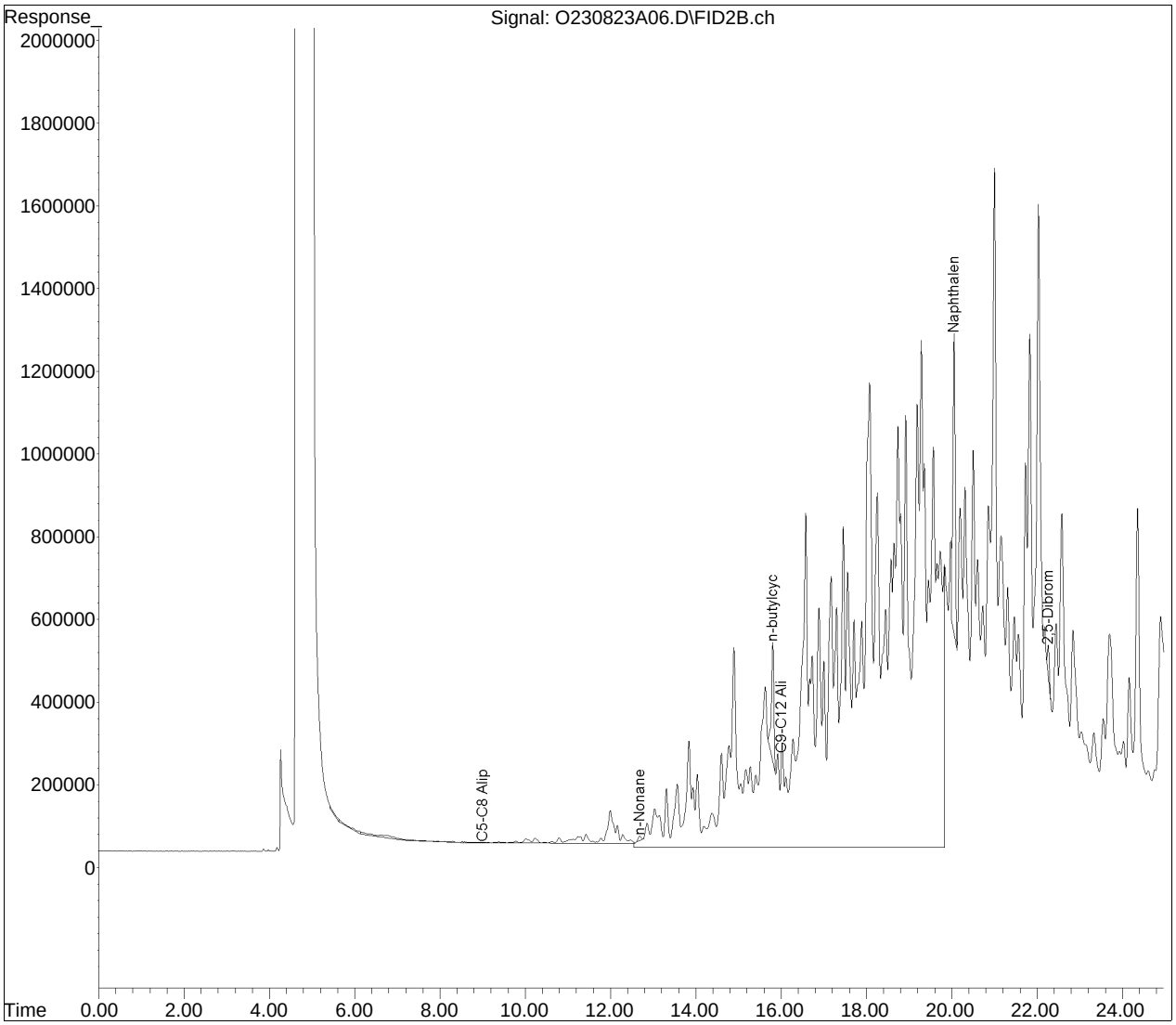
Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES_GC\OVPH\2023\230823Aali\
Data File : O230823A06.D
Signal(s) : FID2B.ch
Acq On : 23 Aug 2023 12:49 pm
Operator : OVPH:BAD
Sample : l2348541-01,41,10,7.11,0.100,,a,r3b
Misc : WG1819664,ICAL20206,VPH-50
ALS Vial : 6 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 24 09:20:43 2023
Quant Method : I:\VOLATILES_GC\OVPH\2023\230823Aali\vph-ali230726B.m
Quant Title : VPH ALIPHATIC
QLast Update : Thu Jul 27 09:41:02 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Sub List : Default - All compounds listed



# APPENDIX E
# Soil Boring and Temporary Well Logs

BLE INC.

**BUNNELL-LAMMONS ENGINEERING, INC.**

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

# BORING NO. B-1

PROJECT: Balsam Edge Site | PROJECT NO.: J23-20565-02

CLIENT: Mountain Housing Opportunities, Inc. | START: 8-18-23 END: 8-18-23

LOCATION: Waynesville, North Carolina | ELEVATION:

DRILLER: M & W Drillers, Dan and Hunter | LOGGED BY: K. Cahill

DRILLING METHOD: Stainless steel hand auger

DEPTH TO - WATER> INITIAL: ▽ _____ AFTER 24 HOURS: ▼ _____ CAVING> _____

| ELEVATION/ DEPTH (FT) | DESCRIPTION | SOIL TYPE | SAMPLES | PID (ppm) READING |
|---|---|---|---|---|
| | Brick/concrete GRAVEL, dust | | | 0 |
| | Brown SILT | | | 0 |
| | Reddish brown, clayey SILT | | | 0 |
| | | | | 0 |
| | Staining - grayish brown, silty CLAY<br>Petrol odor starting at 4.0 feet below ground surface | | | 185 |
| 5 | Auger refusal at 5.0 feet below ground surface. No groundwater encountered at time of drilling. | | | |



ENVNOWELL_PIDONLY 20565-02.GPJ 8/29/23

BLE INC.

**BUNNELL-LAMMONS ENGINEERING, INC.**
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

# BORING NO. B-2

PROJECT: Balsam Edge Site | PROJECT NO.: J23-20565-02
CLIENT: Mountain Housing Opportunities, Inc. | START: 8-18-23 END: 8-18-23
LOCATION: Waynesville, North Carolina | ELEVATION:
DRILLER: M & W Drillers, Dan and Hunter | LOGGED BY: K. Cahill
DRILLING METHOD: Track mounted push probe
DEPTH TO - WATER> INITIAL: ▽ 19.88 AFTER 24 HOURS: ▼ CAVING>

| ELEVATION/ DEPTH (FT) | DESCRIPTION | SOIL TYPE | SAMPLES | PID (ppm) READING | MONITOR WELL INSTALLATION DETAILS |
|---|---|---|---|---|---|
| | Limited return, brown, clayey, silty CLAY with some gravel and concrete chunks | | | | |
| 5 | Grayish brown, CLAY stained, odor | | | 17.7<br>166.7 | |
| | Brown clayey SILT | | | 106.2<br>18.2<br>57.1 | |
| 10 | | | | 35.7<br>122 | |
| | Reddish brown SILT | | | 83<br>81<br>83 | |
| 15 | | | | 14<br>6.5<br>3.4<br>3.7 | 1-inch diameter, 0.010-inch slotted Schedule 40 PVC well screen,15.0 to 35.0 feet |
| 20 ▽ | Light brown, wet, silty SAND | | | 2.9<br>1.5<br>1.3 | |
| | Reddish brown, wet, silty SAND | | | 1.7<br>1.0 | |
| 25 | Red, brown, and yellow, micaceous, silty SAND | | | 0.6<br>0.6<br>0.8<br>0.8<br>1.2<br>0.7 | |
| 30 | Brown, black, and green, micaceous, silty SAND | | | 0.6<br>0.4 | |
| 35 | Boring terminated at 35.0 feet below ground surface. Groundwater encountered at 19.88 feet below ground surface at time of drilling. Setting up temporary well at 35.0 feet below ground surface with 20 feet of screen | | | | |



ENV_WELL_ONLY_PID 20565-02.GPJ 8/29/23

BLE INC.

**BUNNELL-LAMMONS ENGINEERING, INC.**

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

# BORING NO. B-3

PROJECT: Balsam Edge Site | PROJECT NO.: J23-20565-02

CLIENT: Mountain Housing Opportunities, Inc. | START: 8-18-23 END: 8-18-23

LOCATION: Waynesville, North Carolina | ELEVATION:

DRILLER: M & W Drillers, Dan and Hunter | LOGGED BY: K. Cahill

DRILLING METHOD: Stainless steel hand auger

DEPTH TO - WATER> INITIAL: ▽ _____ AFTER 24 HOURS: ▼ _____ CAVING> _____

| ELEVATION/ DEPTH (FT) | DESCRIPTION | SOIL TYPE | SAMPLES | PID (ppm) READING |
|---|---|---|---|---|
| | Brick/concrete GRAVEL, dust | | | 0 |
| | Brown SILT | | | 0 |
| | Reddish brown, clayey SILT | | | 7 |
| | Staining - grayish brown, silty CLAY<br>Petrol odor starting at 4.0 feet below ground surface | | | 8<br>22 |
| 5 | Auger refusal at 5.0 feet below ground surface. No groundwater encountered at time of drilling. | | | |



ENVNOWELL_PIDONLY 20565-02.GPJ 8/29/23

# ATTACHMENT 8:

# Endangered Species

NCORR USFWS Consultation and Correspondence

## Gievers, Andrea

**From:** Gievers, Andrea
**Sent:** Friday, January 31, 2025 12:00 PM
**To:** Adeline Wolfe
**Cc:** Colores, Tracey; Wiggins, Michele; Patricia Cantrell; Curry, Alisha; Hannah White; Justin
**Subject:** RE: [External] Re: Remediation at Balsam Edge
**Attachments:** USFWS Response Attmt - 20230216_23-445_email response exchange concluding consult.pdf

Hello Adeline:

I received confirmation from USFWS that the February 2023 consultation remains valid. I have attached the email chain sent by USFWS which includes a February 7th email from ECS (grey text) that MHO will have **onsite manmade structures surveyed for evidence of bats within two weeks prior to demolition activities**. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats. In addition, USFWS stated to further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives and attached several general lighting recommendations. USFWS also offered to be available to assist with a site-specific lighting design at the request of project proponents. I just wanted to ensure that you were aware of the agreement with USFWS to conduct a bat survey *within two weeks prior to demolition* of the onsite manmade structures. Thanks, and let me know if you have any questions.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

---

**From:** Adeline Wolfe <adeline@mtnhousing.org>
**Sent:** Friday, January 3, 2025 4:13 PM
**To:** Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
**Cc:** Colores, Tracey <tracey.colores@ncdps.gov>; Wiggins, Michele <tammy.wiggins@ncdps.gov>; Patricia Cantrell <patricia.cantrell@haywoodcountync.gov>; Curry, Alisha <alisha.curry@ncdps.gov>; Hannah White <hannah.white@haywoodcountync.gov>; Justin <Justin@mtnhousing.org>
**Subject:** [External] Re: Remediation at Balsam Edge

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Thanks Andrea!

This is very helpful.

As we formalize a plan to move forward with demo and remediation, we will check in again just to be sure but this is great news for keeping the project on timeline.

Happy new year to you all,
Adeine

On Mon, Dec 16, 2024 at 12:27 PM Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov> wrote:

> Hello Adeline:
>
> I spoke to Lenwood and he said that as long as you are **not** using NCORR funding (NCHFA or non-HUD only) it is **okay to proceed** with the remediation including demolition, if needed. I have included *below* the applicable HUD mitigation measures I drafted for the NCORR EA. Please be aware of the applicable federal, state, and local laws and regulations below. Thanks, and let me know if you have any questions.
>
> -------**Mitigation Measures**--------
>
> During the Phase I ESA's site visit, a hazard was identified as a fill port and vent pipe indicative of an underground storage tank (UST) near the southwestern corner of the residence. This potential for an undocumented release from the UST was deemed a REC with additional environmental assessment warranted. A Limited UST Closure Assessment was performed on August 18, 2023 to assess the potential impacts of the UST to the soil and groundwater. Petroleum constituents were identified in soils on the western and southern side of the UST in exceedance of NC Department of Environmental Quality (NCDEQ) Residential Maximum Soil Contaminant Concentrations (MSCCs) and groundwater impacts at concentrations above the NCDEQ 15A NCAC 02L .0202 Ground Water Quality Standards. The UST-61 24-Hour Release and UST Leak Reporting Form were submitted to the NCDEQ UST Section on February 13, 2024. Prior to funding, NCHFA requested that a State-approved remediation plan be prepared for the removal of the UST and associated petroleum-impacted soil to the extent practicable. The UST Closure and Initial Abatement Action Plan dated March 5, 2024 was approved by NCDEQ on March 14, 2024 with a Low Risk classification and documents the scope of services for the heating oil UST removal, petroleum-impacted soil removal, and associated soil sampling (**Attachment 7**) at the Subject Property. **The heating oil UST and identified petroleum-impacted soil shall be removed and remediated to acceptable NCDEQ residential MSCC and NC2L GWQS standards and obtain a No Further Action or equivalent letter prior to development. All documentation of the remediation must be provided to NCORR and appended to the environmental review record (ERR).**
>
> If suspect asbestos-containing material (ACM) is found during demolition and redevelopment activities, it should be assumed to contain asbestos until laboratory analysis can confirm or deny their asbestos content. The NC Department of Health and Human Services (DHHS) and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos professionals in accordance with all applicable

federal, state and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, NC Hazardous Waste Rules, and NC Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the Health Hazards Control Unit (HHCU) of the NC DHHS Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607.

Lead-based Paint (LBP) inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. All LBP and ACM debris will be properly disposed of in a NC DWM approved landfill facility in accordance with applicable regulations. The Asbestos and Lead-based Paint Surveys/ Clearance Reports and applicable permits will be appended to this ERR.

While not considered a REC, if encountered during remediation or site development, all USTs, septic systems, and water supply wells should be *closed* in accordance with applicable laws. If any additional USTs are discovered, then NC DEQ DWM's UST Section Asheville Regional Office will be notified. If any abandoned wells are discovered, then NC DEQ will be notified and abandoned in accordance with Title 15A. Subchapter 2C.0100. "Any open burning associated with the subject proposal must be in compliance with 15 A NCAC 2D.1900" (*See* **Attachment 28**). In the event that unexpected contaminated or potentially hazardous materials, soils or debris are encountered during demolition or construction, work in the area shall cease immediately, and the work area shall be secured. The NC DEQ Asheville Regional Office will be contacted and the contamination assessed with an environmental consultant. Appropriate measures will be taken to address the hazard(s) (i.e., contaminated soils, hazardous debris, USTs, lead-based paint, etc.), and, if removed, will be properly disposed of in the appropriate NC DEQ DWM approved facility in accordance with federal, state and local laws and regulations (e.g., RCRA Subtitles C and D, NESHAP 40 CFR 61.150, and NC Solid Laws NCGS 130A, and NC Hazardous Waste Rules 15A NCAC 13A).

Based upon the site inspection, Phase I ESA, and review of available environmental and historical records and reports for the Subject Property and surrounding area, there is one REC and potential radon identified that could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property without proper mitigation. With the proper mitigation measures and protocols discussed above, the Subject Property will be unlikely to contain hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the Subject Property. The proposed project is in compliance with contamination and toxic substances requirements.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM

Environmental SME

Community Development

NC Office of Recovery and Resiliency

Andrea.L.Gievers@Rebuild.NC.Gov

(845) 682-1700

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**Adeline Wolfe**
**Mountain Housing Opportunities, Inc.**
Real Estate Developer, Community Investments

**64 Clingman Ave, Suite 101**
Asheville, NC 28801
828.254.4030 Ext.133

# USFWS Response to NCORR Consultation

## Gievers, Andrea

**From:** Reid, Rebekah N <rebekah_reid@fws.gov>
**Sent:** Thursday, January 30, 2025 7:52 AM
**To:** Gievers, Andrea
**Cc:** Hamstead, Byron A
**Subject:** [External] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request
**Attachments:** 20230216_23-445_email response exchange concluding consult.pdf

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Andrea,

The consultation done by Byron in Feb of 2023 remains valid. The removal of trees from the site in March meets the time-of-year restrictions recommended in the consultation and agreed to by the project proponent; therefore, we have no reason to update what was sent.

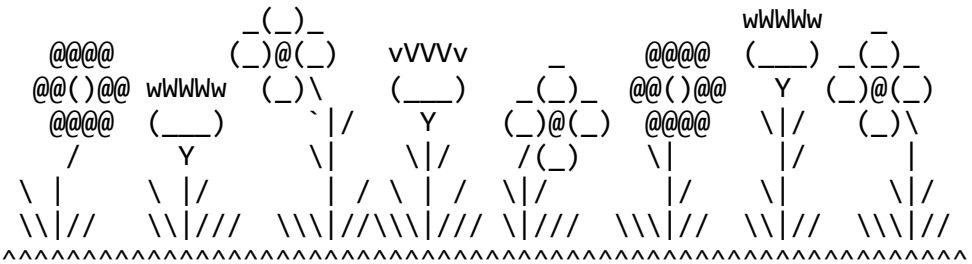
If you need anything additional from USFWS, please let us know.

Thank you,

Rebekah Reid

Consultation Biologist and Section 7 Team Lead
US Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa St., Suite B
Asheville, North Carolina 28801

Office phone: 828-258-3939 (x3 for the Planning and Consultation Team)
Cell phone: 828-782-0090



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## Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Hamstead, Byron A <byron_hamstead@fws.gov>

Thu 2/16/2023 9:58 AM

To: Thomas S Hawkins, PWS <THawkins@ecslimited.com>
Cc: Zach Windham <ZWindham@ecslimited.com>;Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>

Thanks Thomas.

The proposed impact avoidance and minimization measures described in your last email would support our concurrence with "may affect, not likely to adversely affect" determinations from the action agency for all the bat species referenced in our January 11, 2023, email. We reiterate that these measures would also support our concurrence with a "may affect, not likely to adversely affect" determination from the action agency for the proposed endangered tricolored bat (*Perimyotis subflavus*), should it become listed in the future.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species and we require no further action at this time. Further coordination and/or consultation may be required under the Endangered Species Act (ESA) if: (1) information reveals impacts of this identified action which may affect or may have affected listed species or critical habitat, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

Thanks again for the coordination.

Byron

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

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**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Tuesday, February 7, 2023 11:16 AM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** RE: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Hi Byron,

Greatly appreciate your time reviewing this project and enjoyed our discussion last week.

I've spoken with our client, Mountain Housing Opportunities, and they are in the process of contracting tree clearing services within the proposed development area and the work will be completed by March 15, 2023. In addition, they agreed to have the manmade structures on the property surveyed for evidence of bats within two weeks prior to the demolition activities.

Please let me know if the actions above are suitable, and if you require any additional information, I'm available by email here or at (864) 350-2414.

Thank you,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Wednesday, January 11, 2023 2:21 PM
**To:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Thanks for the coordination Thomas. We offer the following comments and recommendations to inform prudent effect determinations to listed species from the action agency:

Listed bats
Based on the information provided, suitable habitat occurs within the proposed action area (50CFR 402.02) for the federally endangered Northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus,* see information below pertaining to this animal's federal status). We acknowledge that you did not detect caves or cave-like features within the action area. However, a known roost supporting tricolored bat and the federally endangered gray bat (*Myotis grisescens*) occurs within 0.5 miles of the proposed action area.

During their "active seasons," the animals listed above may forage, commute, and/or roost within the action area. The following impact avoidance and minimization measures would reduce the probability for take of these animals and support our concurrence with a "may affect, not likely to adversely affect" determination from the appropriate action agency:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Tricolored bat
On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat as endangered under the Act. The Service has up to 12 months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of White Nose Syndrome (WNS). Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the Act; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and "take" will apply. Therefore, if you suspect your future or existing project may affect tricolored bats after the

potential new listing goes into effect, we recommend analyzing possible effects of the project on tricolored bats and their habitat to determine whether consultation under section 7 of the Act is necessary. Conferencing procedures can be followed prior to listing to ensure the project does not jeopardize the existence of a species. Projects with an existing section 7 biological opinion may require re-initiation of consultation to provide uninterrupted authorization for covered activities.

Monarch butterfly
Monarch butterfly (*Danaus plexippus*) is a candidate species, and we appreciate the project proponent's consideration of monarch butterfly when evaluating the action area for impacts to federally listed species and their habitats. The species is not currently subject to section 7 consultation, and an effects determination is not necessary. However, incorporating proactive conservation measures on behalf of this animal may preclude the need to list it in the future. Attached are several recommendations on behalf of this species and other pollinators for the Applicant's consideration.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species. Please be aware that in accordance with the Endangered Species Act it is the responsibility of the appropriate federal action agency or its designated representative to review its activities or programs and to identify any such activities or programs that may affect endangered or threatened species or their habitats. If it is determined that the proposed activity may adversely affect any species federally listed as endangered or threatened, formal consultation with this office must be initiated.

There is a lot here Thomas. Please reach out if you have any questions.

Regards,
Byron

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

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---

**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Sunday, December 11, 2022 5:51 PM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good evening Byron,

Please see the attached request for comments, questions, and/or concurrence on the potential presence of federally threatened and endangered species for a proposed multi-family development located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. We are submitting this request as part of a HUD Part 58 Environmental Assessment. Please let me know if I can assist with any questions or if you require additional information.

Thank you,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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# NCORR Consultation with USFWS

## Gievers, Andrea

**From:** Gievers, Andrea
**Sent:** Tuesday, January 7, 2025 4:39 PM
**To:** rebekah_reid@fws.gov
**Subject:** NCORR Balsam Edge, Haywood County - Previously Reviewed Section 7
**Attachments:** NCORR USFWS Balsam Edge pkg 1.7.25.pdf

Hello Ms. Reid:

Please find attached the 10-step Project Review Package for ***Balsam Edge*** located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786. The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed Affordable Housing Development Fund Program project. Balsam Edge is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Due to the greater need for available affordable housing after Hurricane Helene, we appreciate you reaching out with any questions at your earliest convenience.

**NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office.** Before the NCHFA HUD NEPA 24 CFR Part 58 environmental review was completed, there were choice limiting actions committed by the subrecipient, Mountain Housing Opportunities (MHO) when **trees were cleared** from the Subject Property between March 6 and March 10, 2023. NCORR has updated the Species List and reviewed the proposed project using the USFWS Asheville Ecological Services' online 10-step project review process and made "**No Effect**" determinations for proposed/listed species and/or proposed/designated critical habitat except a "**May Affect, Not Likely to Adversely Affect**" determinations for the Rusty-patched Bumble Bee and Monarch Butterfly, *Candidate Species and determination not required*, and a "**no Eagle Act permit required**" determination for eagles. *The USFWS IPaC tool has been inoperable for the Rusty-patched Bumble Bee since mid-December. However, I have included the species in this review based on the NCNHP Element Occurrences List.* The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Thank you so much for your time and assistance!

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Josh Stein, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

January 7, 2025

Ms. Janet Mizzi
U.S. Fish and Wildlife Service
Asheville ES Field Office
160 Zillicoa Street
Asheville, NC 28801

Sent Via Email: rebekah_reid@fws.gov

RE: Section 7 Project Review - Effect Determination
NCORR - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Ms. Mizzi:

The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed affordable housing project, Balsam Edge, at located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786. The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office.**

The purpose of this letter is to provide the U.S. Fish and Wildlife Service – Asheville ES Field Office (USFWS) notice of the proposed project and to document compliance with Section 7 of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as well as the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703–712) and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668c, 54 Stat. 250), as amended.

We have reviewed the proposed project using the USFWS Asheville Ecological Services' online 10-step project review process and made "**No Effect**" determinations for proposed/listed species and/or proposed/designated critical habitat except a "**May Affect, Not Likely to Adversely Affect**" determinations for the Rusty-patched Bumble Bee and Monarch Butterfly, *Candidate Species and determination not required*, and a "**no Eagle Act permit required**" determination for eagles. Please find attached the and 10-step Project Review Package *including NCHFA's and ECS's previous correspondence with your Office* for the proposed project in accordance with all instructions provided, using the best available information to reach our conclusions. *The USFWS IPaC tool has been inoperable for the Rusty-patched Bumble Bee since mid-December. However, I have included the species in this review based on the NCNHP Element Occurrences List.*

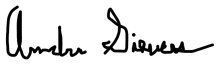
Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. The proposed project site plans are included in **Attachment 1**. The Subject Property consists of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 1**. Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Before the NCHFA HUD NEPA 24 CFR Part 58 environmental review was completed, there were choice limiting actions committed by the subrecipient, Mountain Housing Opportunities (MHO) when **trees were cleared** from the Subject Property between March 6 and March 10, 2023. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 1**. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

The USFWS Asheville Office provided the ***General Pollinator Habitat Guidance*** for incorporation into this site's development and maintenance measures. The proposed project will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. All necessary permits will be identified and obtained prior to commencing work and appended to the Environmental Review Record (ERR). The proposed project would not jeopardize the continued existence of ESA species or destroy or adversely modify their critical habitat.

NCORR is submitting the above information as notification of its **No Effect**" determinations for proposed/listed species and/or proposed/designated critical habitat except a "**May Affect, Not Likely to Adversely Affect**" determinations for the Rusty-patched Bumble Bee and Monarch Butterfly, *Candidate Species and determination not required*, and a "**no Eagle Act permit required**" determination for eagles and requests *acknowledgement* from USFWS that they have received and reviewed this determination for species under USFWS jurisdiction.

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,



Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Attachments:

- 10-step Project Review Package
- NCHFA's USFWS Asheville Office Correspondence

# ATTACHMENT 1:

# 10-Step Project Review Package

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Ecological Services Field Office
160 Zillicoa Street, Suite B
Asheville, NC 28801-1082
Phone: (828) 258-3939 Fax: (828) 258-5330

In Reply Refer To: 11/01/2024 18:53:08 UTC
Project Code: 2025-0014389
Project Name: Balsam Edge

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The enclosed species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new species information can change your official species list. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends you visit the ECOS-IPaC website at regular intervals during project planning and implementation to ensure your species list is accurate or obtain an updated species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment (BA) or biological evaluation (BE) should be completed for your project. A BA is required for major construction activities (or other undertakings having similar physical impacts) considered to be Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)) (NEPA). For projects other than major construction activities, the Service suggests that a BE be prepared to determine effects of the action and whether those effects may affect listed species and/or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other

activities that are caused by the proposed action. A consequence is caused by the proposed action if it is reasonably certain to occur and would not occur “but for” the proposed action.. Recommended contents of a BA/BE are described at 50 CFR 402.12. More information and resources about project review and preparing a BA/BE can be found at the following web link: https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview.

If a Federal agency determines listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. The Service is not required to concur with "no effect" determinations from Federal action agencies. If consultation is required, the Service recommends that candidate species, proposed species, proposed critical habitat, and at-risk species be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or licensed applicants, can be found in the "Endangered Species Consultation Handbook" at the following web link: https://www.fws.gov/media/endangered-species-consultation-handbook.

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). More information about MBTA and BGEPA can be found at the following web link: https://www.fws.gov/program/migratory-birds.

We appreciate your consideration of Federally listed species. The Service encourages Federal agencies to include conservation of threatened and endangered species in their project planning to further the purposes of the Act. Please contact our staff at 828-258-3939, if you have any questions. In any future correspondence concerning this project, please reference the Consultation Code which can be found in the header of this letter.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

# OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether

any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Asheville Ecological Services Field Office**
160 Zillicoa Street, Suite B
Asheville, NC 28801-1082
(828) 258-3939

# PROJECT SUMMARY

Project Code: 2025-0014389
Project Name: Balsam Edge
Project Type: Residential Construction
Project Description: The North Carolina Office of Recovery and Resiliency (NCORR) is funding the proposed project through HUD CDBG-DR funds. The proposed project is located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786. The proposed project involves new construction of an 84-unit affordable housing apartment complex. Balsam Edge will include a stand-alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.50478,-82.98439867711772,14z

Counties: Haywood County, North Carolina

# ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

| NAME | STATUS |
|---|---|
| Gray Bat *Myotis grisescens*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6329 | Endangered |
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Endangered |
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## INSECTS

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

## FLOWERING PLANTS

| NAME | STATUS |
|---|---|
| Small Whorled Pogonia *Isotria medeoloides*<br>Population:<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/1890 | Threatened |

## LICHENS

| NAME | STATUS |
|---|---|
| Rock Gnome Lichen *Gymnoderma lineare*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/3933 | Endangered |

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Sep 1 to Aug 31 |

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper

Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

**Breeding Season** (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

**Survey Effort** (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

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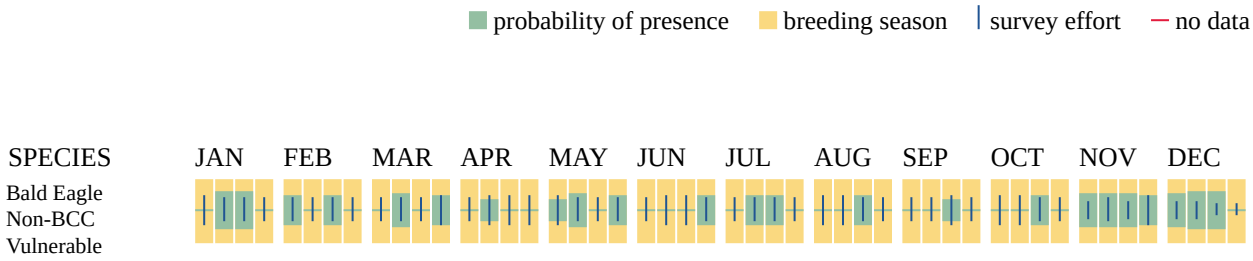


Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

# MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Sep 1 to Aug 31 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| Black-capped Chickadee *Poecile atricapillus practicus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/10645 | Breeds Apr 10 to Jul 31 |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9643 | Breeds May 20 to Aug 10 |
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9406 | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/10678 | Breeds May 1 to Aug 20 |

| NAME | BREEDING SEASON |
|---|---|
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Kentucky Warbler *Geothlypis formosa*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9443 | Breeds Apr 20 to Aug 20 |
| Prairie Warbler *Setophaga discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9513 | Breeds May 1 to Jul 31 |
| Prothonotary Warbler *Protonotaria citrea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9439 | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9398 | Breeds May 10 to Sep 10 |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/9478 | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9431 | Breeds May 10 to Aug 31 |

# PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence (■)**

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

**Breeding Season (■)**

Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

**Survey Effort** (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

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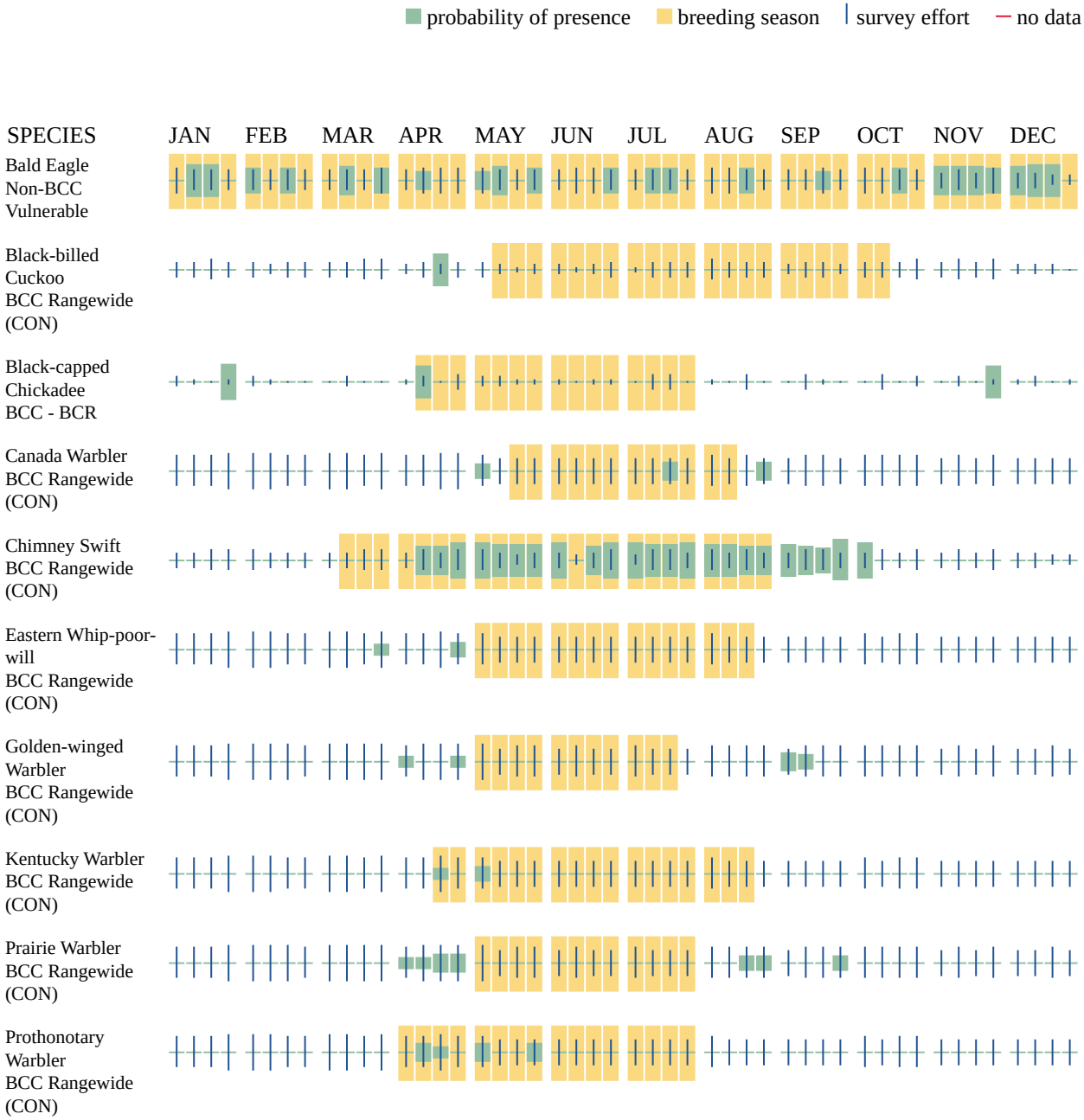
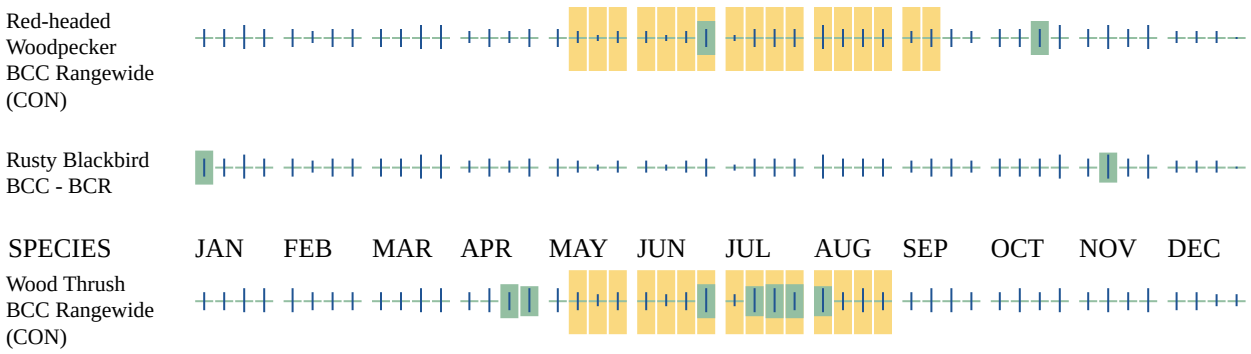





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

# WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- R4SBC

# IPAC USER CONTACT INFORMATION


| | |
|---|---|
| Agency: | North Carolina Department of Agriculture and Consumer Services |
| Name: | Andrea Gievers |
| Address: | P.O. Box 110465 |
| Address Line 2: | NCORR |
| City: | Durham |
| State: | NC |
| Zip: | 27709 |
| Email | andrea@arcolaenv.com |
| Phone: | 8456821700 |

NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
**Deputy Director, Natural Heritage Program**

NCNHDE-28718

December 19, 2024

Andrea Gievers
NCORR
P.O. Box 110465
Durham, NC 27709
RE: Balsam Edge

Dear Andrea Gievers:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact the NCNHP at natural.heritage@dncr.nc.gov.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Balsam Edge
December 19, 2024
NCNHDE-28718

Element Occurrences Documented Within a One-mile Radius of the Project Area

| Taxonomic Group | EO ID | Scientific Name | Common Name | Last Observation Date | Element Occurrence Rank | Accuracy | Federal Status | State Status | Global Rank | State Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| Butterfly | 25593 | Erora laeta | Early Hairstreak | 2006-06-20 | D | 4-Low | --- | Significantly Rare | G2G3 | S2S3 |
| Mammal | 39016 | Myotis grisescens | Gray Bat | 2019-09-11 | E | 2-High | Endangered | Endangered | G3G4 | S1 |
| Mammal | 39068 | Perimyotis subflavus | Tricolored Bat | 2018-04-20 | E | 2-High | Proposed Endangered | Endangered | G3G4 | S3 |
| Moss | 22911 | Syntrichia papillosa | Papillose Tortula | 1988-09-29 | E | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |
| Sawfly, Wasp, Bee, or Ant | 37104 | Bombus affinis | Rusty-patched Bumble Bee | 1952-04-30 | H | 4-Low | Endangered | Significantly Rare | G2 | S1 |
| Stonefly | 40276 | Acroneuria arida | Elegant Stone | 1901-07 | H | 3-Medium | --- | Significantly Rare | G3 | SH |
| Vascular Plant | 23933 | Hackelia virginiana | Virginia Stickseed | 1968-Pre | H | 5-Very Low | --- | Significantly Rare Peripheral | G5 | S2 |
| Vascular Plant | 23969 | Orbexilum onobrychis | Lanceleaf Scurfpea | 1891-07-17 | X | 5-Very Low | --- | Special Concern Historical | G5 | SX |
| Vascular Plant | 6840 | Platanthera herbiola | Northern Rein Orchid | 1937-06-17 | H | 3-Medium | --- | Special Concern Vulnerable | G4?T4Q | S1S2 |
| Vascular Plant | 19109 | Platanthera peramoena | Purple Fringeless Orchid | 1937-07 | H | 4-Low | --- | Threatened | G5 | S2 |
| Vascular Plant | 3312 | Poa palustris | Swamp Bluegrass | 1931-07-11 | H | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |

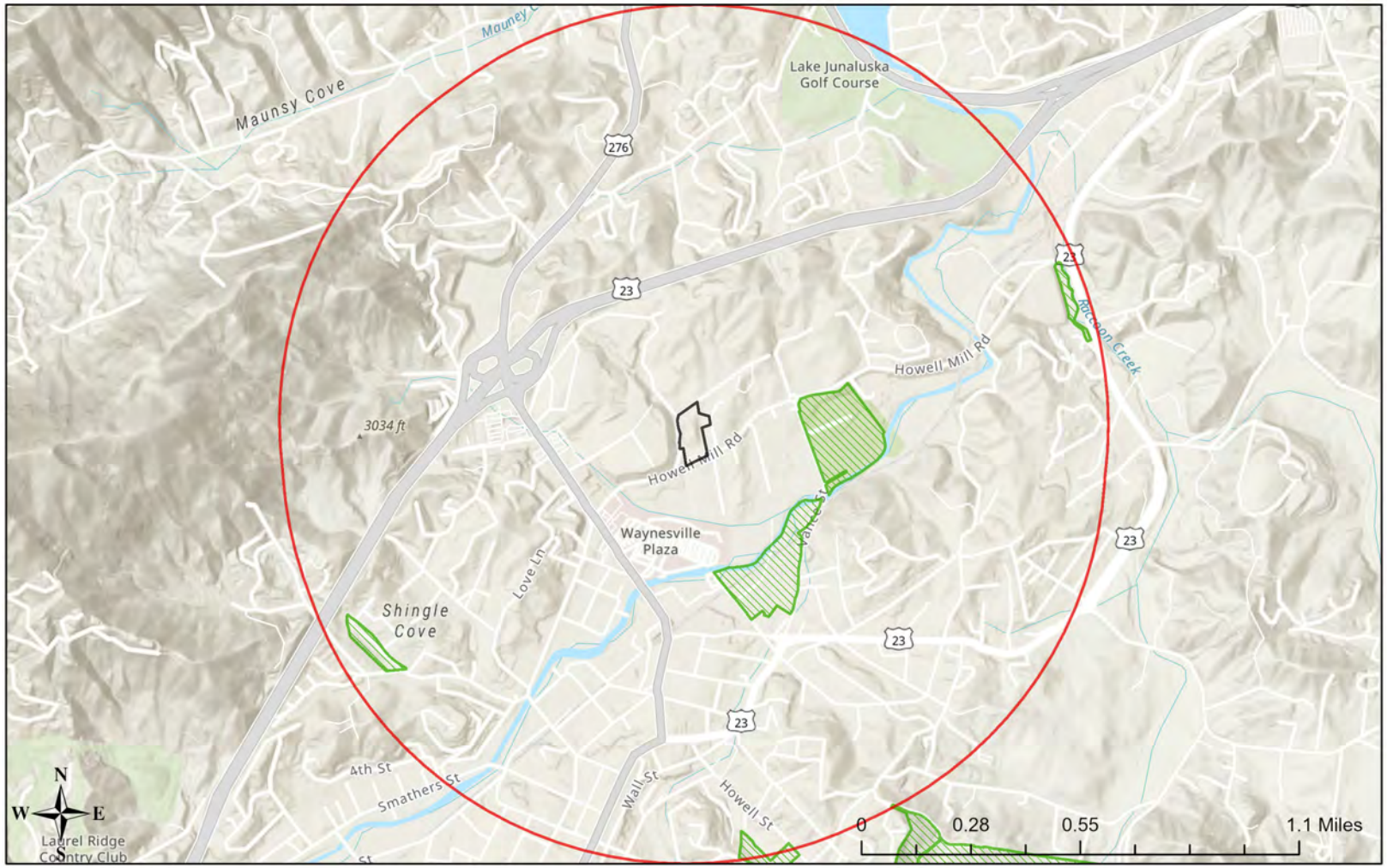
No Natural Areas are Documented Within a One-mile Radius of the Project Area

Managed Areas Documented Within a One-mile Radius of the Project Area

| Managed Area Name | Owner | Owner Type |
|---|---|---|
| Mountain Research Station | NC Department of Agriculture, Research Stations Division | State |
| NC Department of Transportation Mitigation Site | NC Department of Transportation | State |
| Town of Waynesville - Chestnut Park | Town of Waynesville | Local Government |
| Town of Waynesville - Waynesville Recreation Park | Town of Waynesville | Local Government |
| Town of Waynesville Open Space | Town of Waynesville | Local Government |

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on December 19, 2024; source: NCNHP, Fall (October) 2024. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

# NCNHDE-28718: Balsam Edge




December 19, 2024

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

Esri, NASA, NGA, USGS, FEMA
State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

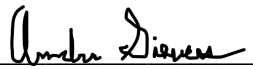
**Species Conclusions Table**

Project Name: Balsam Edge

Date: 12/19/24

| Species / Resource Name | Conclusion | ESA Section 7 / Eagle Act Determination | Notes / Documentation |
|---|---|---|---|
| Gray Bat | No suitable habitat present in action area | No Effect | No caves observed on site. |
| Indiana Bat | No suitable habitat present in action area | No Effect | Potential tree habitat previously cleared. |
| Northern Long-eared Bat | No suitable habitat present in action area | No Effect | Potential tree habitat previously cleared. |
| Tricolored Bat | No suitable habitat present, species not present | Not likely to jeopardize specie's continued existence | Potential tree habitat previously cleared. |
| Monarch Butterfly | Potential suitable habitat present in action area | Candidate Species - May Affect, Not Likely to Adversely Affect | Pollinator habitat recommendations can be incorporated. |
| Small Whorled Pogonia | No suitable habitat present in action area | No Effect | No species or suitable habitat observed. |
| Rock Gnome Lichen | No suitable habitat present in action area | No Effect | No species or suitable habitat observed. |
| Rusty-patched Bumble Bee | Potential suitable habitat present in action area | May Affect, Not Likely to Adversely Affect | Pollinator habitat recommendations can be incorporated. |
| Bald Eagle | Unlikely to disturb nesting bald eagles | No Eagle Act Permit Required | No mature tree clearing. No nests or individuals observed on or near site. |

Acknowledgement: I agree that the above information about my proposed project is true. I used all of the provided resources to make an informed decision about impacts in the immediate and surrounding areas.



Signature /Title

12/19/24

Date

# United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

Date: 1/7/25

**Self-Certification Letter**

Project Name Balsam Edge

IPaC Project Code: 2025-0014389 IPaC Record Locator #_____

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Raleigh Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. Based on your analysis, mark all the determinations that apply:

- ■ "no effect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- ■ "may affect, not likely to adversely affect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- ■ "no Eagle Act permit required" determinations for eagles.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” or “not likely to adversely affect” determinations for proposed and listed species and proposed and designated critical habitat; the “may affect” determination for Northern long-eared bat; and/or the “no Eagle Act permit required” determinations for eagles. Additional coordination with this office is not needed. Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species. Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year. Information about the online project review process including instructions, species information, and other information regarding project reviews within North Carolina is available at our website http://www.fws.gov. If you have any questions, you can write to us at Raleigh@fws.gov or please contact Leigh Mann of this office at 919-856-4520, ext. 10.

Sincerely,

/s/Pete Benjamin

Pete Benjamin
Field Supervisor
Raleigh Ecological Services

Enclosures - project review package

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

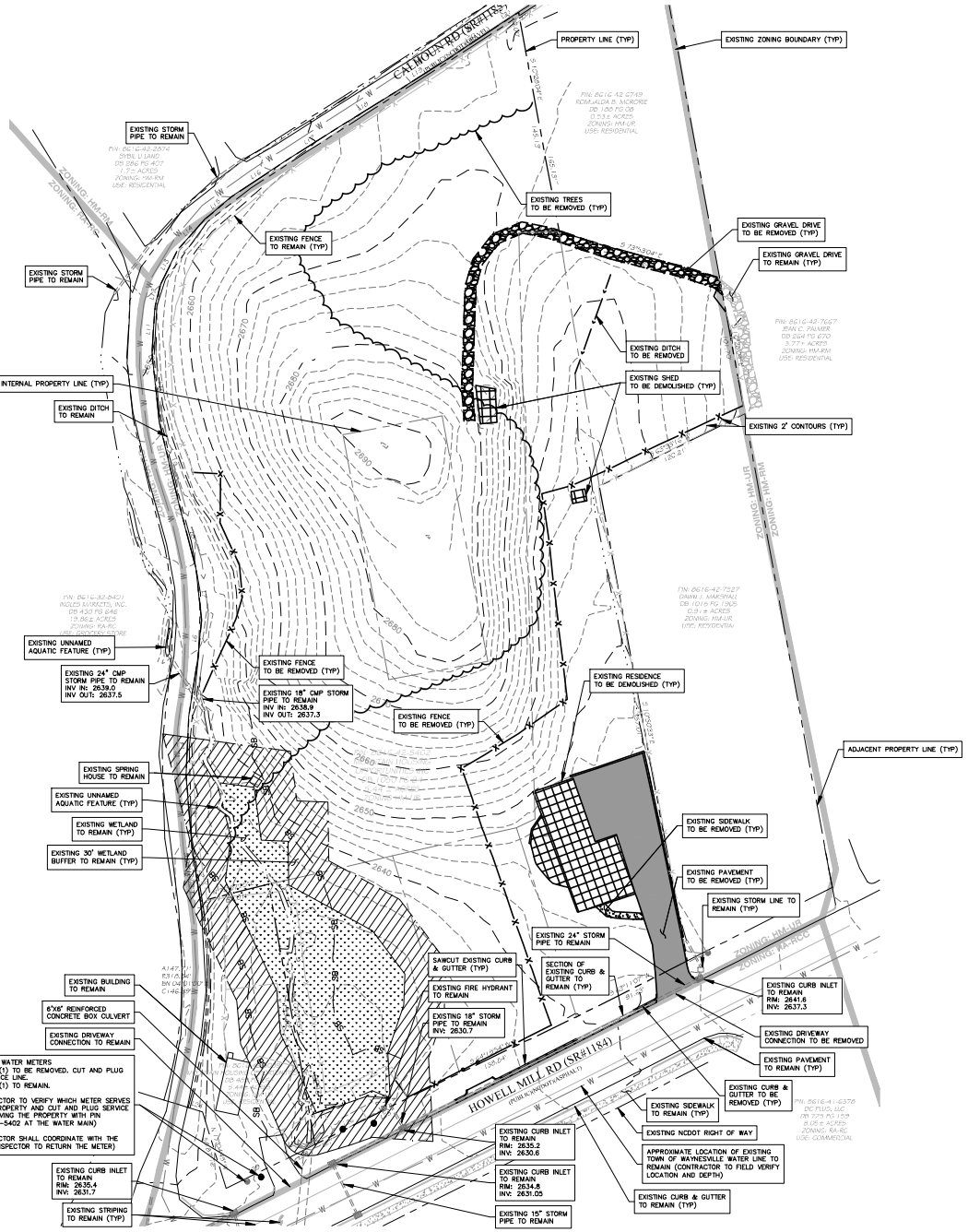
Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

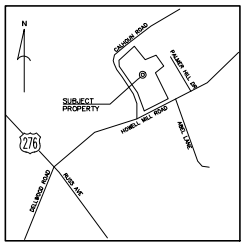
## NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTIONS@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

## EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN - 1.5 SPACES PER UNIT
MAX - 1 SPACE PER 20 SPACES
UNITS - 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
828.252.5388

BOONE OFFICE
1594 HWY 105 EXTENSION
SUITE 100 #179
BOONE, NC 28607
828.719.4755


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

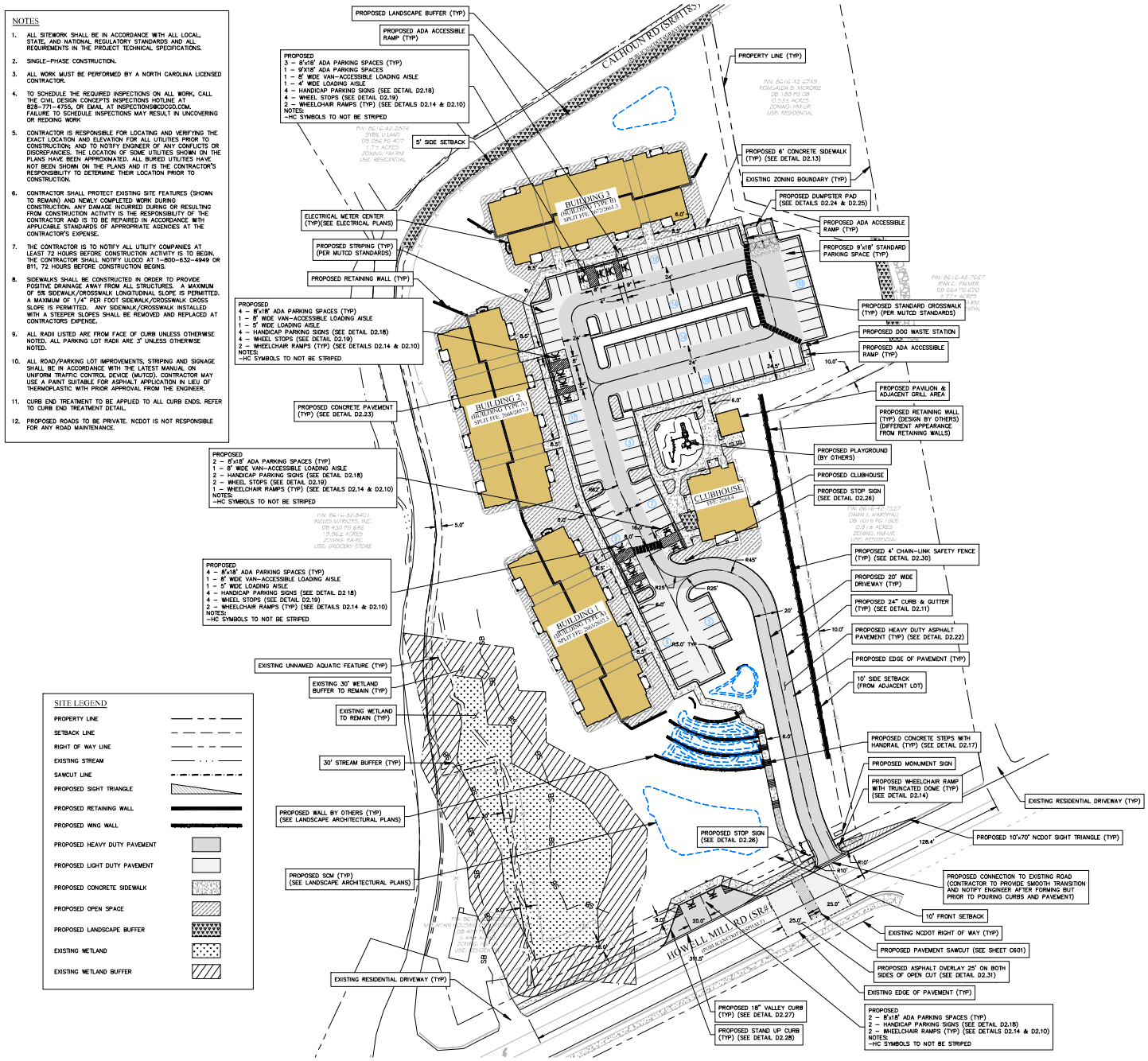
FOR REVIEW ONLY

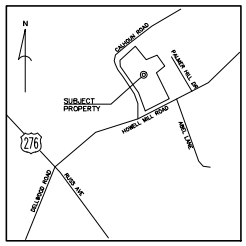
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101

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ASHEVILLE, NC 28801
(828) 252-5388
NC FIRM LICENSE # C-2439
SURVEYING SERVICES
324 BLACKSTOCK ROAD
SPARTANBURG, SC 29301
(864) 582-8711
SC FIRM LICENSE # 3267
RESIDENTIAL SERVICES
STORM WATER SYSTEMS • WATER & SEWER SYSTEMS
MASTER PLANNING
SITE DESIGN
SUBDIVISION PLANNING
www.civildesignconcepts.com

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BRUCE 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

# ATTACHMENT 2:

# NCHFA's USFWS Asheville Office Correspondence

General Pollinator Habitat Guidance

Pollinators, such as most bees, some birds and bats, and other insects, including moths and butterflies, play a crucial role in the reproduction of flowering plants and production of most fruits and vegetables. Over 75 percent of flowering plants and about 75 percent of crops are pollinated by these types of fauna. A recent study of the status of pollinators in North America by the National Academy of Sciences found that populations of honey bees (which are not native to North America) and many wild pollinators are declining. Declines in wild pollinators are a result of disease and the loss, degradation, and fragmentation of habitat. Because loss of habitat and diminished native food sources have decreased the populations and diversity of pollinators throughout the country, we recommend that development projects be sited in areas that are previously disturbed (fallow fields, closed industrial sites, etc.) or sites that do not impact mature forests, streams, or wetlands.

We have records of rare species of pollinators in the area, including monarch butterfly (*Danaus plexippus plexippus*), a federal candidate for listing.[1] Monarch butterflies east of the Rocky Mountains used to number in the hundreds of millions but the population has declined by approximately 80 percent. Loss of habitat due to genetically modified crops, overuse of herbicides and insecticides, urban, suburban and agricultural development, disease, climate change, and overwintering site degradation are the leading causes of monarch decline. Adults use a wide variety of flowering plants throughout migration for nectar and breeding. However, milkweed plants (*Asclepias* spp.) are essential to monarch breeding as these are the only genus of plants that can host monarchs in their larval form. For a regional and seasonal list of plants important to monarch butterflies, please visit the Xerces Society website at: *http://www.xerces.org/monarch-nectar-plants/*.

Although the provisions of section 7 of the Act do not currently apply to candidate species or other non-listed pollinators, we would greatly appreciate your assistance in determining if monarch butterflies or suitable habitat for the species is present on the proposed project site. If individuals or suitable habitat is present, impacts should be avoided. More specific information about monarch butterfly can be found at the Service website dedicated to the species at: *https://www.fws.gov/savethemonarch/*.

To reduce development impacts to monarch butterflies and other pollinators and/or to increase the habitat and species diversity within the project area, we recommend the following measures be incorporated into project designs:

1. Throughout the site, avoid non-native seed mixes and plants. Instead, sow native seed mixes and plant species that are beneficial to pollinators.

[1]"Taxa for which the [Fish and Wildlife] Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened. Proposed rules have not yet been issued because this action is precluded at present by other listing activity. Development and publication of proposed rules on these taxa are anticipated. The Service encourages State and other Federal agencies as well as other affected parties to give consideration to these taxa in environmental planning" (*Federal Register*, February 28, 1996). Taxa formerly considered as "Category 1" are now considered as "candidates."

a. Avoid seed mixes and plants that have been pre-treated with insecticides, such as neonictinoids.
b. Taller-growing pollinator plant species should be planted around the periphery of the site and anywhere on the site where mowing can be restricted during the summer months. Taller plants, not mowed during the summer, would provide benefits to pollinators, habitat for ground-nesting/feeding birds, and cover for small mammals.
c. Native low-growing/groundcover species should be planted in areas that need to be maintained. This would provide benefits to pollinators while also minimizing the amount of maintenance, such as mowing and herbicide treatment.
d. Using a seed mix that includes milkweed species is especially beneficial for monarch butterflies. The following website provides additional information and a comprehensive list of native plant species that benefit pollinators: *http://www.xerces.org/pollinator-resource-center/mid-atlantic*. We also offer our assistance with developing seed mixes that can be used in conjunction with fast growing erosion control seed mixes for overall soil stability and pollinator benefits.
e. Additional information regarding plant species, seed mixes, and pollinator habitat requirements can be provided upon request.

2. Mowing and grounds maintenance, including pesticide use, should be scheduled to not interfere with monarch breeding or nectaring at project sites that occur along the migration route. To reduce harm, we advise mowing in the fall or winter when flowers are not in bloom.
3. Provide nesting sites for pollinator species. Different pollinators have different needs for nesting sites. Therefore, we recommend project designs include a diverse array of habitats to accommodate varied pollinators. For example:
    a. Hummingbirds typically nest in trees or shrubs.
    b. Many butterflies lay eggs on specific host plants.
    c. Most bees nest in the ground and in wood or dry plant stems.
    d. For additional information and actions that can be taken to benefit pollinators, please visit the following website: *https://www.fws.gov/pollinators/*.
4. Minimize effects of outdoor light pollution. Recent studies indicate that artificial lighting disrupts the natural reproduction and feeding patterns of nocturnal pollinators such as beetles and moths. This disruption results in a decrease of pollination rates in plants and a decrease in the health and diversity of nocturnal pollinators. When developing an outdoor lighting plan or installing any outdoor lighting devices, we recommend the following measures be considered to minimize potential adverse effects of outdoor lighting:
    a. Decrease the number of light fixtures, as practicable, to meet lighting objectives.
    b. Install lighting only in areas that need illumination for safety (e.g. paths, roads, etc.). Avoid lighting landscape features such as trees, shrubs, or building facades.
    c. Install fully shielded lights that direct light downward.

d. Use only low-pressure sodium (LPS), high-pressure sodium (HPS), or light emitting diode (LED) light sources that emit “warm” light. “Warm” light sources are those that contain low amounts of blue light in their spectrum. Choosing light sources with a color temperature of no more than 3,000 Kelvins will minimize the effects of blue light exposure.
e. For additional information and actions that can be taken to reduce outdoor light pollution, please visit the following website: *https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/*.

General Lighting Avoidance and Minimization Measures for *Myotis* sp.

When developing an outdoor lighting plan, installing any outdoor lighting devices, performing maintenance at existing lights, or modifying lighting, we recommend consideration for the following measures on behalf of bats that are adverse to lighting. For additional information and practices to reduce outdoor light pollution, please visit *https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/*.

- Reduce the amount of lighting needed for all activities to the maximum extent practicable while meeting lighting objectives.
- Install lighting only in areas that need illumination for safety (e.g. paths, roads, etc.).
- Avoid lighting landscape features such as trees, shrubs, building facades, adjacent wooded areas, or the surface waters of rivers and streams that provide suitable habitat for bats, pollinators and other wildlife species.
- Use the shortest light pole that meets safety requirements.
- Use light fixtures with a Backlight-Uplight-Glare (BUG) rating of 1-0-3 or less. The goal is to be as close to 0 for all three ratings with a priority for "uplight" rating of 0 and "backlight" rating as low as practicable.
- Use light fixtures with a lower lumen output, reducing overall brightness.
- Use light fixtures with a more rectangular light pattern as well as house side or fully shielded lights to minimize lighting outside of the pavement area and direct light downwards.
- Use only low-pressure sodium (LPS), high-pressure sodium (HPS), or light emitting diode (LED) light sources that emit “warm” light. “Warm” light sources are those that contain low amounts of blue light in their spectrum. Choosing light sources with a color temperature of no more than 3,000 Kelvins will minimize the effects of blue light exposure (Downs 2003).

Construction Lighting

- Between March 15 and November 15 (active season for gray bat), limit all construction-related lighting to whatever is necessary to maintain safety in active work areas.
- Limit night work that requires artificial light.
- Restrict lighting to where active construction is occurring.

# USFWS REQUEST LETTER

PROPOSED BALSAM EDGE APARTMENTS SITE
333 HOWELL MILL ROAD
WAYNESVILLE, HAYWOOD COUNTY, NORTH CAROLINA

ECS PROJECT NO. 49:18762

FOR U.S. FISH AND WILDLIFE SERVICE

DECEMBER 11, 2022

December 11, 2022

U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801-1082

ECS Project No. 49:18762

Reference: USFWS Request Letter, Proposed Balsam Edge Apartments Site, 333 Howell Mill Road, Waynesville, Haywood County North Carolina

To Whom Tt May Concern:

ECS Southeast, LLP (ECS) is pleased submit this USFWS Request Letter, for the above-referenced site, for information concerning the possible presence of threatened and endangered species and their habitats. If there are questions regarding this request, or a need for further information, please contact the undersigned.

ECS Southeast, LLP

Thomas S. Hawkins, Jr., PWS
Environmental Project Manager
thawkins@ecslimited.com
864-987-1610

Paul M. Stephens IV, P.E., PWS
Associate Principal
pstephens@ecslimited.com
843-654-4448

## 1.0 BACKGROUND INFORMATION

This review is requested in order to meet the environmental review requirements for HUD Part 58 at the Proposed Balsam Edge Apartments Site, located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The site is proposed for construction of three multi-family apartment buildings, a proposed community building, and appropriate paved parking lots, access roads, and stormwater management areas for the development. The project study area (PSA) consists of a 5.1 acre portion of a parent parcel totaling approximately 5.44 acres. According to the Haywood County Online GIS Database website, the Parcel Identification Number (PIN) is: 8616-42-5402 (5.44 total acres). The site currently consists of wooded land, fields, a residential structure, and a shed. Surrounding properties consist of wooded land, fields, single-family residential houses, and commercial buildings. Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the PSA.

The Proposed Balsam Edge Apartments Site will consist of the three multi-family apartment builds, a community center, paved parking area, and playground. The structures will be utilized to provide 84 units of affordable housing for residents. This request is part of an HUD Part 58 Environmental Assessment (EA) that ECS is conducting for federal funding.

## 2.0 SITE RECONNAISSANCE

ECS personnel conducted the field investigation on November 18, 2022. The PSA currently consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. The understory vegetation within the wooded land was moderately dense and primarily consisted of goldenrod, bushy bluestem, greenbriar, and christmas fern. Low-lying areas and potential wetlands were observed along a potential stream that transects the southwest portion of the PSA. The vegetation within these low-lying areas was dense and contained sweetgum and red maple saplings, chinese privet, wild rose, japanese stiltgrass, and species of briar. The fields within the PSA primarily consisted of dense herbaceous species including orchard grass, bull thistle, narrowleaf plantain, broomsedge bluestem, purple-leaved willow-herb, allegheny monkeyflower, and goldenrod. Rock outcroppings were observed along the west-facing slope of the ridge on the northern-central portion of the site.

### USFWS

ECS utilized the USFWS IPaC database to acquire a listing of federally protected threatened and endangered species in Haywood County, North Carolina, that may have potential to occur on or within the vicinity of the PSA:

| Common Name | Scientific Name | Federal Status |
|---|---|---|
| **Bird** | | |
| Bald Eagle | *Haliaeetus leucocephalus* | BGEPA |

| Common Name | Scientific Name | Federal Status |
|---|---|---|
| **Mammal** | | |
| Gray Bat | *Myotis grisescens* | E |
| Indiana Bat | *Myotis sodalis* | E |
| Northern Long-eared Bat | *Myotis septentrionalis* | T |
| Tricolored Bat | *Perimyotis subflavus* | P |
| **Insect** | | |
| Monarch Butterfly | *Danaus plexippus* | C |
| **Flowering Plant** | | |
| Small Whorled Pogonia | *Isotria medeoloides* | T |
| **Lichen** | | |
| Rock Gnome Lichen | *Gymnoderma lineare* | E |

- BGEPA - Federally protected under the Bald and Golden Eagle Protection Act
- E - Federally Endangered
- T - Federally Threatened
- CH - Critical Habitat
- C - Candidate
- P - Proposed

**Species & Habitat Description**

**Bald Eagle**

**Description:** Distinguished by a white head and white tail feathers, bald eagles are powerful, brown birds that may weigh 14 pounds and have a wingspan of 8 feet. Male eagles are smaller, weighing as much as 10 pounds and have a wingspan of 6 feet. Sometimes confused with Golden Eagles, Bald Eagles are mostly dark brown until they are four to five years old and acquire their characteristic coloring.

**Habitat:** Bald Eagles live near rivers, lakes, and marshes where they can find fish, their staple food. Bald Eagles will also feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion. Bald Eagles require a good food base, perching areas, and nesting sites. Their habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts. In winter, the birds congregate near open water in tall trees for spotting prey and night roosts for sheltering.

**Conclusions:** The PSA currently consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. Low-lying areas and potential wetlands were

observed along a stream that transects the southwest portion of the PSA. There are no large water features adjacent to or within the site; therefore, a steady food support base is not present on the site. Additionally, bald eagles individuals or bald eagle nests have not been observed within the site.

Based on our knowledge of the site, it is ECS's opinion that suitable habitat for the bald eagle is not located within the site and bald eagles will not be impacted by the proposed project.

**Gray Bat**

**Description:** Gray bats are distinguished from other bats by the unicolored fur on their back. In addition, following their molt in July or August, gray bats have dark gray fur which often bleaches to a chestnut brown or russet. They weigh 7-16 grams. The bat's wing membrane connects to its ankle instead of at the toe, where it is connected in other species of Myotis. Females give birth to a single young in late May or early June. The bats eat a variety of flying aquatic and terrestrial insects present along rivers or lakes.

**Habitat:** With rare exceptions, gray bats live in caves year-round. During the winter, gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. They do not use houses or barns.

**Conclusions:** The PSA consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. During the site reconnaissance, ECS did not observe caves located on site. Therefore, no suitable habitat for this species is located within the site and ECS opines that this species will not be impacted by the proposed project.

**Indiana Bat**

**Description:** Indiana bats are a medium sized, chestnut brown to dark gray colored bat with a lighter belly area. They are about 2.9 to 3.9 inches in length with a wingspan of 9.5 to 10.5 inches. The hind feet of an Indiana bat tend to be small and delicate, with fewer, shorter hairs, meaning the hairs do not extend beyond the claws, compared to little brown bats. Indiana Bats also have a keeled calcar, a cartilaginous spur on the inner side of the ankle. The average weight ranges from 5.7 g to 6.6 g.

**Habitat:** During winter, Indiana bats are restricted to suitable underground hibernacula. Most of these sites are caves located in karst areas of the east-central United States; however, Indiana bats also hibernate in other cave-like locations, like abandoned mines. Most Indiana bats hibernate in caves or mines where the ambient temperature remains below 10°C, or 50.0°F, but above freezing, and remains relatively stable. These hibernacula tend to have large volumes and often have large rooms and vertical or extensive passages. Cave volume and complexity help buffer the cave environment against rapid and extreme changes in outside temperature, and vertical relief helps provide a range of temperatures and roost sites.

In summer, most reproductive females occupy roost sites in forested areas under the exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands and upland communities. Indiana bats typically forage in semi-open to closed forested habitats with open understory, forest edges, and riparian areas. Adult males occupy similar habitats but can use a wider range of roosts compared to females.

**Conclusion:** The PSA consists of wooded land, fields, a residential structure, and a shed. The exterior of the residential structure appeared intact, with little to no visible entry points for avian or bat species. Interior portions of the roof in both the residential structure and shed were observed and no evidence of avian or bat scat was observed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. During the site reconnaissance, ECS did not observe caves, mines, or other potential winter hibernacula located within the site. Mature tree growth, which could provide potential summer roost sites, were observed within the PSA; however, the mature trees within the PSA are relatively isolated and not within close proximity of substantial forested habitats. Therefore, ECS opines that a *may affect not likely to adversely affect* determination is suitable for the proposed project.

**Northern Long-eared Bat**

**Description:** The northern long-eared bat (NLEB) is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. Their fur color can be medium to dark brown on the back and tawny to pale-brown on the underside. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species range includes 37 states.

White-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat, especially throughout the Northeast where the species has declined by up to 99 percent from pre-white-nose syndrome levels at many hibernation sites. Although the disease has not yet spread throughout the northern long-eared bats entire range (white-nose syndrome is currently found in at least 25 of 37 states where the northern long-eared bat occurs), it continues to spread. Experts expect that where it spreads, it will have the same impact as seen in the Northeast.

Like most bats, northern long-eared bats emerge at dusk to feed. They primarily fly through the understory of forested areas feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation or by gleaning motionless insects from vegetation.

**Habitat:** NLEB spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, surveyors find them hibernating most often in small crevices or cracks, often with only the nose and ears visible.

During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.

**Conclusions:** The PSA consists of wooded land, fields, a residential structure, and a shed. The exterior of the residential structure appeared intact, with little to no visible entry points for avian or bat species. Interior portions of the roof in both the residential structure and shed were observed and no evidence of avian or bat scat was observed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age.

During the site reconnaissance, ECS did not observe caves, mines, or other potential winter hibernacula located within the site. Mature tree growth, which could provide potential summer roost sites, were observed within the PSA; however, the mature trees within the PSA are relatively isolated and not within close proximity of substantial forested habitats. Therefore, ECS opines that a *may affect not likely to adversely affect* determination is suitable for the proposed project.

**Tricolored Bat**

**Description:** *Perimyotis subflavus* is a small yellowish-brown insectivorous bat that is easily identified by its tri-colored fur (black at the base, followed by a band of lighter brown, and dark tips) and the juxtaposition of its black wing membrane surrounding a reddish-orange forearm. The tricolored bat has short round ears with a blunt, straight tragus. It can often be identified when hibernating by its distinctive orange forearm. It has a forearm length of 31-35 mm and weighs 4-8 g.

**Habitat:** During the spring, summer and fall - collectively referred to as the non-hibernating seasons - tricolored bats primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. In the southern and northern portions of the range, tricolored bats will also roost in Spanish moss (*Tillandsia usneoides*) and *Usnea trichodea* lichen, respectively. In addition, tricolored bats have been observed roosting during summer among pine needles, eastern red cedar (*Juniperus virginiana*), within artificial roosts like barns, beneath porch roofs, bridges, concrete bunkers, and rarely within caves. Female tricolored bats exhibit high site fidelity, returning year after year to the same summer roosting locations. Female tricolored bats form maternity colonies and switch roost trees regularly. Males roost singly.

During the winter, tricolored bats hibernate - which means that they reduce their metabolic rates, body temperatures and heart rate - in caves and mines; although, in the southern United States, where caves are sparse, tricolored bats often hibernate in road-associated culverts, as well as sometimes in tree cavities and abandoned water wells. Tricolored bats exhibit high site fidelity with many individuals returning year after year to the same hibernaculum.

**Conclusions:** The PSA consists of wooded land, fields, a residential structure, and a shed. The exterior of the residential structure appeared intact, with little to no visible entry points for avian or bat species. Interior portions of the roof in both the residential structure and shed were observed and no evidence of avian or bat scat was observed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. Two corrugated metal culverts ranging from 12-24 inches in diameter, were observed along the western boundary of the site.

During the site reconnaissance, ECS did not observe caves or mines located within the PSA. Hardwood trees were observed during the site reconnaissance, though the trees were observed to have minimal dead leaf clusters and/or tree cavities. Although bats were not observed during the field reconnaissance, potential habitat is present at the project site; therefore, ECS opines that a *may affect not likely to adversely affect* determination is suitable for the proposed project.

**Small Whorled Pogonia**

**Description:** Small-whorled pogonia has a greenish-white stem that grows between 3 – 13 inches tall. It gets its common name from the five or six grayish-green leaves that are displayed in a single whorl around the stem. When the leaves are well developed, a single flower or sometimes a flower pair rises from the center of the circle of leaves. The flowers are yellowish-green with a greenish-white lip. Each flower has three sepals of equal length that spread outward. The flowers are scentless, lack nectar, and are primarily self-pollinating. It produces fruit which ripens in the fall. The seeds contain very little food reserves and therefore need to fall on soil containing mycorrhizal fungi in order for the seed to germinate and seedlings to become established. An over-wintering vegetative bud may form in late August or September. Occasionally small whorled pogonia will reproduce vegetatively, without the use of seeds.

**Habitat:** Small whorled pogonia can be limited by shade. The species seems to require small light gaps, or canopy breaks, and generally grows in areas with sparse to moderate ground cover. Too many other plants in an area can be harmful to this plant. This orchid typically grows under canopies that are relatively open or near features that create long-persisting breaks in the forest canopy such as a road or a stream. It grows in mixed-deciduous or mixed-deciduous/coniferous forests that are generally in second- or third-growth successional stages. The soils in which it lives are usually acidic, moist, and have very few nutrients.

**Conclusion:** The PSA currently consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas

primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. The understory vegetation within the wooded land was moderately dense and primarily consisted of goldenrod, bushy bluestem, greenbriar, and christmas fern. Low-lying areas and potential wetlands were observed along a stream that transects the southwest portion of the PSA. The vegetation within these low-lying areas was dense and contained sweetgum and red maple saplings, chinese privet, wild rose, japanese stiltgrass, and species of briar. The fields within the PSA primarily consisted of dense herbaceous species including orchard grass, bull thistle, narrowleaf plantain, broomsedge bluestem, purple-leaved willow-herb, allegheny monkeyflower, and goldenrod. Based on our field reconnaissance, areas containing sparse to moderate ground cover were limited to portions of the slopes, beneath the more mature oaks, within the wooded land on the northern-central portion of the site.

Based on our observations, areas with open herbaceous layer and open canopy did not coincide on the PSA. Therefore, suitable habitat for the Small Whorled Pogonia is not located on site and the project should have no effect on this species.

**Rock Gnome Lichen**

**Description:** One of two lichens on the federal list of threatened and endangered species, Rock gnome lichen is the only member of the genus Gymnodera to live in North America. Other members of this genus live in the mountains of East Asia, including Japan and the Himalayas. Rock gnome lichen occurs in dense colonies of narrow strap-like lobes that are about 0.04 inch (1 millimeter) across and generally one to two centimeters long. These lobes are blue gray on the terminal upper surface, and generally shiny white on the lower surface, grading to black near the base. The fruiting bodies are born on the tips of these lobes, are black, and have been found from July through September. The primary means of propagation appears to be asexual, with colonies spreading clonally.

**Habitat:** Rock gnome lichen is primarily limited to vertical rock faces where seepage water from forest soils above flows during (and only during) very wet times. It appears the species needs a moderate amount of light, but that it cannot tolerate high-intensity solar radiation. It does well on moist, generally open, sites, with northern exposures, but needs at least partial canopy coverage where the aspect is southern or western.

**Conclusions:** Rock outcroppings were observed along the west-facing slope of the ridge on the northern-central portion of the site. The outcrops appeared dry and devoid of seepage water and were not located adjacent to a large stream. Species of lichen and moss were observed on the exposed surfaces of the outcrop; however, Rock Gnome Lichen was not identified.

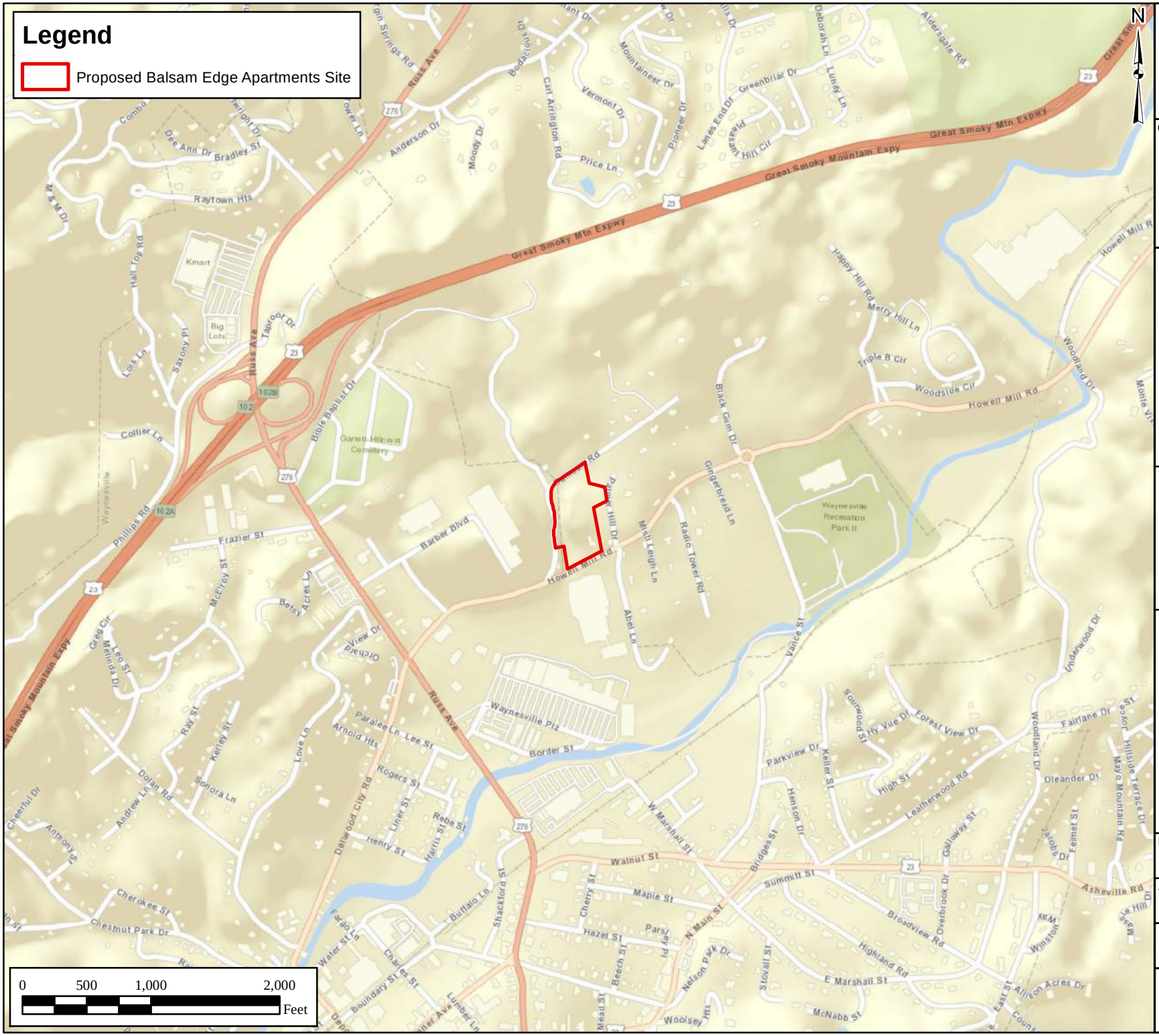
Based on our observations, it is ECS's opinion that suitable habitat is not present for Rock Gnome Lichen and the project should have no impact on this species.

## 3.0 CONCLUSIONS

ECS has conducted a preliminary threatened and endangered species determination review for the site. Please note that our services did not include detailed studies for threatened and endangered species. Based on our knowledge, site observations, and available resources concerning Threatened and Endangered Species, ECS concludes that suitable habitat for Rock Gnome Lichen, Small Whorled Pogonia, Gray Bat, and Bald Eagle is not present at the project site. Potential maternity roost trees,

which could provide summer habitat to Northern Long-Eared Bat, Indiana Bat, and Tricolored Bat, were observed on the project site. Based on the lack of winter hibernacula of the the project site by the aforementioned bat species, ECS proposes that a *may affect not likely to adversely affect* determination is suitable for the project. We are requesting a review of the proposed project for comments, questions, and/or concurrence on our preliminary determination for threatened and endangered species at the project site.

# Appendix I: Figures




**Client:**

MHO
Mountain Housing Opportunities

**Project:**

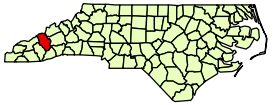
PROPOSED
BALSAM EDGE
APARTMENTS SITE

271 HOWELL MILL ROAD,
WAYNESVILLE,
HAYWOOD COUNTY,
NORTH CAROLINA

**Title:**

**SITE LOCATION MAP**

**HAYWOOD COUNTY**

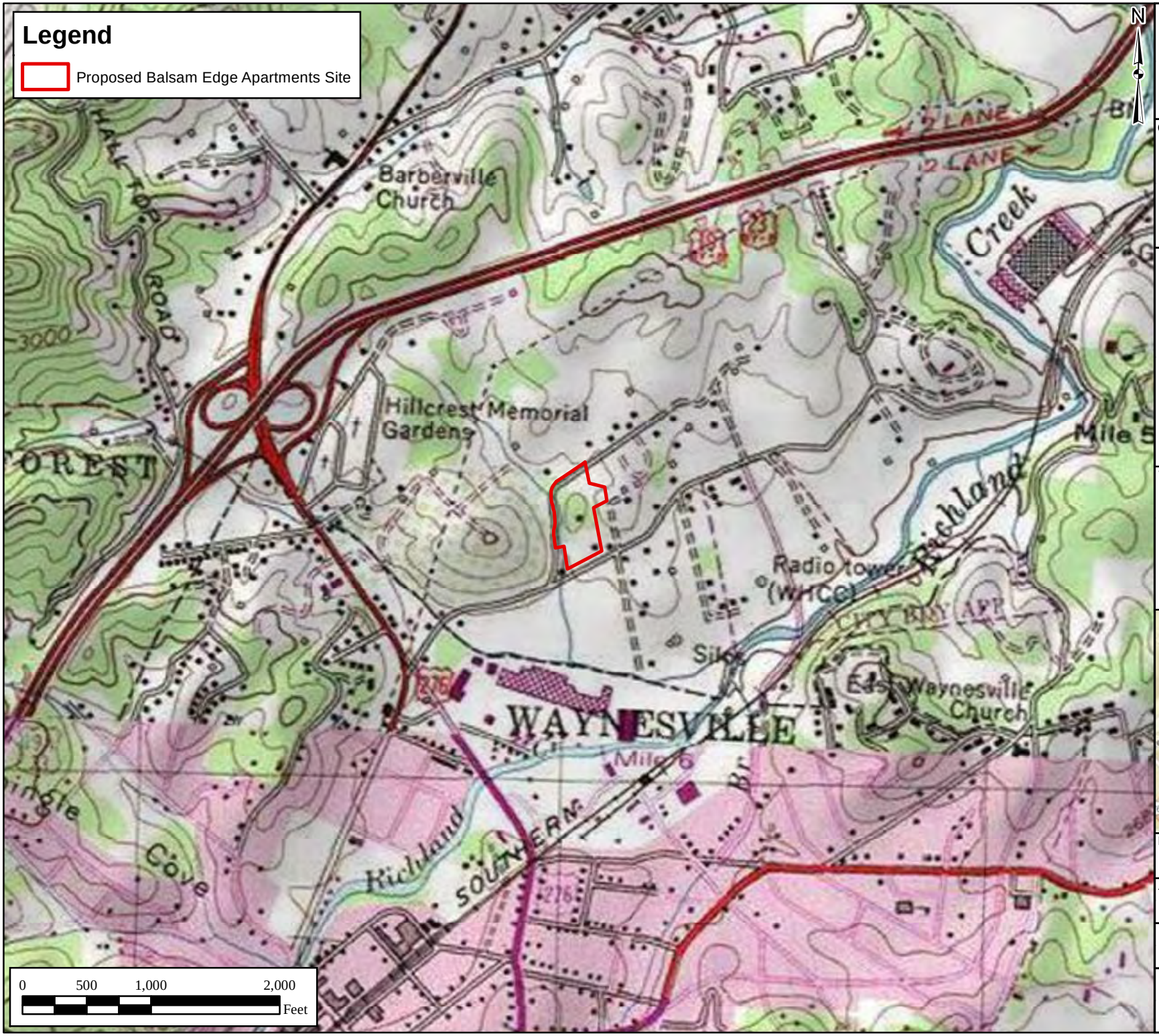


| Drawn By: | Scale: |
|---|---|
| ZJW | 1 " = 1,000 ' |
| **Approved By:** | **Date:** |
| PMS | 11/07/2022 |

**ECS Project No.**

**49: 18762**

**FIGURE 1**




ECS

**Client:**

MHO
Mountain Housing Opportunities

**Project:**

PROPOSED
BALSAM EDGE
APARTMENTS SITE

271 HOWELL MILL ROAD,
WAYNESVILLE,
HAYWOOD COUNTY,
NORTH CAROLINA

**Title:**

**USGS TOPOGRAPHIC MAP**

**CLYDE, NC QUADRANGLE**
**DATED: 1979**

| Drawn By: | Scale: |
|---|---|
| ZJW | 1 " = 1,000 ' |
| **Approved By:** | **Date:** |
| PMS | 11/07/2022 |

**ECS Project No.**
**49: 18762**

**FIGURE 2**

Client:

MHO
Mountain Housing Opportunities

Project:

PROPOSED
BALSAM EDGE
APARTMENTS SITE

271 HOWELL MILL ROAD,
WAYNESVILLE,
HAYWOOD COUNTY,
NORTH CAROLINA

Title:

**AERIAL IMAGERY MAP**

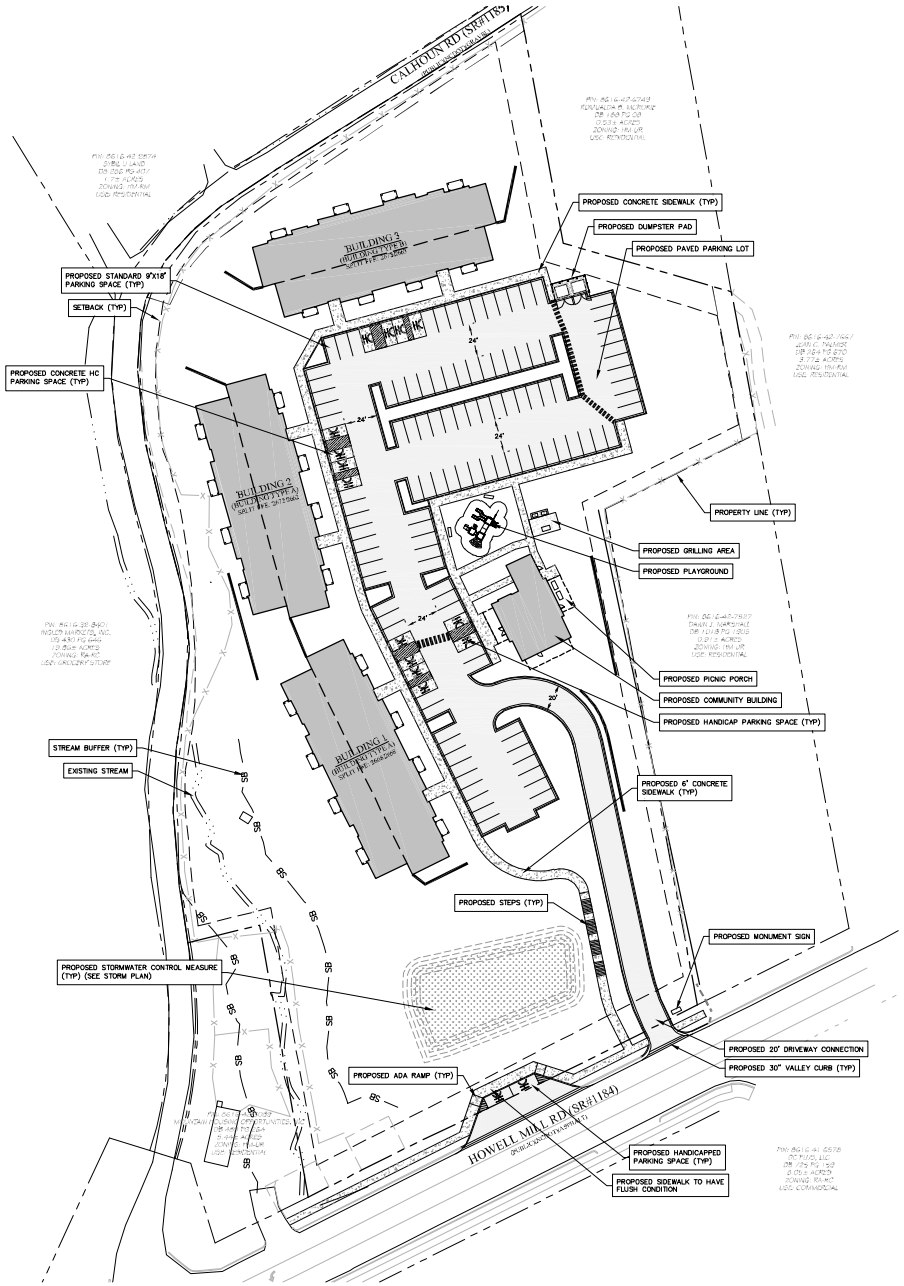
| Drawn By: | Scale: |
|---|---|
| ZJW | 1 " = 200 ' |
| **Approved By:** | **Date:** |
| PMS | 11/07/2022 |

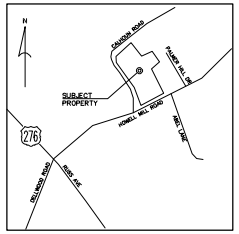
**ECS Project No.**

**49: 18762**

**FIGURE 3**

# Appendix II: Proposed Site Plans




VICINITY MAP

(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONSEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-3468; 8616-42-5404;<br>8616-42-6329; 8616-42-6671;<br>8616-42-5167; 8616-42-4173; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 486/478;150/370;489/264;133/179;<br>486/481;486/472;486/475 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 5' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE |

PARKING CALCULATIONS:

| | |
|---|---|
| VEHICULAR: | |
| REQUIRED SPACES: | MIN – 1.5 SPACES PER UNIT<br>MAX – 1 SPACE PER 20 SPACES<br>UNITS – 84 |
| SPACES PROVIDED: | 126 |
| HANDICAPPED SPACES: | |
| SPACES REQUIRED: 5 | SPACES PROVIDED: 14 |

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.20 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

OPEN SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-777-4733 OR INSPECTION@CDCGO.COM

Know what's below. Call before you dig.

NORTH

C201 SITE PLAN
1" = 40'

HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC 364 Bridge Concepts, P.A.

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO.: APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

PRELIMINARY NOT RELEASED FOR CONSTRUCTION

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

SITE PLAN

C201

# Appendix III: IPaC USFWS Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, NC 28801-1082
Phone: (828) 258-3939 Fax: (828) 258-5330

In Reply Refer To: November 08, 2022
Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The enclosed species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new species information can change your official species list. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends you visit the ECOS-IPaC website at regular intervals during project planning and implementation to ensure your species list is accurate or obtain an updated species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment (BA) or biological evaluation (BE) should be completed for your project. A BA is required for major construction activities (or other undertakings having similar physical impacts) considered to be Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)) (NEPA). For projects other than major construction activities, the Service suggests that a BE be prepared to determine effects of the action and whether those effects may affect listed species and/or designated critical habitat. E?ects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other

activities that are caused by the proposed action. A consequence is caused by the proposed action if it is reasonably certain to occur and would not occur “but for” the proposed action.. Recommended contents of a BA/BE are described at 50 CFR 402.12. More information and resources about project review and preparing a BA/BE can be found at the following web link: https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview.

If a Federal agency determines listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. The Service is not required to concur with "no effect" determinations from Federal action agencies. If consultation is required, the Service recommends that candidate species, proposed species, proposed critical habitat, and at-risk species be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or licensed applicants, can be found in the "Endangered Species Consultation Handbook" at the following web link: https://www.fws.gov/media/endangered-species-consultation-handbook.

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). More information about MBTA and BGEPA can be found at the following web link: https://www.fws.gov/program/migratory-birds.

We appreciate your consideration of Federally listed species. The Service encourages Federal agencies to include conservation of threatened and endangered species in their project planning to further the purposes of the Act. Please contact our staff at 828-258-3939, if you have any questions. In any future correspondence concerning this project, please reference the Consultation Code which can be found in the header of this letter.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Asheville Ecological Services Field Office**
160 Zillicoa Street
Asheville, NC 28801-1082
(828) 258-3939

# Project Summary

Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments
Project Type: Acquisition of Lands
Project Description: Potential Development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.50482825,-82.98441990059978,14z

Counties: Haywood County, North Carolina

# Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME | STATUS |
|---|---|
| Gray Bat *Myotis grisescens*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6329 | Endangered |
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## Insects

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

## Flowering Plants

| NAME | STATUS |
| --- | --- |
| Small Whorled Pogonia *Isotria medeoloides* | Threatened |

Population:

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/1890

## Lichens

| NAME | STATUS |
| --- | --- |
| Rock Gnome Lichen *Gymnoderma lineare* | Endangered |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/3933

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Sep 1 to Aug 31 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |

| NAME | BREEDING SEASON |
|---|---|
| Black-capped Chickadee *Poecile atricapillus practicus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Apr 10 to Jul 31 |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Kentucky Warbler *Oporornis formosus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Prairie Warbler *Dendroica discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Prothonotary Warbler *Protonotaria citrea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

# IPaC User Contact Information


| | |
|---|---|
| Agency: | ECS |
| Name: | Zach Windham |
| Address: | 1200 Woodruff Road |
| Address Line 2: | Suit H-12 |
| City: | Greenville |
| State: | SC |
| Zip: | 29607 |
| Email | zwindham@ecslimited.com |
| Phone: | 4049859014 |

# Appendix IV: NHP Portal Request Letter

NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
**Deputy Director, Natural Heritage Program**

NCNHDE-19913

November 8, 2022

Zach Windham
ECS Southeast LLP
1200 Woodruff Road
Greenville, SC 29607
RE: Proposed Balsam Edge Apartments ; 49-18762

Dear Zach Windham :

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Proposed Balsam Edge Apartments
Project No. 49-18762
November 8, 2022
NCNHDE-19913

Element Occurrences Documented Within a One-mile Radius of the Project Area

| Taxonomic Group | EO ID | Scientific Name | Common Name | Last Observation Date | Element Occurrence Rank | Accuracy | Federal Status | State Status | Global Rank | State Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| Butterfly | 25593 | Erora laeta | Early Hairstreak | 2006-06-20 | D | 4-Low | --- | Significantly Rare | G2G3 | S2S3 |
| Mammal | 39016 | Myotis grisescens | Gray Bat | 2019-09-05 | E | 2-High | Endangered | Endangered | G3G4 | S1 |
| Mammal | 39068 | Perimyotis subflavus | Tricolored Bat | 2018-04-20 | E | 2-High | --- | Significantly Rare | G3G4 | S3 |
| Moss | 22911 | Syntrichia papillosa | Papillose Tortula | 1988-09-29 | E | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |
| Sawfly, Wasp, Bee, or Ant | 37104 | Bombus affinis | Rusty-patched Bumble Bee | 1952-04-30 | H | 4-Low | Endangered | Significantly Rare | G2 | S1 |
| Vascular Plant | 23933 | Hackelia virginiana | Virginia Stickseed | 1968-Pre | H | 5-Very Low | --- | Significantly Rare Peripheral | G5 | S2 |
| Vascular Plant | 23969 | Orbexilum onobrychis | Lanceleaf Scurfpea | 1891-07-17 | H | 5-Very Low | --- | Special Concern Historical | G5 | SH |
| Vascular Plant | 6840 | Platanthera herbiola | Northern Rein Orchid | 1937-06-17 | H | 3-Medium | --- | Special Concern Vulnerable | G4?T4Q | S1S2 |
| Vascular Plant | 19109 | Platanthera peramoena | Purple Fringeless Orchid | 1937-07 | H | 4-Low | --- | Threatened | G5 | S2 |
| Vascular Plant | 3312 | Poa palustris | Swamp Bluegrass | 1931-07-11 | H | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |

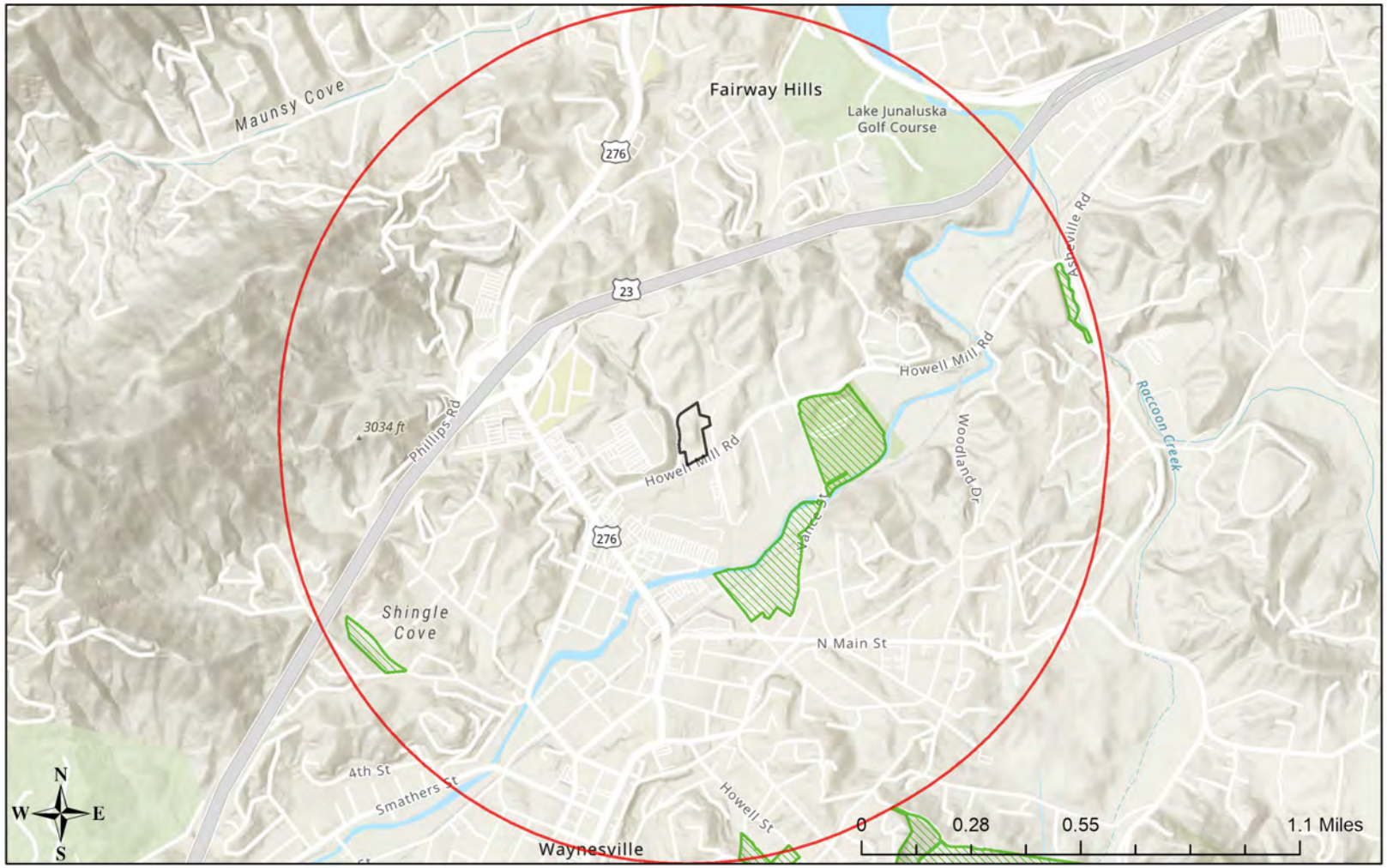
No Natural Areas are Documented Within a One-mile Radius of the Project Area

Managed Areas Documented Within a One-mile Radius of the Project Area

| Managed Area Name | Owner | Owner Type |
|---|---|---|
| Mountain Research Station | NC Department of Agriculture, Research Stations Division | State |
| NC Department of Transportation Mitigation Site | NC Department of Transportation | State |
| Town of Waynesville - Chestnut Park | Town of Waynesville | Local Government |
| Town of Waynesville - Waynesville Recreation Park | Town of Waynesville | Local Government |
| Town of Waynesville Open Space | Town of Waynesville | Local Government |

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on November 8, 2022; source: NCNHP, Q2, July 2022. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

# NCNHDE-19913: Proposed Balsam Edge Apartments




November 8, 2022

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

# Appendix V: Photographic Log

1 - View of the northern portion of the PSA, facing north.

2 - View of the eastern portion of the PSA, facing south.

3 - View of the central portion of the PSA, facing north.

4 - View of the southern portion of the PSA, facing south.

5 - View of the western portion of the PSA, facing northwest.

6 - View of the shed structure on the eastern portion of the PSA, facing north.

7 - View within the shed.

8 - View of the residential structure on the southeastern portion of the PSA, facing northeast.

9 - View within the attic in the residential structure.

10 - View of a potential stream along the western portion of the PSA, facing south.

11 - View of a potential wetland on the southwestern portion of the PSA, facing southwest.

12 - View of a rock outcrop on the western portion of the PSA, facing east.

## Claudia Young

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Wednesday, January 11, 2023 2:21 PM
**To:** Thomas S Hawkins, P.G., PWS
**Cc:** Zach Windham; Paul M. Stephens IV, P.E., PWS
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request
**Attachments:** 20230111_23-445_Recs for Lighting and Pollinators.pdf; 49-18762 - Balsam Edge Apartments - USFWS Request Letter.pdf

Thanks for the coordination Thomas. We offer the following comments and recommendations to inform prudent effect determinations to listed species from the action agency:

Listed bats

Based on the information provided, suitable habitat occurs within the proposed action area (50CFR 402.02) for the federally endangered Northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus,* see information below pertaining to this animal's federal status). We acknowledge that you did not detect caves or cave-like features within the action area. However, a known roost supporting tricolored bat and the federally endangered gray bat (*Myotis grisescens*) occurs within 0.5 miles of the proposed action area.

During their "active seasons," the animals listed above may forage, commute, and/or roost within the action area. The following impact avoidance and minimization measures would reduce the probability for take of these animals and support our concurrence with a "may affect, not likely to adversely affect" determination from the appropriate action agency:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Tricolored bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat as endangered under the Act. The Service has up to 12 months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of White Nose Syndrome (WNS). Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the Act; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and “take” will apply. Therefore, if you suspect your future or existing project may affect tricolored bats after the potential new listing goes into effect, we recommend analyzing possible effects of the project on tricolored bats and their habitat to determine whether consultation under section 7 of

the Act is necessary. Conferencing procedures can be followed prior to listing to ensure the project does not jeopardize the existence of a species. Projects with an existing section 7 biological opinion may require re-initiation of consultation to provide uninterrupted authorization for covered activities.

Monarch butterfly

Monarch butterfly (*Danaus plexippus*) is a candidate species, and we appreciate the project proponent's consideration of monarch butterfly when evaluating the action area for impacts to federally listed species and their habitats. The species is not currently subject to section 7 consultation, and an effects determination is not necessary. However, incorporating proactive conservation measures on behalf of this animal may preclude the need to list it in the future. Attached are several recommendations on behalf of this species and other pollinators for the Applicant's consideration.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species. Please be aware that in accordance with the Endangered Species Act it is the responsibility of the appropriate federal action agency or its designated representative to review its activities or programs and to identify any such activities or programs that may affect endangered or threatened species or their habitats. If it is determined that the proposed activity may adversely affect any species federally listed as endangered or threatened, formal consultation with this office must be initiated.

There is a lot here Thomas. Please reach out if you have any questions.

Regards,
Byron

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

*This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act and may be disclosed to third parties.*

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**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Sunday, December 11, 2022 5:51 PM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good evening Byron,

Please see the attached request for comments, questions, and/or concurrence on the potential presence of federally threatened and endangered species for a proposed multi-family development located at 333 Howell Mill Road in

Waynesville, Haywood County, North Carolina. We are submitting this request as part of a HUD Part 58 Environmental Assessment. Please let me know if I can assist with any questions or if you require additional information.

Thank you,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

**ECS SOUTHEAST, LLP**
www.ecslimited.com
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*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

## Claudia Young

**From:** Adeline Wolfe <adeline@mtnhousing.org>
**Sent:** Monday, October 2, 2023 1:28 PM
**To:** Claudia Young; Jennifer Percy
**Cc:** Rich Olejniczak; Geoffrey Barton; Susan Campbell
**Subject:** Fwd: [EXTERNAL] Additional Balsam Edge Question
**Attachments:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request.eml

Claudia,

Please see Thomas's reply and supporting email from USFW for support in regards to the Small-whorled pogonia.

I have just sent on the explosives question.

---------- Forwarded message ---------
From: **Thomas S Hawkins, P.G., PWS** <THawkins@ecslimited.com>
Date: Mon, Oct 2, 2023 at 1:11 PM
Subject: RE: [EXTERNAL] Additional Balsam Edge Question
To: Adeline Wolfe <adeline@mtnhousing.org>, Justin A. Roth, CHMM <JRoth@ecslimited.com>

Hi Adeline,

Doing well and hope you are as well! I've put together the response below, let me know your thoughts:

Based on the habitat description for Small-whorled pogonia, the species generally grows in areas with sparse to moderate ground cover under canopies that are relatively open or near features that create long-persisting breaks in the canopy coverage, such as a road or stream. Our full habitat description is listed in the letter addressed to USFWS in the attached email.

Based on our site reconnaissance, the subject property contained wooded land along the western and northern boundaries of the property and on a ridge located on the northern-central portion of the site. Tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock with a moderately dense understory that contained species such as goldenrod, bushy bluestem, greenbriar, and christmas fern. The vegetation observed along the stream transecting the southwestern portion of the subject property included dense vegetation composed of sweetgum and red maple saplings, chinese privet, wild rose, Japanese stiltgrass, and species of briar. A maintained lawn was observed surrounding the brick residential structure on the southeast corner of the site. The remainder of the subject property consisted of unmaintained fields with dense herbaceous species including orchard grass, bull thistle, narrowleaf plantain, broomsedge bluestem, purple-leaved willow-herb, allegheny monkeyflower, and goldenrod.

Based on our observations, areas containing sparse to moderate ground cover were limited to portions of the slopes, beneath the more mature three growth, within the wooded land on the northern-central portion of the site. Based on our observations, areas with an open herbaceous layer and open canopy did not coincide on the subject property. Therefore, suitable habitat for the Small-whorled pogonia is not present at the subject property and the project should have no effect on this species.

Our correspondence, including our species write-up for Small-whorled pogonia paraphrased above, was submitted to USFWS on December 11, 2022. Byron Hamstead of the USFWS responded by email on January 11, 2023, with information regarding the listed bat species (Northern long-eared bat, Indiana bat, Gray bat) and the Tricolored bat, which is proposed for listing as endangered. Mr. Hamstead further stated within his email that, based on the information provided, suitable habitat does not occur within the action area for any other federally protected species.

Thanks,

**THOMAS S HAWKINS, P.G., PWS** | Environmental Senior Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

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**From:** Adeline Wolfe <adeline@mtnhousing.org>
**Sent:** Monday, October 2, 2023 12:20 PM
**To:** Thomas S Hawkins, P.G., PWS <THawkins@ecslimited.com>; Justin A. Roth, CHMM <JRoth@ecslimited.com>
**Subject:** [EXTERNAL] Additional Balsam Edge Question

Thomas,

I hope you are well!

We received the following clarifying question from HUD in regards to Balsam Edge's environmental review. Could you please compile a response based on your review and survey of the land that the following species was not present?

*Can you please have your consultants provide additional documentation and an explanation to address this question? Thanks.*

*"According to IPaC – Small-whorled pogonia is known from the area. Tree removal actions could have caused harm to this species if it was present. Is there a scientifically defensible finding of No Effect for this species?"*

Thank you!

Adeline

--


## Adeline Wolfe

**Mountain Housing Opportunities, Inc.**

Real Estate Developer, Community Investments

**64 Clingman Ave, Suite 101**

Asheville, NC 28801

828.254.4030 Ext.133


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## Adeline Wolfe
**Mountain Housing Opportunities, Inc.**
Real Estate Developer, Community Investments

**64 Clingman Ave, Suite 101**
Asheville, NC 28801
828.254.4030 Ext.133

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, NC 28801-1082
Phone: (828) 258-3939 Fax: (828) 258-5330

In Reply Refer To: November 08, 2022
Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The enclosed species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new species information can change your official species list. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends you visit the ECOS-IPaC website at regular intervals during project planning and implementation to ensure your species list is accurate or obtain an updated species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment (BA) or biological evaluation (BE) should be completed for your project. A BA is required for major construction activities (or other undertakings having similar physical impacts) considered to be Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)) (NEPA). For projects other than major construction activities, the Service suggests that a BE be prepared to determine effects of the action and whether those effects may affect listed species and/or designated critical habitat. E?ects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other

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activities that are caused by the proposed action. A consequence is caused by the proposed action if it is reasonably certain to occur and would not occur “but for” the proposed action.. Recommended contents of a BA/BE are described at 50 CFR 402.12. More information and resources about project review and preparing a BA/BE can be found at the following web link: https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview.

If a Federal agency determines listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. The Service is not required to concur with "no effect" determinations from Federal action agencies. If consultation is required, the Service recommends that candidate species, proposed species, proposed critical habitat, and at-risk species be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or licensed applicants, can be found in the "Endangered Species Consultation Handbook" at the following web link: https://www.fws.gov/media/endangered-species-consultation-handbook.

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). More information about MBTA and BGEPA can be found at the following web link: https://www.fws.gov/program/migratory-birds.

We appreciate your consideration of Federally listed species. The Service encourages Federal agencies to include conservation of threatened and endangered species in their project planning to further the purposes of the Act. Please contact our staff at 828-258-3939, if you have any questions. In any future correspondence concerning this project, please reference the Consultation Code which can be found in the header of this letter.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Asheville Ecological Services Field Office**
160 Zillicoa Street
Asheville, NC 28801-1082
(828) 258-3939

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# Project Summary

Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments
Project Type: Acquisition of Lands
Project Description: Potential Development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.50482825,-82.98441990059978,14z

Counties: Haywood County, North Carolina

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# Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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## Mammals

| NAME | STATUS |
|---|---|
| Gray Bat *Myotis grisescens*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6329 | Endangered |
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## Insects

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Small Whorled Pogonia *Isotria medeoloides* | Threatened |

Population:

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/1890

## Lichens

| NAME | STATUS |
|---|---|
| Rock Gnome Lichen *Gymnoderma lineare* | Endangered |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/3933

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Sep 1 to Aug 31 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |

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| NAME | BREEDING SEASON |
|---|---|
| Black-capped Chickadee *Poecile atricapillus practicus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Apr 10 to Jul 31 |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Kentucky Warbler *Oporornis formosus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Prairie Warbler *Dendroica discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Prothonotary Warbler *Protonotaria citrea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

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## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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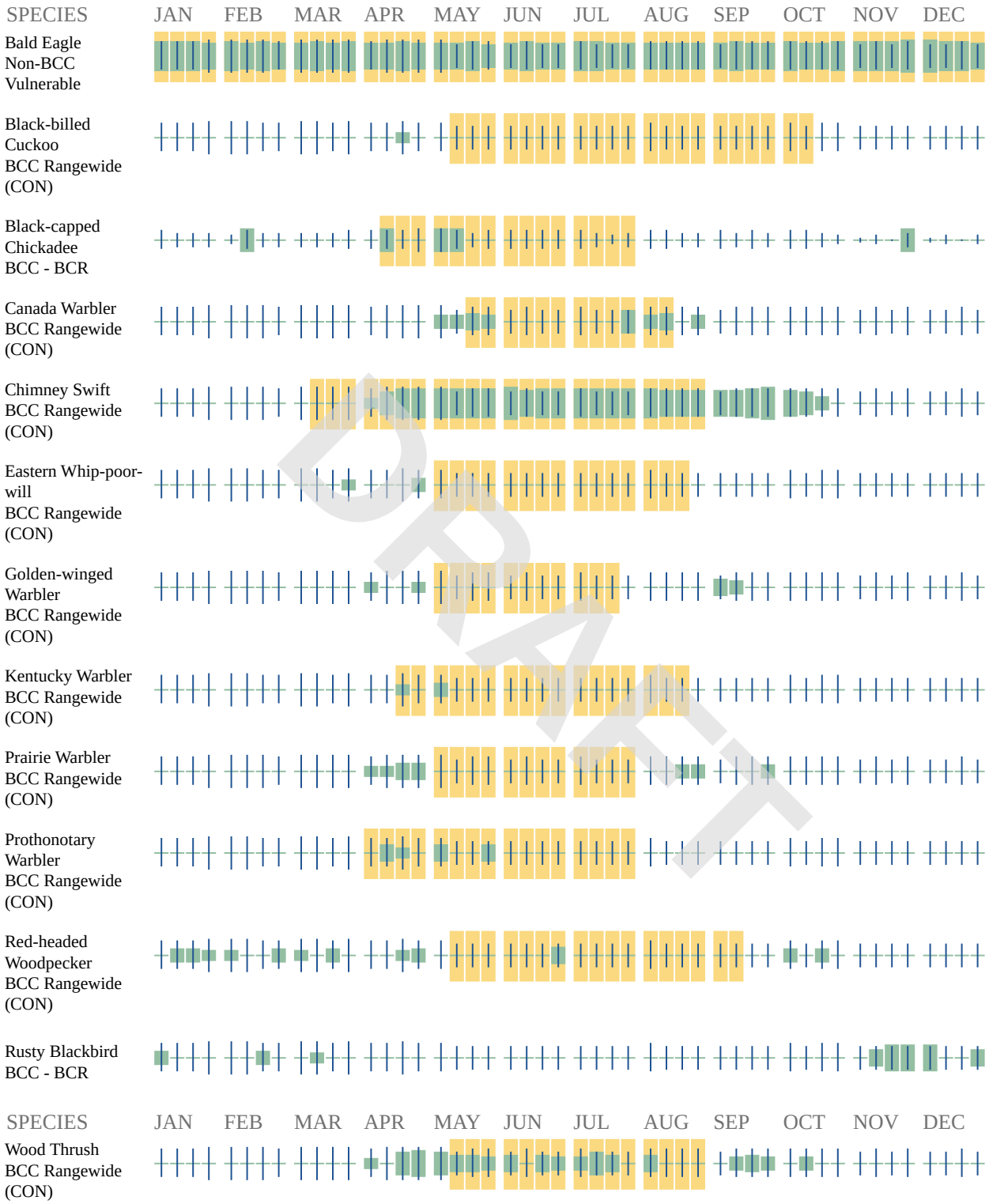


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Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

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The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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# Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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## IPaC User Contact Information


| | |
|---|---|
| Agency: | ECS |
| Name: | Zach Windham |
| Address: | 1200 Woodruff Road |
| Address Line 2: | Suit H-12 |
| City: | Greenville |
| State: | SC |
| Zip: | 29607 |
| Email | zwindham@ecslimited.com |
| Phone: | 4049859014 |


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NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
**Deputy Director, Natural Heritage Program**

NCNHDE-19913

November 8, 2022

Zach Windham
ECS Southeast LLP
1200 Woodruff Road
Greenville, SC 29607
RE: Proposed Balsam Edge Apartments ; 49-18762

Dear Zach Windham :

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

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Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Proposed Balsam Edge Apartments
Project No. 49-18762
November 8, 2022
NCNHDE-19913

Element Occurrences Documented Within a One-mile Radius of the Project Area

| Taxonomic Group | EO ID | Scientific Name | Common Name | Last Observation Date | Element Occurrence Rank | Accuracy | Federal Status | State Status | Global Rank | State Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| Butterfly | 25593 | Erora laeta | Early Hairstreak | 2006-06-20 | D | 4-Low | --- | Significantly Rare | G2G3 | S2S3 |
| Mammal | 39016 | Myotis grisescens | Gray Bat | 2019-09-05 | E | 2-High | Endangered | Endangered | G3G4 | S1 |
| Mammal | 39068 | Perimyotis subflavus | Tricolored Bat | 2018-04-20 | E | 2-High | --- | Significantly Rare | G3G4 | S3 |
| Moss | 22911 | Syntrichia papillosa | Papillose Tortula | 1988-09-29 | E | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |
| Sawfly, Wasp, Bee, or Ant | 37104 | Bombus affinis | Rusty-patched Bumble Bee | 1952-04-30 | H | 4-Low | Endangered | Significantly Rare | G2 | S1 |
| Vascular Plant | 23933 | Hackelia virginiana | Virginia Stickseed | 1968-Pre | H | 5-Very Low | --- | Significantly Rare Peripheral | G5 | S2 |
| Vascular Plant | 23969 | Orbexilum onobrychis | Lanceleaf Scurfpea | 1891-07-17 | H | 5-Very Low | --- | Special Concern Historical | G5 | SH |
| Vascular Plant | 6840 | Platanthera herbiola | Northern Rein Orchid | 1937-06-17 | H | 3-Medium | --- | Special Concern Vulnerable | G4?T4Q | S1S2 |
| Vascular Plant | 19109 | Platanthera peramoena | Purple Fringeless Orchid | 1937-07 | H | 4-Low | --- | Threatened | G5 | S2 |
| Vascular Plant | 3312 | Poa palustris | Swamp Bluegrass | 1931-07-11 | H | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |

No Natural Areas are Documented Within a One-mile Radius of the Project Area

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Managed Areas Documented Within a One-mile Radius of the Project Area

| Managed Area Name | Owner | Owner Type |
|---|---|---|
| Mountain Research Station | NC Department of Agriculture, Research Stations Division | State |
| NC Department of Transportation Mitigation Site | NC Department of Transportation | State |
| Town of Waynesville - Chestnut Park | Town of Waynesville | Local Government |
| Town of Waynesville - Waynesville Recreation Park | Town of Waynesville | Local Government |
| Town of Waynesville Open Space | Town of Waynesville | Local Government |

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on November 8, 2022; source: NCNHP, Q2, July 2022. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

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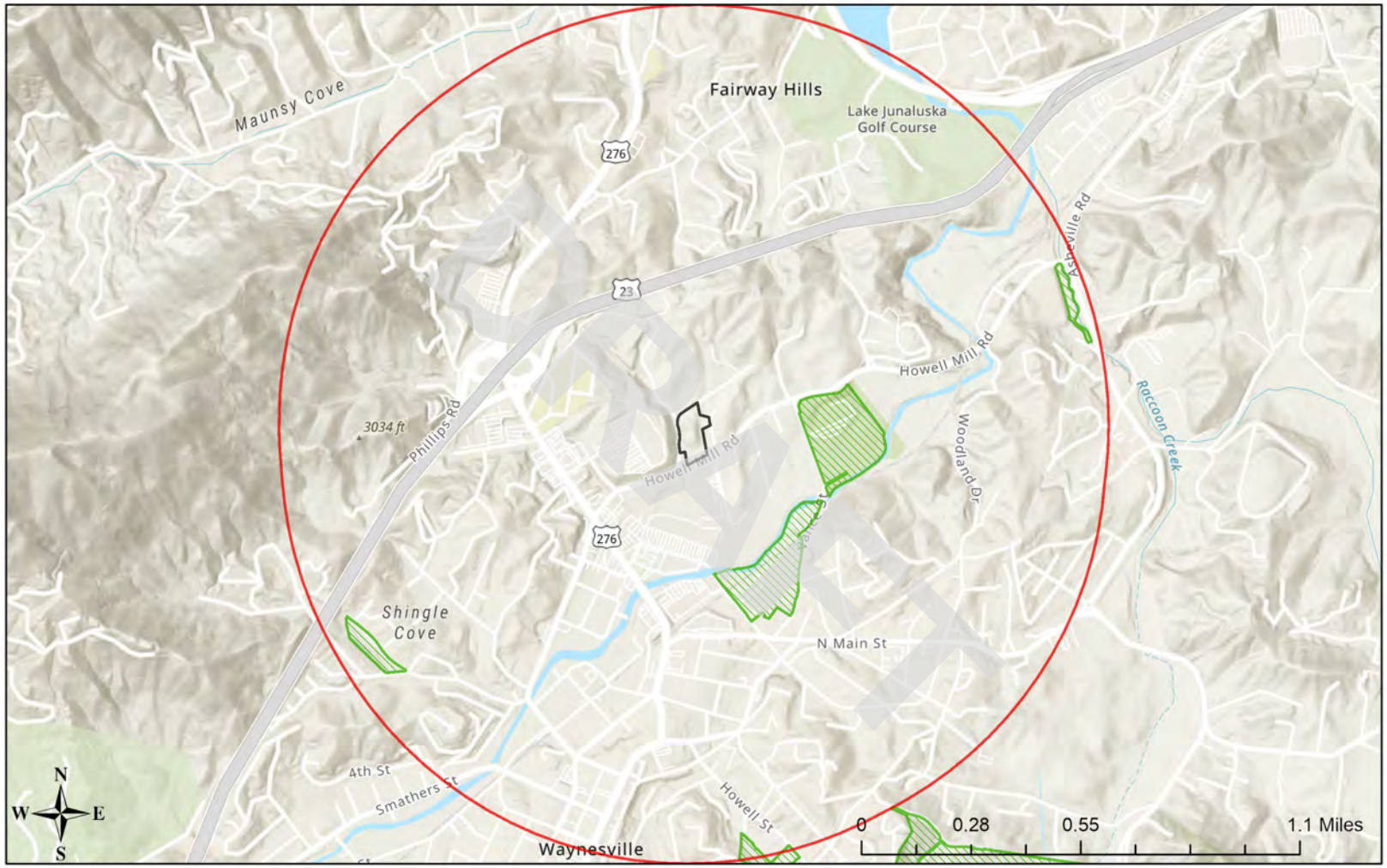
# NCNHDE-19913: Proposed Balsam Edge Apartments




November 8, 2022

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

## Thomas S Hawkins, PWS

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Thursday, February 16, 2023 9:58 AM
**To:** Thomas S Hawkins, PWS
**Cc:** Zach Windham; Paul M. Stephens IV, P.E., PWS
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Thanks Thomas.

The proposed impact avoidance and minimization measures described in your last email would support our concurrence with "may affect, not likely to adversely affect" determinations from the action agency for all the bat species referenced in our January 11, 2023, email. We reiterate that these measures would also support our concurrence with a "may affect, not likely to adversely affect" determination from the action agency for the proposed endangered tricolored bat (*Perimyotis subflavus*), should it become listed in the future.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species and we require no further action at this time. Further coordination and/or consultation may be required under the Endangered Species Act (ESA) if: (1) information reveals impacts of this identified action which may affect or may have affected listed species or critical habitat, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

Thanks again for the coordination.

Byron

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

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**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Tuesday, February 7, 2023 11:16 AM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** RE: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Hi Byron,

Greatly appreciate your time reviewing this project and enjoyed our discussion last week.

I've spoken with our client, Mountain Housing Opportunities, and they are in the process of contracting tree clearing services within the proposed development area and the work will be completed by March 15, 2023. In addition, they

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agreed to have the manmade structures on the property surveyed for evidence of bats within two weeks prior to the demolition activities.

Please let me know if the actions above are suitable, and if you require any additional information, I'm available by email here or at (864) 350-2414.

Thank you,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Wednesday, January 11, 2023 2:21 PM
**To:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

DRAFT

Thanks for the coordination Thomas. We offer the following comments and recommendations to inform prudent effect determinations to listed species from the action agency:

Listed bats

Based on the information provided, suitable habitat occurs within the proposed action area (50CFR 402.02) for the federally endangered Northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus,* see information below pertaining to this animal's federal status). We acknowledge that you did not detect caves or cave-like features within the action area. However, a known roost supporting tricolored bat and the federally endangered gray bat (*Myotis grisescens*) occurs within 0.5 miles of the proposed action area.

During their "active seasons," the animals listed above may forage, commute, and/or roost within the action area. The following impact avoidance and minimization measures would reduce the probability for take of these animals and support our concurrence with a "may affect, not likely to adversely affect" determination from the appropriate action agency:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Tricolored bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat as endangered under the Act. The Service has up to 12 months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of White Nose Syndrome (WNS). Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as

human disturbance and habitat loss. Species proposed for listing are not afforded protection under the Act; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and "take" will apply. Therefore, if you suspect your future or existing project may affect tricolored bats after the potential new listing goes into effect, we recommend analyzing possible effects of the project on tricolored bats and their habitat to determine whether consultation under section 7 of the Act is necessary. Conferencing procedures can be followed prior to listing to ensure the project does not jeopardize the existence of a species. Projects with an existing section 7 biological opinion may require re-initiation of consultation to provide uninterrupted authorization for covered activities.

Monarch butterfly

Monarch butterfly (*Danaus plexippus*) is a candidate species, and we appreciate the project proponent's consideration of monarch butterfly when evaluating the action area for impacts to federally listed species and their habitats. The species is not currently subject to section 7 consultation, and an effects determination is not necessary. However, incorporating proactive conservation measures on behalf of this animal may preclude the need to list it in the future. Attached are several recommendations on behalf of this species and other pollinators for the Applicant's consideration.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species. Please be aware that in accordance with the Endangered Species Act it is the responsibility of the appropriate federal action agency or its designated representative to review its activities or programs and to identify any such activities or programs that may affect endangered or threatened species or their habitats. If it is determined that the proposed activity may adversely affect any species federally listed as endangered or threatened, formal consultation with this office must be initiated.

There is a lot here Thomas. Please reach out if you have any questions.

Regards,
Byron

DRAFT

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

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**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Sunday, December 11, 2022 5:51 PM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good evening Byron,

Please see the attached request for comments, questions, and/or concurrence on the potential presence of federally threatened and endangered species for a proposed multi-family development located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. We are submitting this request as part of a HUD Part 58 Environmental Assessment. Please let me know if I can assist with any questions or if you require additional information.

Thank you,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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# NCHFA Consultation with USFWS

# Appendix G

# Endangered Species

General Pollinator Habitat Guidance

Pollinators, such as most bees, some birds and bats, and other insects, including moths and butterflies, play a crucial role in the reproduction of flowering plants and production of most fruits and vegetables. Over 75 percent of flowering plants and about 75 percent of crops are pollinated by these types of fauna. A recent study of the status of pollinators in North America by the National Academy of Sciences found that populations of honey bees (which are not native to North America) and many wild pollinators are declining. Declines in wild pollinators are a result of disease and the loss, degradation, and fragmentation of habitat. Because loss of habitat and diminished native food sources have decreased the populations and diversity of pollinators throughout the country, we recommend that development projects be sited in areas that are previously disturbed (fallow fields, closed industrial sites, etc.) or sites that do not impact mature forests, streams, or wetlands.

We have records of rare species of pollinators in the area, including monarch butterfly (*Danaus plexippus plexippus*), a federal candidate for listing.[1] Monarch butterflies east of the Rocky Mountains used to number in the hundreds of millions but the population has declined by approximately 80 percent. Loss of habitat due to genetically modified crops, overuse of herbicides and insecticides, urban, suburban and agricultural development, disease, climate change, and overwintering site degradation are the leading causes of monarch decline. Adults use a wide variety of flowering plants throughout migration for nectar and breeding. However, milkweed plants (*Asclepias* spp.) are essential to monarch breeding as these are the only genus of plants that can host monarchs in their larval form. For a regional and seasonal list of plants important to monarch butterflies, please visit the Xerces Society website at: *http://www.xerces.org/monarch-nectar-plants/*.

Although the provisions of section 7 of the Act do not currently apply to candidate species or other non-listed pollinators, we would greatly appreciate your assistance in determining if monarch butterflies or suitable habitat for the species is present on the proposed project site. If individuals or suitable habitat is present, impacts should be avoided. More specific information about monarch butterfly can be found at the Service website dedicated to the species at: *https://www.fws.gov/savethemonarch/*.

To reduce development impacts to monarch butterflies and other pollinators and/or to increase the habitat and species diversity within the project area, we recommend the following measures be incorporated into project designs:

1. Throughout the site, avoid non-native seed mixes and plants. Instead, sow native seed mixes and plant species that are beneficial to pollinators.

[1]"Taxa for which the [Fish and Wildlife] Service has on file enough substantial information on biological vulnerability and threat(s) to support proposals to list them as endangered or threatened. Proposed rules have not yet been issued because this action is precluded at present by other listing activity. Development and publication of proposed rules on these taxa are anticipated. The Service encourages State and other Federal agencies as well as other affected parties to give consideration to these taxa in environmental planning" (*Federal Register*, February 28, 1996). Taxa formerly considered as "Category 1" are now considered as "candidates."

a. Avoid seed mixes and plants that have been pre-treated with insecticides, such as neonictinoids.
b. Taller-growing pollinator plant species should be planted around the periphery of the site and anywhere on the site where mowing can be restricted during the summer months. Taller plants, not mowed during the summer, would provide benefits to pollinators, habitat for ground-nesting/feeding birds, and cover for small mammals.
c. Native low-growing/groundcover species should be planted in areas that need to be maintained. This would provide benefits to pollinators while also minimizing the amount of maintenance, such as mowing and herbicide treatment.
d. Using a seed mix that includes milkweed species is especially beneficial for monarch butterflies. The following website provides additional information and a comprehensive list of native plant species that benefit pollinators: *http://www.xerces.org/pollinator-resource-center/mid-atlantic*. We also offer our assistance with developing seed mixes that can be used in conjunction with fast growing erosion control seed mixes for overall soil stability and pollinator benefits.
e. Additional information regarding plant species, seed mixes, and pollinator habitat requirements can be provided upon request.

2. Mowing and grounds maintenance, including pesticide use, should be scheduled to not interfere with monarch breeding or nectaring at project sites that occur along the migration route. To reduce harm, we advise mowing in the fall or winter when flowers are not in bloom.
3. Provide nesting sites for pollinator species. Different pollinators have different needs for nesting sites. Therefore, we recommend project designs include a diverse array of habitats to accommodate varied pollinators. For example:
    a. Hummingbirds typically nest in trees or shrubs.
    b. Many butterflies lay eggs on specific host plants.
    c. Most bees nest in the ground and in wood or dry plant stems.
    d. For additional information and actions that can be taken to benefit pollinators, please visit the following website: *https://www.fws.gov/pollinators/*.
4. Minimize effects of outdoor light pollution. Recent studies indicate that artificial lighting disrupts the natural reproduction and feeding patterns of nocturnal pollinators such as beetles and moths. This disruption results in a decrease of pollination rates in plants and a decrease in the health and diversity of nocturnal pollinators. When developing an outdoor lighting plan or installing any outdoor lighting devices, we recommend the following measures be considered to minimize potential adverse effects of outdoor lighting:
    a. Decrease the number of light fixtures, as practicable, to meet lighting objectives.
    b. Install lighting only in areas that need illumination for safety (e.g. paths, roads, etc.). Avoid lighting landscape features such as trees, shrubs, or building facades.
    c. Install fully shielded lights that direct light downward.

d. Use only low-pressure sodium (LPS), high-pressure sodium (HPS), or light emitting diode (LED) light sources that emit “warm” light. “Warm” light sources are those that contain low amounts of blue light in their spectrum. Choosing light sources with a color temperature of no more than 3,000 Kelvins will minimize the effects of blue light exposure.
e. For additional information and actions that can be taken to reduce outdoor light pollution, please visit the following website: *https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/*.

General Lighting Avoidance and Minimization Measures for *Myotis* sp.

When developing an outdoor lighting plan, installing any outdoor lighting devices, performing maintenance at existing lights, or modifying lighting, we recommend consideration for the following measures on behalf of bats that are adverse to lighting. For additional information and practices to reduce outdoor light pollution, please visit *https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/*.

- Reduce the amount of lighting needed for all activities to the maximum extent practicable while meeting lighting objectives.
- Install lighting only in areas that need illumination for safety (e.g. paths, roads, etc.).
- Avoid lighting landscape features such as trees, shrubs, building facades, adjacent wooded areas, or the surface waters of rivers and streams that provide suitable habitat for bats, pollinators and other wildlife species.
- Use the shortest light pole that meets safety requirements.
- Use light fixtures with a Backlight-Uplight-Glare (BUG) rating of 1-0-3 or less. The goal is to be as close to 0 for all three ratings with a priority for "uplight" rating of 0 and "backlight" rating as low as practicable.
- Use light fixtures with a lower lumen output, reducing overall brightness.
- Use light fixtures with a more rectangular light pattern as well as house side or fully shielded lights to minimize lighting outside of the pavement area and direct light downwards.
- Use only low-pressure sodium (LPS), high-pressure sodium (HPS), or light emitting diode (LED) light sources that emit “warm” light. “Warm” light sources are those that contain low amounts of blue light in their spectrum. Choosing light sources with a color temperature of no more than 3,000 Kelvins will minimize the effects of blue light exposure (Downs 2003).

Construction Lighting

- Between March 15 and November 15 (active season for gray bat), limit all construction-related lighting to whatever is necessary to maintain safety in active work areas.
- Limit night work that requires artificial light.
- Restrict lighting to where active construction is occurring.

# USFWS REQUEST LETTER

PROPOSED BALSAM EDGE APARTMENTS SITE
333 HOWELL MILL ROAD
WAYNESVILLE, HAYWOOD COUNTY, NORTH CAROLINA

ECS PROJECT NO. 49:18762

FOR U.S. FISH AND WILDLIFE SERVICE

DECEMBER 11, 2022

December 11, 2022

U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801-1082

ECS Project No. 49:18762

Reference: USFWS Request Letter, Proposed Balsam Edge Apartments Site, 333 Howell Mill Road, Waynesville, Haywood County North Carolina

To Whom Tt May Concern:

ECS Southeast, LLP (ECS) is pleased submit this USFWS Request Letter, for the above-referenced site, for information concerning the possible presence of threatened and endangered species and their habitats. If there are questions regarding this request, or a need for further information, please contact the undersigned.

ECS Southeast, LLP

Thomas S. Hawkins, Jr., PWS
Environmental Project Manager
thawkins@ecslimited.com
864-987-1610

Paul M. Stephens IV, P.E., PWS
Associate Principal
pstephens@ecslimited.com
843-654-4448

## 1.0 BACKGROUND INFORMATION

This review is requested in order to meet the environmental review requirements for HUD Part 58 at the Proposed Balsam Edge Apartments Site, located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. The site is proposed for construction of three multi-family apartment buildings, a proposed community building, and appropriate paved parking lots, access roads, and stormwater management areas for the development. The project study area (PSA) consists of a 5.1 acre portion of a parent parcel totaling approximately 5.44 acres. According to the Haywood County Online GIS Database website, the Parcel Identification Number (PIN) is: 8616-42-5402 (5.44 total acres). The site currently consists of wooded land, fields, a residential structure, and a shed. Surrounding properties consist of wooded land, fields, single-family residential houses, and commercial buildings. Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the PSA.

The Proposed Balsam Edge Apartments Site will consist of the three multi-family apartment builds, a community center, paved parking area, and playground. The structures will be utilized to provide 84 units of affordable housing for residents. This request is part of an HUD Part 58 Environmental Assessment (EA) that ECS is conducting for federal funding.

## 2.0 SITE RECONNAISSANCE

ECS personnel conducted the field investigation on November 18, 2022. The PSA currently consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. The understory vegetation within the wooded land was moderately dense and primarily consisted of goldenrod, bushy bluestem, greenbriar, and christmas fern. Low-lying areas and potential wetlands were observed along a potential stream that transects the southwest portion of the PSA. The vegetation within these low-lying areas was dense and contained sweetgum and red maple saplings, chinese privet, wild rose, japanese stiltgrass, and species of briar. The fields within the PSA primarily consisted of dense herbaceous species including orchard grass, bull thistle, narrowleaf plantain, broomsedge bluestem, purple-leaved willow-herb, allegheny monkeyflower, and goldenrod. Rock outcroppings were observed along the west-facing slope of the ridge on the northern-central portion of the site.

### USFWS

ECS utilized the USFWS IPaC database to acquire a listing of federally protected threatened and endangered species in Haywood County, North Carolina, that may have potential to occur on or within the vicinity of the PSA:

| Common Name | Scientific Name | Federal Status |
|---|---|---|
| **Bird** | | |
| Bald Eagle | *Haliaeetus leucocephalus* | BGEPA |

| Common Name | Scientific Name | Federal Status |
|---|---|---|
| **Mammal** | | |
| Gray Bat | *Myotis grisescens* | E |
| Indiana Bat | *Myotis sodalis* | E |
| Northern Long-eared Bat | *Myotis septentrionalis* | T |
| Tricolored Bat | *Perimyotis subflavus* | P |
| **Insect** | | |
| Monarch Butterfly | *Danaus plexippus* | C |
| **Flowering Plant** | | |
| Small Whorled Pogonia | *Isotria medeoloides* | T |
| **Lichen** | | |
| Rock Gnome Lichen | *Gymnoderma lineare* | E |

- BGEPA - Federally protected under the Bald and Golden Eagle Protection Act
- E - Federally Endangered
- T - Federally Threatened
- CH - Critical Habitat
- C - Candidate
- P - Proposed

**Species & Habitat Description**

**Bald Eagle**

**Description:** Distinguished by a white head and white tail feathers, bald eagles are powerful, brown birds that may weigh 14 pounds and have a wingspan of 8 feet. Male eagles are smaller, weighing as much as 10 pounds and have a wingspan of 6 feet. Sometimes confused with Golden Eagles, Bald Eagles are mostly dark brown until they are four to five years old and acquire their characteristic coloring.

**Habitat:** Bald Eagles live near rivers, lakes, and marshes where they can find fish, their staple food. Bald Eagles will also feed on waterfowl, turtles, rabbits, snakes, and other small animals and carrion. Bald Eagles require a good food base, perching areas, and nesting sites. Their habitat includes estuaries, large lakes, reservoirs, rivers, and some seacoasts. In winter, the birds congregate near open water in tall trees for spotting prey and night roosts for sheltering.

**Conclusions:** The PSA currently consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. Low-lying areas and potential wetlands were

observed along a stream that transects the southwest portion of the PSA. There are no large water features adjacent to or within the site; therefore, a steady food support base is not present on the site. Additionally, bald eagles individuals or bald eagle nests have not been observed within the site.

Based on our knowledge of the site, it is ECS's opinion that suitable habitat for the bald eagle is not located within the site and bald eagles will not be impacted by the proposed project.

**Gray Bat**

**Description:** Gray bats are distinguished from other bats by the unicolored fur on their back. In addition, following their molt in July or August, gray bats have dark gray fur which often bleaches to a chestnut brown or russet. They weigh 7-16 grams. The bat's wing membrane connects to its ankle instead of at the toe, where it is connected in other species of Myotis. Females give birth to a single young in late May or early June. The bats eat a variety of flying aquatic and terrestrial insects present along rivers or lakes.

**Habitat:** With rare exceptions, gray bats live in caves year-round. During the winter, gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States. They do not use houses or barns.

**Conclusions:** The PSA consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. During the site reconnaissance, ECS did not observe caves located on site. Therefore, no suitable habitat for this species is located within the site and ECS opines that this species will not be impacted by the proposed project.

**Indiana Bat**

**Description:** Indiana bats are a medium sized, chestnut brown to dark gray colored bat with a lighter belly area. They are about 2.9 to 3.9 inches in length with a wingspan of 9.5 to 10.5 inches. The hind feet of an Indiana bat tend to be small and delicate, with fewer, shorter hairs, meaning the hairs do not extend beyond the claws, compared to little brown bats. Indiana Bats also have a keeled calcar, a cartilaginous spur on the inner side of the ankle. The average weight ranges from 5.7 g to 6.6 g.

**Habitat:** During winter, Indiana bats are restricted to suitable underground hibernacula. Most of these sites are caves located in karst areas of the east-central United States; however, Indiana bats also hibernate in other cave-like locations, like abandoned mines. Most Indiana bats hibernate in caves or mines where the ambient temperature remains below 10°C, or 50.0°F, but above freezing, and remains relatively stable. These hibernacula tend to have large volumes and often have large rooms and vertical or extensive passages. Cave volume and complexity help buffer the cave environment against rapid and extreme changes in outside temperature, and vertical relief helps provide a range of temperatures and roost sites.

In summer, most reproductive females occupy roost sites in forested areas under the exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark. Primary roosts usually receive direct sunlight for more than half the day. Roost trees are often within canopy gaps in a forest, in a fenceline, or along a wooded edge. Habitats in which maternity roosts occur include riparian zones, bottomland and floodplain habitats, wooded wetlands and upland communities. Indiana bats typically forage in semi-open to closed forested habitats with open understory, forest edges, and riparian areas. Adult males occupy similar habitats but can use a wider range of roosts compared to females.

**Conclusion:** The PSA consists of wooded land, fields, a residential structure, and a shed. The exterior of the residential structure appeared intact, with little to no visible entry points for avian or bat species. Interior portions of the roof in both the residential structure and shed were observed and no evidence of avian or bat scat was observed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. During the site reconnaissance, ECS did not observe caves, mines, or other potential winter hibernacula located within the site. Mature tree growth, which could provide potential summer roost sites, were observed within the PSA; however, the mature trees within the PSA are relatively isolated and not within close proximity of substantial forested habitats. Therefore, ECS opines that a *may affect not likely to adversely affect* determination is suitable for the proposed project.

**Northern Long-eared Bat**

**Description:** The northern long-eared bat (NLEB) is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. Their fur color can be medium to dark brown on the back and tawny to pale-brown on the underside. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species range includes 37 states.

White-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat, especially throughout the Northeast where the species has declined by up to 99 percent from pre-white-nose syndrome levels at many hibernation sites. Although the disease has not yet spread throughout the northern long-eared bats entire range (white-nose syndrome is currently found in at least 25 of 37 states where the northern long-eared bat occurs), it continues to spread. Experts expect that where it spreads, it will have the same impact as seen in the Northeast.

Like most bats, northern long-eared bats emerge at dusk to feed. They primarily fly through the understory of forested areas feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation or by gleaning motionless insects from vegetation.

**Habitat:** NLEB spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, surveyors find them hibernating most often in small crevices or cracks, often with only the nose and ears visible.

During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. This bat has also been found rarely roosting in structures, like barns and sheds.

**Conclusions:** The PSA consists of wooded land, fields, a residential structure, and a shed. The exterior of the residential structure appeared intact, with little to no visible entry points for avian or bat species. Interior portions of the roof in both the residential structure and shed were observed and no evidence of avian or bat scat was observed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age.

During the site reconnaissance, ECS did not observe caves, mines, or other potential winter hibernacula located within the site. Mature tree growth, which could provide potential summer roost sites, were observed within the PSA; however, the mature trees within the PSA are relatively isolated and not within close proximity of substantial forested habitats. Therefore, ECS opines that a *may affect not likely to adversely affect* determination is suitable for the proposed project.

**Tricolored Bat**

**Description:** *Perimyotis subflavus* is a small yellowish-brown insectivorous bat that is easily identified by its tri-colored fur (black at the base, followed by a band of lighter brown, and dark tips) and the juxtaposition of its black wing membrane surrounding a reddish-orange forearm. The tricolored bat has short round ears with a blunt, straight tragus. It can often be identified when hibernating by its distinctive orange forearm. It has a forearm length of 31-35 mm and weighs 4-8 g.

**Habitat:** During the spring, summer and fall - collectively referred to as the non-hibernating seasons - tricolored bats primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. In the southern and northern portions of the range, tricolored bats will also roost in Spanish moss (*Tillandsia usneoides*) and *Usnea trichodea* lichen, respectively. In addition, tricolored bats have been observed roosting during summer among pine needles, eastern red cedar (*Juniperus virginiana*), within artificial roosts like barns, beneath porch roofs, bridges, concrete bunkers, and rarely within caves. Female tricolored bats exhibit high site fidelity, returning year after year to the same summer roosting locations. Female tricolored bats form maternity colonies and switch roost trees regularly. Males roost singly.

During the winter, tricolored bats hibernate - which means that they reduce their metabolic rates, body temperatures and heart rate - in caves and mines; although, in the southern United States, where caves are sparse, tricolored bats often hibernate in road-associated culverts, as well as sometimes in tree cavities and abandoned water wells. Tricolored bats exhibit high site fidelity with many individuals returning year after year to the same hibernaculum.

**Conclusions:** The PSA consists of wooded land, fields, a residential structure, and a shed. The exterior of the residential structure appeared intact, with little to no visible entry points for avian or bat species. Interior portions of the roof in both the residential structure and shed were observed and no evidence of avian or bat scat was observed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. Two corrugated metal culverts ranging from 12-24 inches in diameter, were observed along the western boundary of the site.

During the site reconnaissance, ECS did not observe caves or mines located within the PSA. Hardwood trees were observed during the site reconnaissance, though the trees were observed to have minimal dead leaf clusters and/or tree cavities. Although bats were not observed during the field reconnaissance, potential habitat is present at the project site; therefore, ECS opines that a *may affect not likely to adversely affect* determination is suitable for the proposed project.

**Small Whorled Pogonia**

**Description:** Small-whorled pogonia has a greenish-white stem that grows between 3 – 13 inches tall. It gets its common name from the five or six grayish-green leaves that are displayed in a single whorl around the stem. When the leaves are well developed, a single flower or sometimes a flower pair rises from the center of the circle of leaves. The flowers are yellowish-green with a greenish-white lip. Each flower has three sepals of equal length that spread outward. The flowers are scentless, lack nectar, and are primarily self-pollinating. It produces fruit which ripens in the fall. The seeds contain very little food reserves and therefore need to fall on soil containing mycorrhizal fungi in order for the seed to germinate and seedlings to become established. An over-wintering vegetative bud may form in late August or September. Occasionally small whorled pogonia will reproduce vegetatively, without the use of seeds.

**Habitat:** Small whorled pogonia can be limited by shade. The species seems to require small light gaps, or canopy breaks, and generally grows in areas with sparse to moderate ground cover. Too many other plants in an area can be harmful to this plant. This orchid typically grows under canopies that are relatively open or near features that create long-persisting breaks in the forest canopy such as a road or a stream. It grows in mixed-deciduous or mixed-deciduous/coniferous forests that are generally in second- or third-growth successional stages. The soils in which it lives are usually acidic, moist, and have very few nutrients.

**Conclusion:** The PSA currently consists of wooded land, fields, a residential structure, and a shed. The wooded land was observed along the western and northern boundaries on the PSA and on a ridge located on the northern-central portion of the site. The tree growth within the wooded areas

primarily consisted of red oak, white oak, and eastern hemlock, with more mature tree growth estimated at approximately 80 years in age. The understory vegetation within the wooded land was moderately dense and primarily consisted of goldenrod, bushy bluestem, greenbriar, and christmas fern. Low-lying areas and potential wetlands were observed along a stream that transects the southwest portion of the PSA. The vegetation within these low-lying areas was dense and contained sweetgum and red maple saplings, chinese privet, wild rose, japanese stiltgrass, and species of briar. The fields within the PSA primarily consisted of dense herbaceous species including orchard grass, bull thistle, narrowleaf plantain, broomsedge bluestem, purple-leaved willow-herb, allegheny monkeyflower, and goldenrod. Based on our field reconnaissance, areas containing sparse to moderate ground cover were limited to portions of the slopes, beneath the more mature oaks, within the wooded land on the northern-central portion of the site.

Based on our observations, areas with open herbaceous layer and open canopy did not coincide on the PSA. Therefore, suitable habitat for the Small Whorled Pogonia is not located on site and the project should have no effect on this species.

**Rock Gnome Lichen**

**Description:** One of two lichens on the federal list of threatened and endangered species, Rock gnome lichen is the only member of the genus Gymnodera to live in North America. Other members of this genus live in the mountains of East Asia, including Japan and the Himalayas. Rock gnome lichen occurs in dense colonies of narrow strap-like lobes that are about 0.04 inch (1 millimeter) across and generally one to two centimeters long. These lobes are blue gray on the terminal upper surface, and generally shiny white on the lower surface, grading to black near the base. The fruiting bodies are born on the tips of these lobes, are black, and have been found from July through September. The primary means of propagation appears to be asexual, with colonies spreading clonally.

**Habitat:** Rock gnome lichen is primarily limited to vertical rock faces where seepage water from forest soils above flows during (and only during) very wet times. It appears the species needs a moderate amount of light, but that it cannot tolerate high-intensity solar radiation. It does well on moist, generally open, sites, with northern exposures, but needs at least partial canopy coverage where the aspect is southern or western.

**Conclusions:** Rock outcroppings were observed along the west-facing slope of the ridge on the northern-central portion of the site. The outcrops appeared dry and devoid of seepage water and were not located adjacent to a large stream. Species of lichen and moss were observed on the exposed surfaces of the outcrop; however, Rock Gnome Lichen was not identified.

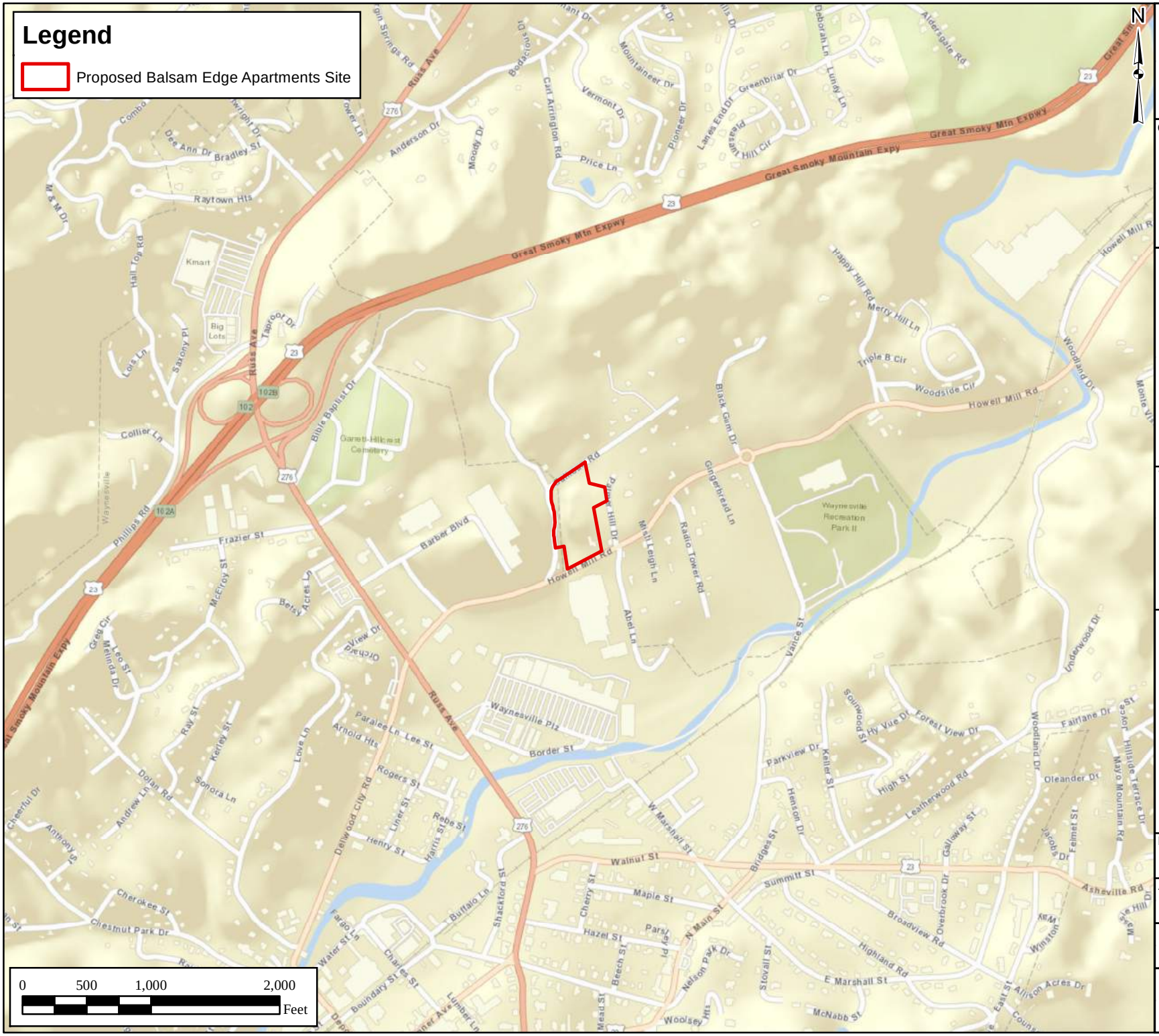
Based on our observations, it is ECS's opinion that suitable habitat is not present for Rock Gnome Lichen and the project should have no impact on this species.

## 3.0 CONCLUSIONS

ECS has conducted a preliminary threatened and endangered species determination review for the site. Please note that our services did not include detailed studies for threatened and endangered species. Based on our knowledge, site observations, and available resources concerning Threatened and Endangered Species, ECS concludes that suitable habitat for Rock Gnome Lichen, Small Whorled Pogonia, Gray Bat, and Bald Eagle is not present at the project site. Potential maternity roost trees,

which could provide summer habitat to Northern Long-Eared Bat, Indiana Bat, and Tricolored Bat, were observed on the project site. Based on the lack of winter hibernacula of the the project site by the aforementioned bat species, ECS proposes that a *may affect not likely to adversely affect* determination is suitable for the project. We are requesting a review of the proposed project for comments, questions, and/or concurrence on our preliminary determination for threatened and endangered species at the project site.

# Appendix I: Figures




**Client:**

MHO
Mountain Housing Opportunities

**Project:**

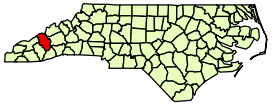
PROPOSED
BALSAM EDGE
APARTMENTS SITE

271 HOWELL MILL ROAD,
WAYNESVILLE,
HAYWOOD COUNTY,
NORTH CAROLINA

**Title:**

**SITE LOCATION MAP**

**HAYWOOD COUNTY**

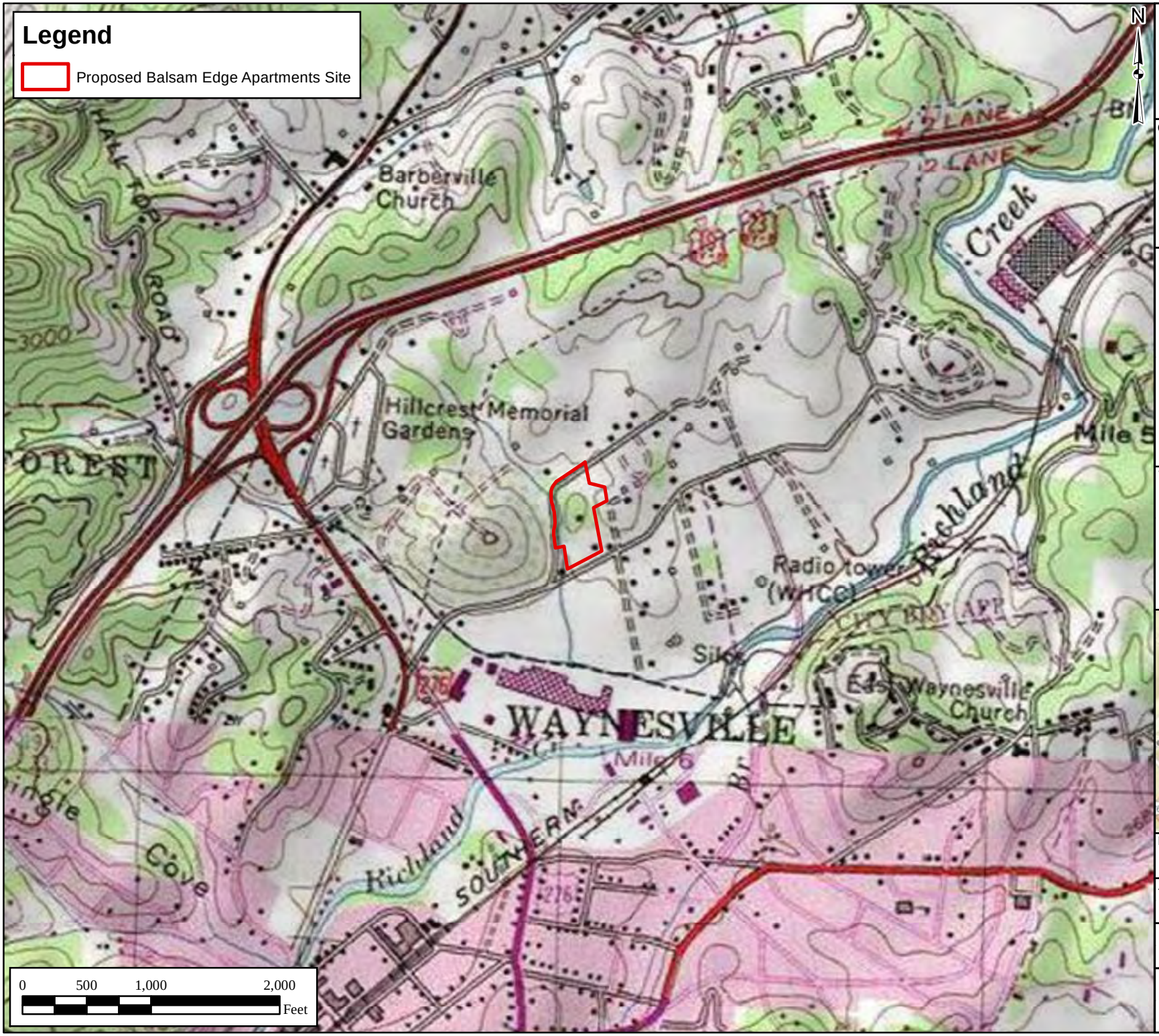


| Drawn By: | Scale: |
|---|---|
| ZJW | 1 " = 1,000 ' |
| **Approved By:** | **Date:** |
| PMS | 11/07/2022 |

**ECS Project No.**

**49: 18762**

**FIGURE 1**




ECS

**Client:**

MHO
Mountain Housing Opportunities

**Project:**

PROPOSED
BALSAM EDGE
APARTMENTS SITE

271 HOWELL MILL ROAD,
WAYNESVILLE,
HAYWOOD COUNTY,
NORTH CAROLINA

**Title:**

**USGS TOPOGRAPHIC MAP**

**CLYDE, NC QUADRANGLE**
**DATED: 1979**

| Drawn By: | Scale: |
|---|---|
| ZJW | 1 " = 1,000 ' |
| **Approved By:** | **Date:** |
| PMS | 11/07/2022 |

**ECS Project No.**
**49: 18762**

**FIGURE 2**

Client:

MHO
Mountain Housing Opportunities

Project:

PROPOSED
BALSAM EDGE
APARTMENTS SITE

271 HOWELL MILL ROAD,
WAYNESVILLE,
HAYWOOD COUNTY,
NORTH CAROLINA

Title:

**AERIAL IMAGERY MAP**

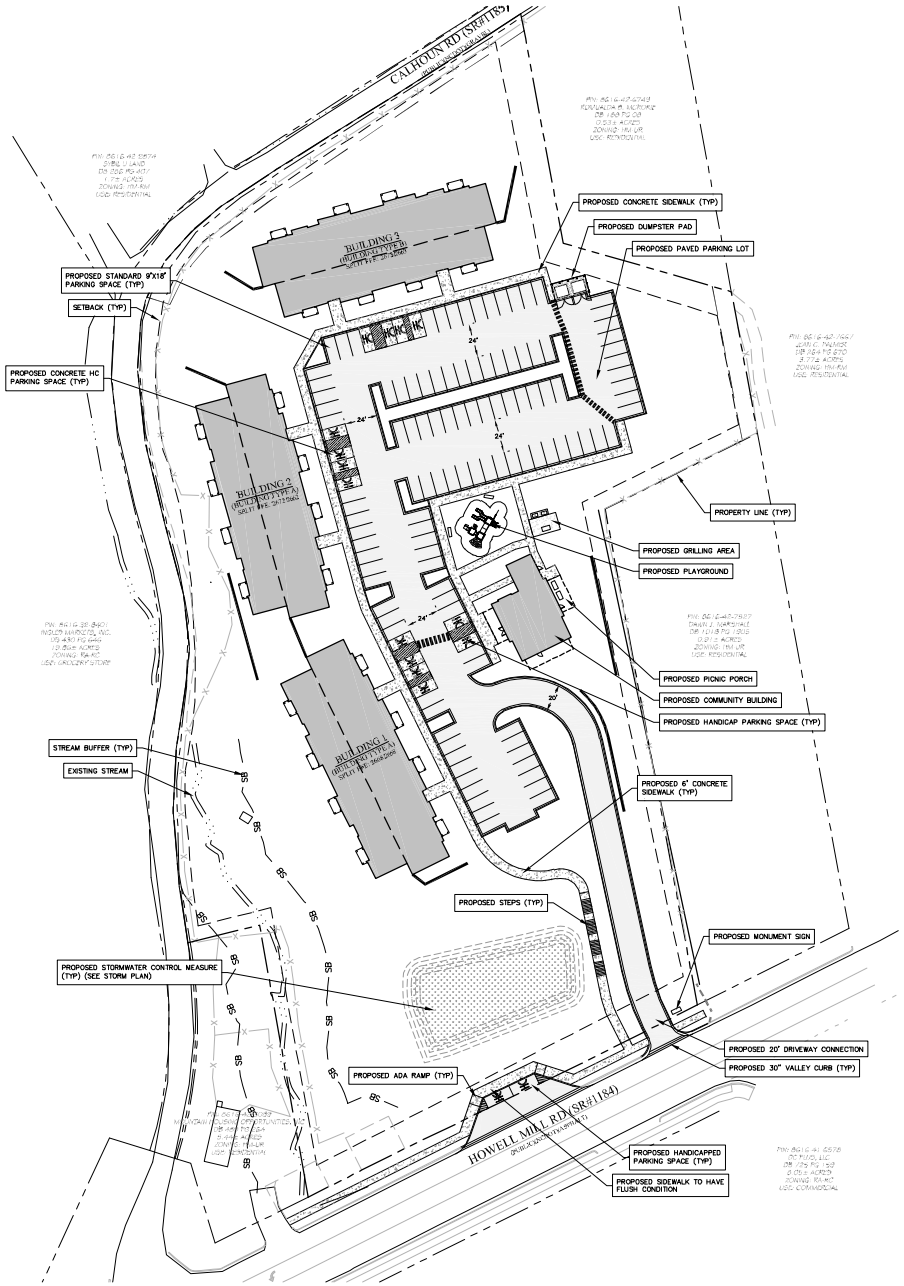
| Drawn By: | Scale: |
|---|---|
| ZJW | 1 " = 200 ' |
| **Approved By:** | **Date:** |
| PMS | 11/07/2022 |

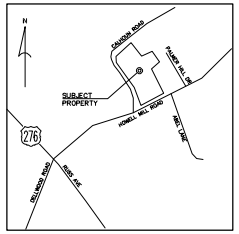
**ECS Project No.**

**49: 18762**

**FIGURE 3**

# Appendix II: Proposed Site Plans




VICINITY MAP

(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONSEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-3468; 8616-42-5404;<br>8616-42-6329; 8616-42-6671;<br>8616-42-5167; 8616-42-4173; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 486/478;150/370;489/264;133/179;<br>486/481;486/472;486/475 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 5' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE |

PARKING CALCULATIONS:

| | |
|---|---|
| VEHICULAR: | |
| REQUIRED SPACES: | MIN – 1.5 SPACES PER UNIT<br>MAX – 1 SPACE PER 20 SPACES<br>UNITS – 84 |
| SPACES PROVIDED: | 126 |
| HANDICAPPED SPACES: | |
| SPACES REQUIRED: 5 | SPACES PROVIDED: 14 |

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,998 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.20 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

OPEN SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-777-4733 OR INSPECTION@CDCGO.COM

Know what's **below.** **Call** before you dig.

NORTH

C201 SITE PLAN
1" = 40'

HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC 264 Bridge Concepts, P.A.

# MHO - BALSAM EDGE

WAYNESVILLE, NORTH CAROLINA

NCHFA APPLICATION NO.: APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

PRELIMINARY NOT RELEASED FOR CONSTRUCTION

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

SITE PLAN

C201

# Appendix III: IPaC USFWS Species List

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, NC 28801-1082
Phone: (828) 258-3939 Fax: (828) 258-5330

In Reply Refer To: November 08, 2022
Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The enclosed species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new species information can change your official species list. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends you visit the ECOS-IPaC website at regular intervals during project planning and implementation to ensure your species list is accurate or obtain an updated species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment (BA) or biological evaluation (BE) should be completed for your project. A BA is required for major construction activities (or other undertakings having similar physical impacts) considered to be Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)) (NEPA). For projects other than major construction activities, the Service suggests that a BE be prepared to determine effects of the action and whether those effects may affect listed species and/or designated critical habitat. E?ects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other

activities that are caused by the proposed action. A consequence is caused by the proposed action if it is reasonably certain to occur and would not occur “but for” the proposed action.. Recommended contents of a BA/BE are described at 50 CFR 402.12. More information and resources about project review and preparing a BA/BE can be found at the following web link: https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview.

If a Federal agency determines listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. The Service is not required to concur with "no effect" determinations from Federal action agencies. If consultation is required, the Service recommends that candidate species, proposed species, proposed critical habitat, and at-risk species be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or licensed applicants, can be found in the "Endangered Species Consultation Handbook" at the following web link: https://www.fws.gov/media/endangered-species-consultation-handbook.

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). More information about MBTA and BGEPA can be found at the following web link: https://www.fws.gov/program/migratory-birds.

We appreciate your consideration of Federally listed species. The Service encourages Federal agencies to include conservation of threatened and endangered species in their project planning to further the purposes of the Act. Please contact our staff at 828-258-3939, if you have any questions. In any future correspondence concerning this project, please reference the Consultation Code which can be found in the header of this letter.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Asheville Ecological Services Field Office**
160 Zillicoa Street
Asheville, NC 28801-1082
(828) 258-3939

# Project Summary

Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments
Project Type: Acquisition of Lands
Project Description: Potential Development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.50482825,-82.98441990059978,14z

Counties: Haywood County, North Carolina

# Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

| NAME | STATUS |
|---|---|
| Gray Bat *Myotis grisescens*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6329 | Endangered |
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## Insects

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

## Flowering Plants

| NAME | STATUS |
| --- | --- |
| Small Whorled Pogonia *Isotria medeoloides* | Threatened |

Population:

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/1890

## Lichens

| NAME | STATUS |
| --- | --- |
| Rock Gnome Lichen *Gymnoderma lineare* | Endangered |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/3933

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Sep 1 to Aug 31 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |

| NAME | BREEDING SEASON |
|---|---|
| Black-capped Chickadee *Poecile atricapillus practicus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Apr 10 to Jul 31 |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Kentucky Warbler *Oporornis formosus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Prairie Warbler *Dendroica discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Prothonotary Warbler *Protonotaria citrea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

# IPaC User Contact Information


| | |
|---|---|
| Agency: | ECS |
| Name: | Zach Windham |
| Address: | 1200 Woodruff Road |
| Address Line 2: | Suit H-12 |
| City: | Greenville |
| State: | SC |
| Zip: | 29607 |
| Email | zwindham@ecslimited.com |
| Phone: | 4049859014 |

# Appendix IV: NHP Portal Request Letter

NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
**Deputy Director, Natural Heritage Program**

NCNHDE-19913

November 8, 2022

Zach Windham
ECS Southeast LLP
1200 Woodruff Road
Greenville, SC 29607
RE: Proposed Balsam Edge Apartments ; 49-18762

Dear Zach Windham :

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Proposed Balsam Edge Apartments
Project No. 49-18762
November 8, 2022
NCNHDE-19913

Element Occurrences Documented Within a One-mile Radius of the Project Area

| Taxonomic Group | EO ID | Scientific Name | Common Name | Last Observation Date | Element Occurrence Rank | Accuracy | Federal Status | State Status | Global Rank | State Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| Butterfly | 25593 | Erora laeta | Early Hairstreak | 2006-06-20 | D | 4-Low | --- | Significantly Rare | G2G3 | S2S3 |
| Mammal | 39016 | Myotis grisescens | Gray Bat | 2019-09-05 | E | 2-High | Endangered | Endangered | G3G4 | S1 |
| Mammal | 39068 | Perimyotis subflavus | Tricolored Bat | 2018-04-20 | E | 2-High | --- | Significantly Rare | G3G4 | S3 |
| Moss | 22911 | Syntrichia papillosa | Papillose Tortula | 1988-09-29 | E | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |
| Sawfly, Wasp, Bee, or Ant | 37104 | Bombus affinis | Rusty-patched Bumble Bee | 1952-04-30 | H | 4-Low | Endangered | Significantly Rare | G2 | S1 |
| Vascular Plant | 23933 | Hackelia virginiana | Virginia Stickseed | 1968-Pre | H | 5-Very Low | --- | Significantly Rare Peripheral | G5 | S2 |
| Vascular Plant | 23969 | Orbexilum onobrychis | Lanceleaf Scurfpea | 1891-07-17 | H | 5-Very Low | --- | Special Concern Historical | G5 | SH |
| Vascular Plant | 6840 | Platanthera herbiola | Northern Rein Orchid | 1937-06-17 | H | 3-Medium | --- | Special Concern Vulnerable | G4?T4Q | S1S2 |
| Vascular Plant | 19109 | Platanthera peramoena | Purple Fringeless Orchid | 1937-07 | H | 4-Low | --- | Threatened | G5 | S2 |
| Vascular Plant | 3312 | Poa palustris | Swamp Bluegrass | 1931-07-11 | H | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |

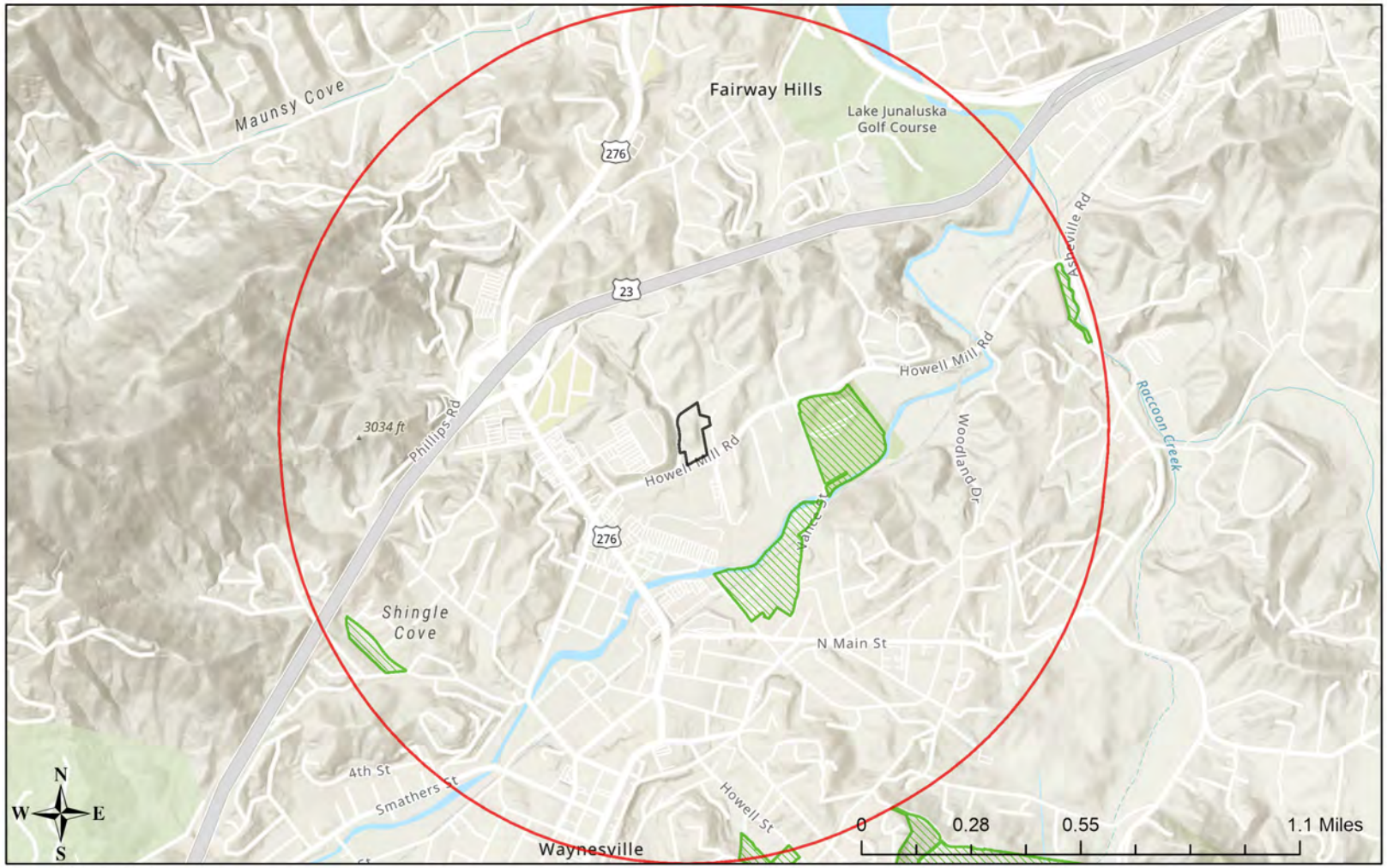
No Natural Areas are Documented Within a One-mile Radius of the Project Area

Managed Areas Documented Within a One-mile Radius of the Project Area

| Managed Area Name | Owner | Owner Type |
|---|---|---|
| Mountain Research Station | NC Department of Agriculture, Research Stations Division | State |
| NC Department of Transportation Mitigation Site | NC Department of Transportation | State |
| Town of Waynesville - Chestnut Park | Town of Waynesville | Local Government |
| Town of Waynesville - Waynesville Recreation Park | Town of Waynesville | Local Government |
| Town of Waynesville Open Space | Town of Waynesville | Local Government |

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on November 8, 2022; source: NCNHP, Q2, July 2022. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

# NCNHDE-19913: Proposed Balsam Edge Apartments




November 8, 2022

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

# Appendix V: Photographic Log

1 - View of the northern portion of the PSA, facing north.

2 - View of the eastern portion of the PSA, facing south.

3 - View of the central portion of the PSA, facing north.

4 - View of the southern portion of the PSA, facing south.

5 - View of the western portion of the PSA, facing northwest.

6 - View of the shed structure on the eastern portion of the PSA, facing north.

7 - View within the shed.

8 - View of the residential structure on the southeastern portion of the PSA, facing northeast.

9 - View within the attic in the residential structure.

10 - View of a potential stream along the western portion of the PSA, facing south.

11 - View of a potential wetland on the southwestern portion of the PSA, facing southwest.

12 - View of a rock outcrop on the western portion of the PSA, facing east.

## Claudia Young

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Wednesday, January 11, 2023 2:21 PM
**To:** Thomas S Hawkins, P.G., PWS
**Cc:** Zach Windham; Paul M. Stephens IV, P.E., PWS
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request
**Attachments:** 20230111_23-445_Recs for Lighting and Pollinators.pdf; 49-18762 - Balsam Edge Apartments - USFWS Request Letter.pdf

Thanks for the coordination Thomas. We offer the following comments and recommendations to inform prudent effect determinations to listed species from the action agency:

Listed bats

Based on the information provided, suitable habitat occurs within the proposed action area (50CFR 402.02) for the federally endangered Northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus,* see information below pertaining to this animal's federal status). We acknowledge that you did not detect caves or cave-like features within the action area. However, a known roost supporting tricolored bat and the federally endangered gray bat (*Myotis grisescens*) occurs within 0.5 miles of the proposed action area.

During their "active seasons," the animals listed above may forage, commute, and/or roost within the action area. The following impact avoidance and minimization measures would reduce the probability for take of these animals and support our concurrence with a "may affect, not likely to adversely affect" determination from the appropriate action agency:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Tricolored bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat as endangered under the Act. The Service has up to 12 months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of White Nose Syndrome (WNS). Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as human disturbance and habitat loss. Species proposed for listing are not afforded protection under the Act; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and “take” will apply. Therefore, if you suspect your future or existing project may affect tricolored bats after the potential new listing goes into effect, we recommend analyzing possible effects of the project on tricolored bats and their habitat to determine whether consultation under section 7 of

the Act is necessary. Conferencing procedures can be followed prior to listing to ensure the project does not jeopardize the existence of a species. Projects with an existing section 7 biological opinion may require re-initiation of consultation to provide uninterrupted authorization for covered activities.

Monarch butterfly

Monarch butterfly (*Danaus plexippus*) is a candidate species, and we appreciate the project proponent's consideration of monarch butterfly when evaluating the action area for impacts to federally listed species and their habitats. The species is not currently subject to section 7 consultation, and an effects determination is not necessary. However, incorporating proactive conservation measures on behalf of this animal may preclude the need to list it in the future. Attached are several recommendations on behalf of this species and other pollinators for the Applicant's consideration.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species. Please be aware that in accordance with the Endangered Species Act it is the responsibility of the appropriate federal action agency or its designated representative to review its activities or programs and to identify any such activities or programs that may affect endangered or threatened species or their habitats. If it is determined that the proposed activity may adversely affect any species federally listed as endangered or threatened, formal consultation with this office must be initiated.

There is a lot here Thomas. Please reach out if you have any questions.

Regards,
Byron

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

*This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act and may be disclosed to third parties.*

---

**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Sunday, December 11, 2022 5:51 PM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good evening Byron,

Please see the attached request for comments, questions, and/or concurrence on the potential presence of federally threatened and endangered species for a proposed multi-family development located at 333 Howell Mill Road in

Waynesville, Haywood County, North Carolina. We are submitting this request as part of a HUD Part 58 Environmental Assessment. Please let me know if I can assist with any questions or if you require additional information.

Thank you,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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## Claudia Young

**From:** Adeline Wolfe <adeline@mtnhousing.org>
**Sent:** Monday, October 2, 2023 1:28 PM
**To:** Claudia Young; Jennifer Percy
**Cc:** Rich Olejniczak; Geoffrey Barton; Susan Campbell
**Subject:** Fwd: [EXTERNAL] Additional Balsam Edge Question
**Attachments:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request.eml

Claudia,

Please see Thomas's reply and supporting email from USFW for support in regards to the Small-whorled pogonia.

I have just sent on the explosives question.

---------- Forwarded message ---------
From: **Thomas S Hawkins, P.G., PWS** <THawkins@ecslimited.com>
Date: Mon, Oct 2, 2023 at 1:11 PM
Subject: RE: [EXTERNAL] Additional Balsam Edge Question
To: Adeline Wolfe <adeline@mtnhousing.org>, Justin A. Roth, CHMM <JRoth@ecslimited.com>

Hi Adeline,

Doing well and hope you are as well! I've put together the response below, let me know your thoughts:

Based on the habitat description for Small-whorled pogonia, the species generally grows in areas with sparse to moderate ground cover under canopies that are relatively open or near features that create long-persisting breaks in the canopy coverage, such as a road or stream. Our full habitat description is listed in the letter addressed to USFWS in the attached email.

Based on our site reconnaissance, the subject property contained wooded land along the western and northern boundaries of the property and on a ridge located on the northern-central portion of the site. Tree growth within the wooded areas primarily consisted of red oak, white oak, and eastern hemlock with a moderately dense understory that contained species such as goldenrod, bushy bluestem, greenbriar, and christmas fern. The vegetation observed along the stream transecting the southwestern portion of the subject property included dense vegetation composed of sweetgum and red maple saplings, chinese privet, wild rose, Japanese stiltgrass, and species of briar. A maintained lawn was observed surrounding the brick residential structure on the southeast corner of the site. The remainder of the subject property consisted of unmaintained fields with dense herbaceous species including orchard grass, bull thistle, narrowleaf plantain, broomsedge bluestem, purple-leaved willow-herb, allegheny monkeyflower, and goldenrod.

Based on our observations, areas containing sparse to moderate ground cover were limited to portions of the slopes, beneath the more mature three growth, within the wooded land on the northern-central portion of the site. Based on our observations, areas with an open herbaceous layer and open canopy did not coincide on the subject property. Therefore, suitable habitat for the Small-whorled pogonia is not present at the subject property and the project should have no effect on this species.

Our correspondence, including our species write-up for Small-whorled pogonia paraphrased above, was submitted to USFWS on December 11, 2022. Byron Hamstead of the USFWS responded by email on January 11, 2023, with information regarding the listed bat species (Northern long-eared bat, Indiana bat, Gray bat) and the Tricolored bat, which is proposed for listing as endangered. Mr. Hamstead further stated within his email that, based on the information provided, suitable habitat does not occur within the action area for any other federally protected species.

Thanks,

**THOMAS S HAWKINS, P.G., PWS** | Environmental Senior Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

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**From:** Adeline Wolfe <adeline@mtnhousing.org>
**Sent:** Monday, October 2, 2023 12:20 PM
**To:** Thomas S Hawkins, P.G., PWS <THawkins@ecslimited.com>; Justin A. Roth, CHMM <JRoth@ecslimited.com>
**Subject:** [EXTERNAL] Additional Balsam Edge Question

Thomas,

I hope you are well!

We received the following clarifying question from HUD in regards to Balsam Edge's environmental review. Could you please compile a response based on your review and survey of the land that the following species was not present?

*Can you please have your consultants provide additional documentation and an explanation to address this question? Thanks.*

*"According to IPaC – Small-whorled pogonia is known from the area. Tree removal actions could have caused harm to this species if it was present. Is there a scientifically defensible finding of No Effect for this species?"*

Thank you!

Adeline

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## Adeline Wolfe

**Mountain Housing Opportunities, Inc.**

Real Estate Developer, Community Investments

**64 Clingman Ave, Suite 101**

Asheville, NC 28801

828.254.4030 Ext.133


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## Adeline Wolfe
**Mountain Housing Opportunities, Inc.**
Real Estate Developer, Community Investments

**64 Clingman Ave, Suite 101**
Asheville, NC 28801
828.254.4030 Ext.133

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, NC 28801-1082
Phone: (828) 258-3939 Fax: (828) 258-5330

In Reply Refer To: November 08, 2022
Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The enclosed species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please note that new species information can change your official species list. Under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends you visit the ECOS-IPaC website at regular intervals during project planning and implementation to ensure your species list is accurate or obtain an updated species list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment (BA) or biological evaluation (BE) should be completed for your project. A BA is required for major construction activities (or other undertakings having similar physical impacts) considered to be Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)) (NEPA). For projects other than major construction activities, the Service suggests that a BE be prepared to determine effects of the action and whether those effects may affect listed species and/or designated critical habitat. E?ects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other

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activities that are caused by the proposed action. A consequence is caused by the proposed action if it is reasonably certain to occur and would not occur “but for” the proposed action.. Recommended contents of a BA/BE are described at 50 CFR 402.12. More information and resources about project review and preparing a BA/BE can be found at the following web link: https://www.fws.gov/office/asheville-ecological-services/asheville-field-office-online-review-process-overview.

If a Federal agency determines listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. The Service is not required to concur with "no effect" determinations from Federal action agencies. If consultation is required, the Service recommends that candidate species, proposed species, proposed critical habitat, and at-risk species be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or licensed applicants, can be found in the "Endangered Species Consultation Handbook" at the following web link: https://www.fws.gov/media/endangered-species-consultation-handbook.

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). More information about MBTA and BGEPA can be found at the following web link: https://www.fws.gov/program/migratory-birds.

We appreciate your consideration of Federally listed species. The Service encourages Federal agencies to include conservation of threatened and endangered species in their project planning to further the purposes of the Act. Please contact our staff at 828-258-3939, if you have any questions. In any future correspondence concerning this project, please reference the Consultation Code which can be found in the header of this letter.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

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# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Asheville Ecological Services Field Office**
160 Zillicoa Street
Asheville, NC 28801-1082
(828) 258-3939

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# Project Summary

Project Code: 2023-0013444
Project Name: Proposed Balsam Edge Apartments
Project Type: Acquisition of Lands
Project Description: Potential Development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.50482825,-82.98441990059978,14z

Counties: Haywood County, North Carolina

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# Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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## Mammals

| NAME | STATUS |
|---|---|
| Gray Bat *Myotis grisescens*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/6329 | Endangered |
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<br>Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |
| Tricolored Bat *Perimyotis subflavus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

## Insects

| NAME | STATUS |
|---|---|
| Monarch Butterfly *Danaus plexippus*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/9743 | Candidate |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Small Whorled Pogonia *Isotria medeoloides* | Threatened |

Population:

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/1890

## Lichens

| NAME | STATUS |
|---|---|
| Rock Gnome Lichen *Gymnoderma lineare* | Endangered |

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/3933

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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# Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---|---|
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. | Breeds Sep 1 to Aug 31 |
| Black-billed Cuckoo *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |

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| NAME | BREEDING SEASON |
|---|---|
| Black-capped Chickadee *Poecile atricapillus practicus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Apr 10 to Jul 31 |
| Canada Warbler *Cardellina canadensis*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Aug 10 |
| Chimney Swift *Chaetura pelagica*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 25 |
| Eastern Whip-poor-will *Antrostomus vociferus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Aug 20 |
| Golden-winged Warbler *Vermivora chrysoptera*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8745 | Breeds May 1 to Jul 20 |
| Kentucky Warbler *Oporornis formosus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 20 to Aug 20 |
| Prairie Warbler *Dendroica discolor*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Prothonotary Warbler *Protonotaria citrea*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker *Melanerpes erythrocephalus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird *Euphagus carolinus*<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds elsewhere |
| Wood Thrush *Hylocichla mustelina*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

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## Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the

FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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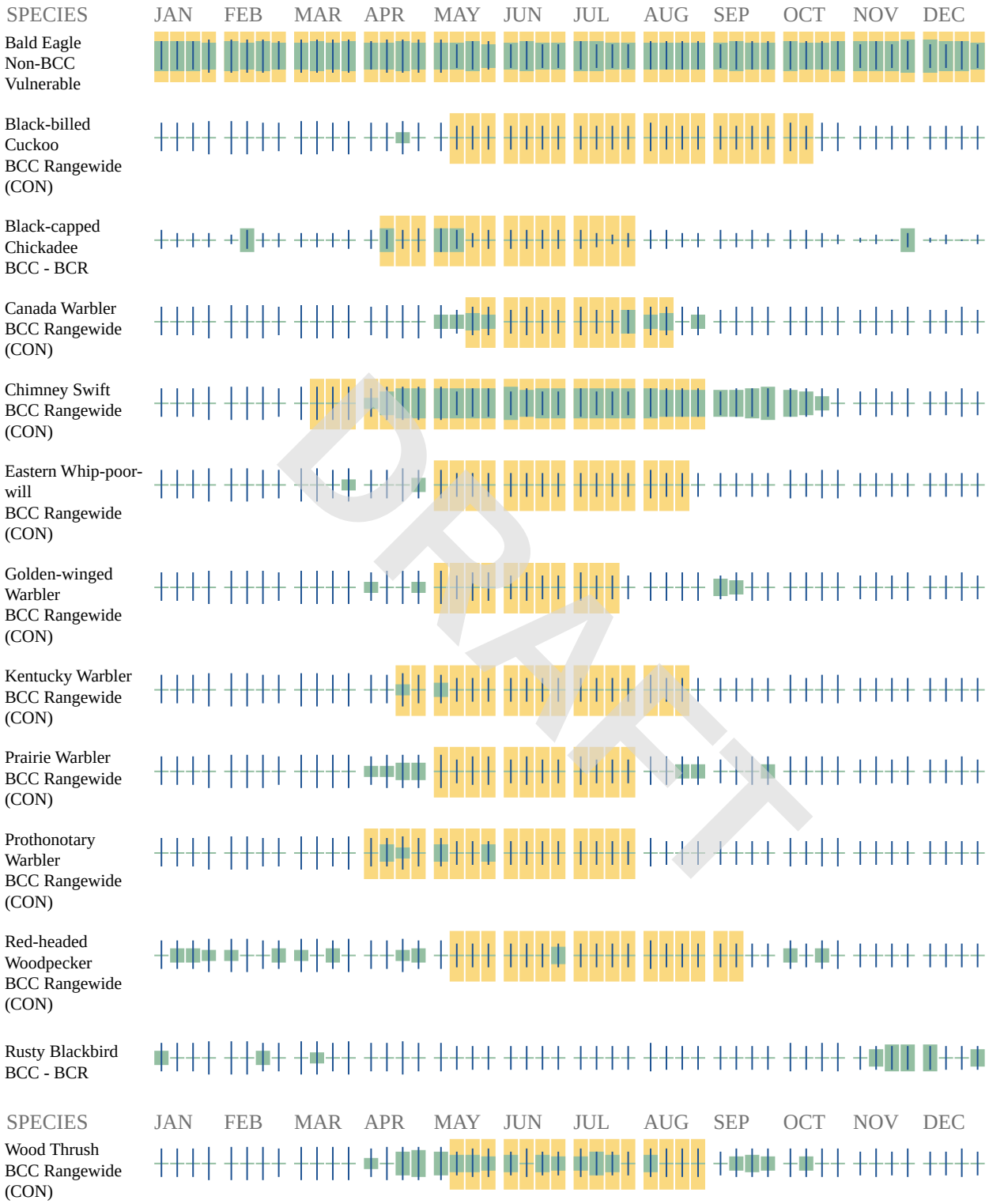


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Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

## Migratory Birds FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering or migrating in my area?**

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To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

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The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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# Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

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## IPaC User Contact Information


| | |
|---|---|
| Agency: | ECS |
| Name: | Zach Windham |
| Address: | 1200 Woodruff Road |
| Address Line 2: | Suit H-12 |
| City: | Greenville |
| State: | SC |
| Zip: | 29607 |
| Email | zwindham@ecslimited.com |
| Phone: | 4049859014 |


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NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
**Deputy Director, Natural Heritage Program**

NCNHDE-19913

November 8, 2022

Zach Windham
ECS Southeast LLP
1200 Woodruff Road
Greenville, SC 29607
RE: Proposed Balsam Edge Apartments ; 49-18762

Dear Zach Windham :

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

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Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Proposed Balsam Edge Apartments
Project No. 49-18762
November 8, 2022
NCNHDE-19913

Element Occurrences Documented Within a One-mile Radius of the Project Area

| Taxonomic Group | EO ID | Scientific Name | Common Name | Last Observation Date | Element Occurrence Rank | Accuracy | Federal Status | State Status | Global Rank | State Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| Butterfly | 25593 | Erora laeta | Early Hairstreak | 2006-06-20 | D | 4-Low | --- | Significantly Rare | G2G3 | S2S3 |
| Mammal | 39016 | Myotis grisescens | Gray Bat | 2019-09-05 | E | 2-High | Endangered | Endangered | G3G4 | S1 |
| Mammal | 39068 | Perimyotis subflavus | Tricolored Bat | 2018-04-20 | E | 2-High | --- | Significantly Rare | G3G4 | S3 |
| Moss | 22911 | Syntrichia papillosa | Papillose Tortula | 1988-09-29 | E | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |
| Sawfly, Wasp, Bee, or Ant | 37104 | Bombus affinis | Rusty-patched Bumble Bee | 1952-04-30 | H | 4-Low | Endangered | Significantly Rare | G2 | S1 |
| Vascular Plant | 23933 | Hackelia virginiana | Virginia Stickseed | 1968-Pre | H | 5-Very Low | --- | Significantly Rare Peripheral | G5 | S2 |
| Vascular Plant | 23969 | Orbexilum onobrychis | Lanceleaf Scurfpea | 1891-07-17 | H | 5-Very Low | --- | Special Concern Historical | G5 | SH |
| Vascular Plant | 6840 | Platanthera herbiola | Northern Rein Orchid | 1937-06-17 | H | 3-Medium | --- | Special Concern Vulnerable | G4?T4Q | S1S2 |
| Vascular Plant | 19109 | Platanthera peramoena | Purple Fringeless Orchid | 1937-07 | H | 4-Low | --- | Threatened | G5 | S2 |
| Vascular Plant | 3312 | Poa palustris | Swamp Bluegrass | 1931-07-11 | H | 4-Low | --- | Significantly Rare Peripheral | G5 | S1 |

No Natural Areas are Documented Within a One-mile Radius of the Project Area

DRAFT

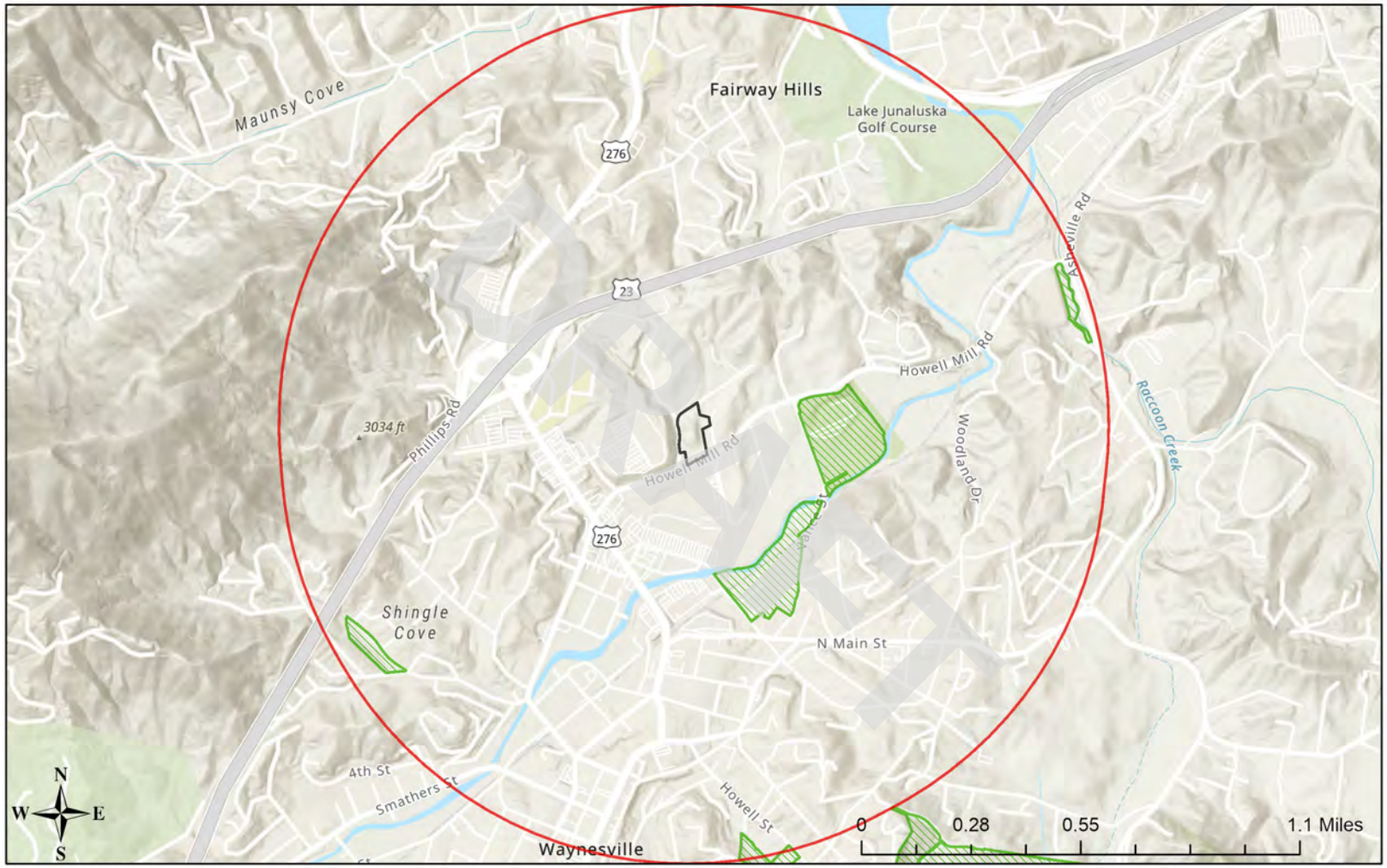
Managed Areas Documented Within a One-mile Radius of the Project Area

| Managed Area Name | Owner | Owner Type |
|---|---|---|
| Mountain Research Station | NC Department of Agriculture, Research Stations Division | State |
| NC Department of Transportation Mitigation Site | NC Department of Transportation | State |
| Town of Waynesville - Chestnut Park | Town of Waynesville | Local Government |
| Town of Waynesville - Waynesville Recreation Park | Town of Waynesville | Local Government |
| Town of Waynesville Open Space | Town of Waynesville | Local Government |

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on November 8, 2022; source: NCNHP, Q2, July 2022. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

DRAFT

# NCNHDE-19913: Proposed Balsam Edge Apartments




November 8, 2022

- Managed Area (MAREA)
- Buffered Project Boundary
- Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

## Thomas S Hawkins, PWS

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Thursday, February 16, 2023 9:58 AM
**To:** Thomas S Hawkins, PWS
**Cc:** Zach Windham; Paul M. Stephens IV, P.E., PWS
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Thanks Thomas.

The proposed impact avoidance and minimization measures described in your last email would support our concurrence with "may affect, not likely to adversely affect" determinations from the action agency for all the bat species referenced in our January 11, 2023, email. We reiterate that these measures would also support our concurrence with a "may affect, not likely to adversely affect" determination from the action agency for the proposed endangered tricolored bat (*Perimyotis subflavus*), should it become listed in the future.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species and we require no further action at this time. Further coordination and/or consultation may be required under the Endangered Species Act (ESA) if: (1) information reveals impacts of this identified action which may affect or may have affected listed species or critical habitat, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

Thanks again for the coordination.

Byron

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

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---

**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Tuesday, February 7, 2023 11:16 AM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** RE: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

Hi Byron,

Greatly appreciate your time reviewing this project and enjoyed our discussion last week.

I've spoken with our client, Mountain Housing Opportunities, and they are in the process of contracting tree clearing services within the proposed development area and the work will be completed by March 15, 2023. In addition, they

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agreed to have the manmade structures on the property surveyed for evidence of bats within two weeks prior to the demolition activities.

Please let me know if the actions above are suitable, and if you require any additional information, I'm available by email here or at (864) 350-2414.

Thank you,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Sent:** Wednesday, January 11, 2023 2:21 PM
**To:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** Re: [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

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Thanks for the coordination Thomas. We offer the following comments and recommendations to inform prudent effect determinations to listed species from the action agency:

Listed bats

Based on the information provided, suitable habitat occurs within the proposed action area (50CFR 402.02) for the federally endangered Northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), and the proposed endangered tricolored bat (*Perimyotis subflavus,* see information below pertaining to this animal's federal status). We acknowledge that you did not detect caves or cave-like features within the action area. However, a known roost supporting tricolored bat and the federally endangered gray bat (*Myotis grisescens*) occurs within 0.5 miles of the proposed action area.

During their "active seasons," the animals listed above may forage, commute, and/or roost within the action area. The following impact avoidance and minimization measures would reduce the probability for take of these animals and support our concurrence with a "may affect, not likely to adversely affect" determination from the appropriate action agency:

1. Accomplish all tree clearing activities outside of the active season for gray bat. The active season for gray bat is March 15 - November 15, which also encompasses the active season for the other bat species listed above. Therefore, this measure would reduce the probability for incidental take of all species listed above.
2. One or more of the bat species listed above may occupy buildings and other manmade structures. Any buildings, sheds, abandoned homes within the action area should be inspected for bat use approximately two weeks prior to demolition. Evidence for bat use may include but is not limited to staining, guano, and observations of live or dead bats.
3. The bat species listed above are averse to light. To further reduce the probability for incidental take of these species, we encourage the Applicant to consider "bat-friendly" lighting design techniques that also meet safety requirements and proposed project objectives. Attached are several general lighting recommendations on behalf of bats for your consideration. At the request of project proponents, our office can be available to assist with a site-specific lighting design.

Tricolored bat

On September 14, 2022, the Service published a proposal in the Federal Register to list the tricolored bat as endangered under the Act. The Service has up to 12 months from the date the proposal published to make a final determination, either to list the tricolored bat under the Act or to withdraw the proposal. The Service determined the bat faces extinction primarily due to the range-wide impacts of White Nose Syndrome (WNS). Because tricolored bat populations have been greatly reduced due to WNS, surviving bat populations are now more vulnerable to other stressors such as

human disturbance and habitat loss. Species proposed for listing are not afforded protection under the Act; however, as soon as a listing becomes effective (typically 30 days after publication of the final rule in the Federal Register), the prohibitions against jeopardizing its continued existence and "take" will apply. Therefore, if you suspect your future or existing project may affect tricolored bats after the potential new listing goes into effect, we recommend analyzing possible effects of the project on tricolored bats and their habitat to determine whether consultation under section 7 of the Act is necessary. Conferencing procedures can be followed prior to listing to ensure the project does not jeopardize the existence of a species. Projects with an existing section 7 biological opinion may require re-initiation of consultation to provide uninterrupted authorization for covered activities.

Monarch butterfly

Monarch butterfly (*Danaus plexippus*) is a candidate species, and we appreciate the project proponent's consideration of monarch butterfly when evaluating the action area for impacts to federally listed species and their habitats. The species is not currently subject to section 7 consultation, and an effects determination is not necessary. However, incorporating proactive conservation measures on behalf of this animal may preclude the need to list it in the future. Attached are several recommendations on behalf of this species and other pollinators for the Applicant's consideration.

Based on the information provided, suitable habitat does not occur within the action area for any other federally protected species. Please be aware that in accordance with the Endangered Species Act it is the responsibility of the appropriate federal action agency or its designated representative to review its activities or programs and to identify any such activities or programs that may affect endangered or threatened species or their habitats. If it is determined that the proposed activity may adversely affect any species federally listed as endangered or threatened, formal consultation with this office must be initiated.

There is a lot here Thomas. Please reach out if you have any questions.

Regards,
Byron

DRAFT

Byron Hamstead
(he/him/his)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Asheville Ecological Services Field Office
160 Zillicoa Street
Asheville, North Carolina, 28801

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---

**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Sunday, December 11, 2022 5:51 PM
**To:** Hamstead, Byron A <byron_hamstead@fws.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Paul M. Stephens IV, P.E., PWS <PStephens@ecslimited.com>
**Subject:** [EXTERNAL] Proposed Balsam Edge Apartments, Waynesville, NC - USFWS Request

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good evening Byron,

Please see the attached request for comments, questions, and/or concurrence on the potential presence of federally threatened and endangered species for a proposed multi-family development located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. We are submitting this request as part of a HUD Part 58 Environmental Assessment. Please let me know if I can assist with any questions or if you require additional information.

Thank you,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

**ECS SOUTHEAST, LLP**
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# ATTACHMENT 9:

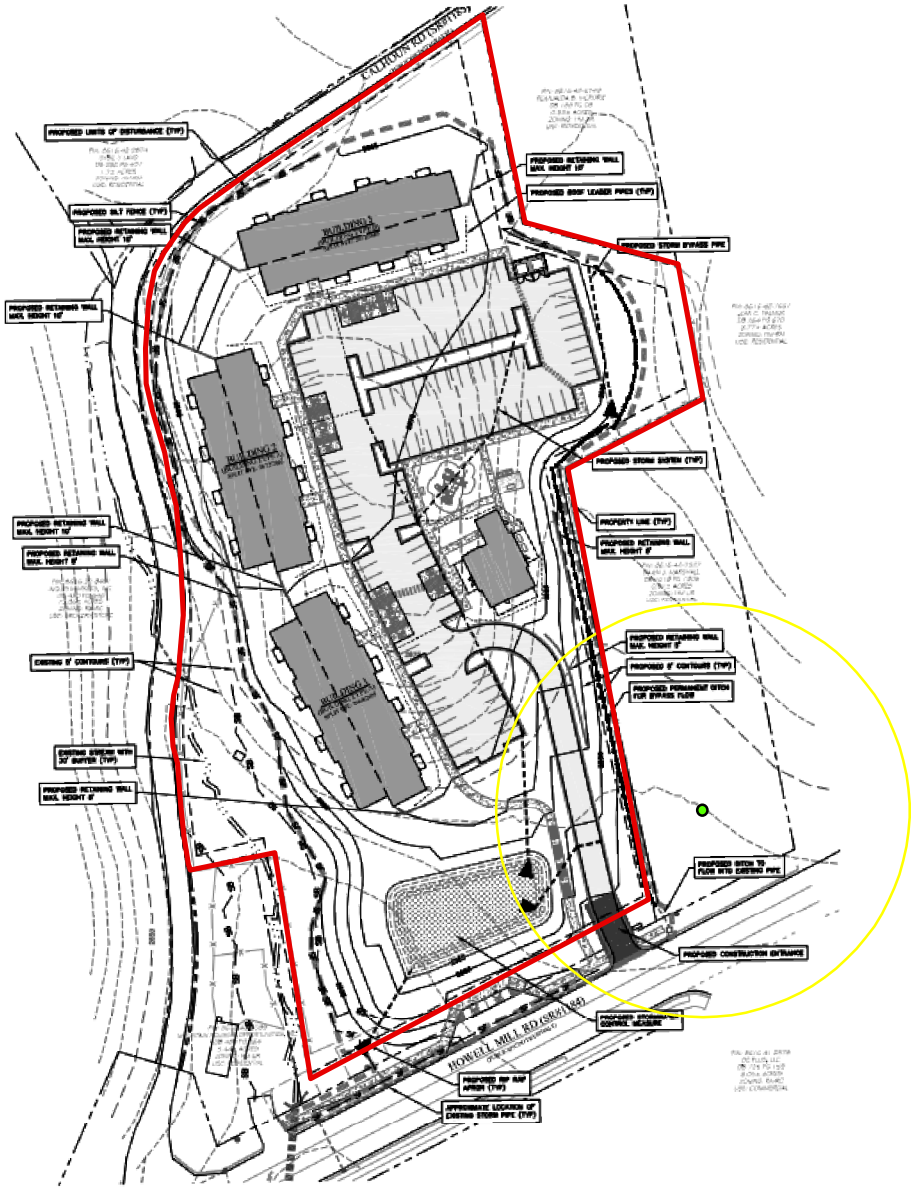
# Explosive and Flammable Hazards

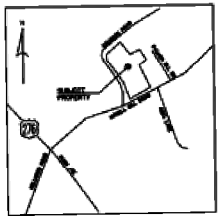
# Appendix H

# Explosive and Flammable Hazards

**Legend**

- Proposed Balsam Edge Apartments
- AST - 11 Palmer Drive
- Thermal Radiation ASD




VICINITY MAP

DEVELOPMENT DATA

PROJECT DATA

HOUSING STUDIO

CDC

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA

MHO

FOR REVIEW ONLY

NOT RELEASED FOR CONSTRUCTION

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

CDC INSPECTIONS HOTLINE:

811 Know what's below. Call before you dig.

NORTH

GR, EC, & SD PLAN

GRADING, EROSION CONTROL & STORM DRAINAGE PLAN

C301

1 " = 150 feet

0 75 150 300 Feet

**ASD Radius Map for 11 Palmer Drive (Georeferenced)**
**Sheet C301 of Housing Studio & CDC Plans**

Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, Haywood County, North Carolina
ECS Project No. 49-18762

**Balsam Edge Apartments**
271 Howell Mill Road
Waynesville, NC 28786

Inquiry Number: 7182357.2s
November 17, 2022

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# The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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| Government Records Searched/Data Currency Tracking | GR-1 |

**GEOCHECK ADDENDUM**

| | |
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***Thank you for your business.***
Please contact EDR at 1-800-352-0050
with any questions or comments.

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# EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

## TARGET PROPERTY INFORMATION

### ADDRESS

271 HOWELL MILL ROAD
WAYNESVILLE, NC 28786

### COORDINATES

| | |
|---|---|
| Latitude (North): | 35.5047540 - 35ˆ 30' 17.11'' |
| Longitude (West): | 82.9843800 - 82ˆ 59' 3.76'' |
| Universal Tranverse Mercator: | Zone 17 |
| UTM X (Meters): | 320025.0 |
| UTM Y (Meters): | 3930632.0 |
| Elevation: | 2681 ft. above sea level |

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

| | |
|---|---|
| Target Property Map: | 13896599 CLYDE, NC |
| Version Date: | 2019 |
| Southeast Map: | 13742066 WAYNESVILLE, NC |
| Version Date: | 2019 |
| Southwest Map: | 13837547 HAZELWOOD, NC |
| Version Date: | 2019 |
| Northwest Map: | 13837535 DELLWOOD, NC |
| Version Date: | 2019 |

### AERIAL PHOTOGRAPHY IN THIS REPORT

| | |
|---|---|
| Portions of Photo from: | 20141019 |
| Source: | USDA |

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# MAPPED SITES SUMMARY

Target Property Address:
271 HOWELL MILL ROAD
WAYNESVILLE, NC 28786

Click on Map ID to see full detail.

| MAP ID | SITE NAME | ADDRESS | DATABASE ACRONYMS | RELATIVE ELEVATION | DIST (ft. & mi.) DIRECTION |
|---|---|---|---|---|---|
| Reg | SCHULHOFFER JUNKYARD | | NC HSDS | Same | 2001, 0.379, ENE |
| 1 | INGLES GAS EXPRESS 7 | 201 BARBER BLVD | UST, Financial Assurance | Higher | 524, 0.099, West |
| A2 | NORTH CAROLINA DEPT | 90 HOWELL MILL RD | RCRA NonGen / NLR | Lower | 565, 0.107, SSW |
| A3 | WR BOYD INVESTMENTS | 90 HOWELL MILL RD | SHWS | Lower | 565, 0.107, SSW |
| 4 | SCHULHOFERS, INC. | 525 HOWELL MILL ROAD | SWRCY | Lower | 894, 0.169, ENE |
| B5 | PLAZA BP | 598 RUSS AVENUE | LUST, UST, IMD, Financial Assurance | Lower | 1379, 0.261, SW |
| C6 | TOWN OF WAYNESVILLE | MAIN ST (NC23/NC276) | OLI | Higher | 1388, 0.263, NW |
| D7 | TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | LCID | Higher | 1399, 0.265, NNW |
| D8 | TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | DEBRIS | Higher | 1452, 0.275, NNW |
| E9 | AZTEX 209 | 504 RUSS AVENUE | LUST, LUST TRUST, UST, ASBESTOS, Financial... | Lower | 1464, 0.277, SSW |
| C10 | TOWN OF WAYNESVILLE | BIBLE BAPTIST DRIVE | LCID | Higher | 1475, 0.279, NNW |
| B11 | TAYLOR MOTOR CO. | 601 RUSS AVENUE | LUST, IMD | Lower | 1477, 0.280, SW |
| E12 | RUSS AVE SHELL (FORM | 475 RUSS AVENUE | IMD | Lower | 1638, 0.310, SSW |
| F13 | RUSS AVE SHELL (FORM | 800/475 RUSS AVENUE | LUST | Lower | 1701, 0.322, West |
| 14 | MESSER'S EXXON STATI | 701 DELLWOOD ROAD | LUST, UST, IMD | Lower | 1843, 0.349, SW |
| F15 | MOUNTAIN ENERGY STOR | 843 RUSS AVE | LUST, INST CONTROL | Higher | 1936, 0.367, West |
| 16 | WC MINI STORAGE | 187 WEST MARSHALL ST | LUST | Lower | 1949, 0.369, South |
| 17 | TOWN OF WAYNESVILLE | 75 VANCE STREET | LUST, LUST TRUST | Lower | 2181, 0.413, SE |
| G18 | HANDY MART | 1002 RUSS AVE | LUST, UST, INST CONTROL | Higher | 2217, 0.420, WNW |
| G19 | HANDY MART (HANDY PA | 1002 RUSS AVENUE | IMD | Higher | 2217, 0.420, WNW |
| H20 | SCHULHOFFER JUNKYARD | HOWELL MILL ROAD | SHWS | Lower | 2364, 0.448, ENE |
| H21 | BROWN NCDOT PARCEL 3 | 838 HOWELL MILL RD | LAST | Lower | 2410, 0.456, ENE |
| 22 | PRIVATE RESIDENCE | 1460 RUSS AVENUE | LAST | Lower | 2965, 0.562, NNW |
| 23 | TOWN OF WAYNESVILLE | 960 N. MAIN ST. | LAST | Lower | 3077, 0.583, SE |
| 24 | GATHERING ROCK DEVEL | PHILLIPS ROAD | LAST | Higher | 3231, 0.612, West |
| 25 | MILLER'S AUTOMOTIVE | 595 NORTH MAIN STREE | LAST | Lower | 3366, 0.637, SSE |
| 26 | NOLAND PROPERTY (BET | 287 GOLF COURSE ROAD | LAST | Lower | 3462, 0.656, North |
| 27 | HAYWOOD COUNTY BRANN | BRANNER AVENUE | LAST, IMD | Higher | 3897, 0.738, South |
| 28 | SHIRLEY ROBERTS PROP | 21 BRADLEY STREET | LAST, IMD | Higher | 4184, 0.792, WNW |
| 29 | A.C. LAWRENCE LEATHE | 100 WEST MAIN STREET | SHWS | Higher | 5116, 0.969, South |

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# EXECUTIVE SUMMARY

## TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

## DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

## STANDARD ENVIRONMENTAL RECORDS

### *Lists of Federal NPL (Superfund) sites*

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

### *Lists of Federal Delisted NPL sites*

Delisted NPL ---------- National Priority List Deletions

### *Lists of Federal sites subject to CERCLA removals and CERCLA orders*

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

### *Lists of Federal CERCLA sites with NFRAP*

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

### *Lists of Federal RCRA facilities undergoing Corrective Action*

CORRACTS ---------- Corrective Action Report

### *Lists of Federal RCRA TSD facilities*

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

### *Lists of Federal RCRA generators*

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

### *Federal institutional controls / engineering controls registries*

LUCIS ---------- Land Use Control Information System

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US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

***Federal ERNS list***

ERNS..... Emergency Response Notification System

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF..... List of Solid Waste Facilities

***Lists of state and tribal leaking storage tanks***

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

***Lists of state and tribal registered storage tanks***

FEMA UST..... Underground Storage Tank Listing
AST..... AST Database
INDIAN UST..... Underground Storage Tanks on Indian Land

***Lists of state and tribal voluntary cleanup sites***

VCP..... Responsible Party Voluntary Action Sites
INDIAN VCP..... Voluntary Cleanup Priority Listing

***Lists of state and tribal brownfield sites***

BROWNFIELDS..... Brownfields Projects Inventory

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS..... A Listing of Brownfields Sites

***Local Lists of Landfill / Solid Waste Disposal Sites***

HIST LF..... Solid Waste Facility Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
IHS OPEN DUMPS..... Open Dumps on Indian Land

***Local Lists of Hazardous waste / Contaminated Sites***

US HIST CDL..... Delisted National Clandestine Laboratory Register
US CDL..... National Clandestine Laboratory Register

***Local Land Records***

LIENS 2..... CERCLA Lien Information

***Records of Emergency Release Reports***

HMIRS..... Hazardous Materials Information Reporting System

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SPILLS ---- Spills Incident Listing
SPILLS 90 ---- SPILLS 90 data from FirstSearch
SPILLS 80 ---- SPILLS 80 data from FirstSearch

***Other Ascertainable Records***

FUDS ---- Formerly Used Defense Sites
DOD ---- Department of Defense Sites
SCRD DRYCLEANERS ---- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---- Financial Assurance Information
EPA WATCH LIST ---- EPA WATCH LIST
2020 COR ACTION ---- 2020 Corrective Action Program List
TSCA ---- Toxic Substances Control Act
TRIS ---- Toxic Chemical Release Inventory System
SSTS ---- Section 7 Tracking Systems
ROD ---- Records Of Decision
RMP ---- Risk Management Plans
RAATS ---- RCRA Administrative Action Tracking System
PRP ---- Potentially Responsible Parties
PADS ---- PCB Activity Database System
ICIS ---- Integrated Compliance Information System
FTTS ---- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---- Material Licensing Tracking System
COAL ASH DOE ---- Steam-Electric Plant Operation Data
COAL ASH EPA ---- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---- PCB Transformer Registration Database
RADINFO ---- Radiation Information Database
HIST FTTS ---- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---- Incident and Accident Data
CONSENT ---- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---- Indian Reservations
FUSRAP ---- Formerly Utilized Sites Remedial Action Program
UMTRA ---- Uranium Mill Tailings Sites
LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
ABANDONED MINES ---- Abandoned Mines
FINDS ---- Facility Index System/Facility Registry System
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
UXO ---- Unexploded Ordnance Sites
ECHO ---- Enforcement & Compliance History Information
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
PFAS NPL ---- Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ---- Federal Sites PFAS Information
PFAS TSCA ---- PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST ---- PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ---- PFAS Contamination Site Location Listing
PFAS WQP ---- Ambient Environmental Sampling for PFAS
PFAS NPDES ---- Clean Water Act Discharge Monitoring Information
PFAS ECHO ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT ---- All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ---- Aqueous Foam Related Incidents Listing
PFAS ---- PFAS Contamination Site Listing

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# EXECUTIVE SUMMARY

AIRS ..... Air Quality Permit Listing
ASBESTOS ..... ASBESTOS
COAL ASH ..... Coal Ash Disposal Sites
DRYCLEANERS ..... Drycleaning Sites
Financial Assurance ..... Financial Assurance Information Listing
NPDES ..... NPDES Facility Location Listing
UIC ..... Underground Injection Wells Listing
AOP ..... Animal Operation Permits Listing
SEPT HAULERS ..... Permitted Septage Haulers Listing
CCB ..... Coal Ash Structural Fills (CCB) Listing
MINES MRDS ..... Mineral Resources Data System
PCSRP ..... Petroleum-Contaminated Soil Remediation Permits

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP ..... EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ..... EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ..... EDR Exclusive Historical Cleaners

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

RGA HWS ..... Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ..... Recovered Government Archive Solid Waste Facilities List
RGA LUST ..... Recovered Government Archive Leaking Underground Storage Tank

**SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of state- and tribal (Superfund) equivalent sites***

NC HSDS: The Hazardous Substance Disposal Sites list contains locations of uncontrolled and unregulated hazardous waste sites. The file contains sites on the national priority list as well as the state priority list. The data source is the North Carolina Center for Geographic Information and Analysis.

A review of the NC HSDS list, as provided by EDR, and dated 08/09/2011 has revealed that there is 1

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NC HSDS site within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SCHULHOFFER JUNKYARD | | ENE 1/4 - 1/2 (0.379 mi.) | 0 | 8 |

***Lists of state- and tribal hazardous waste facilities***

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environment & Natural Resources' Inactive Hazardous Sites Program.

A review of the SHWS list, as provided by EDR, and dated 06/01/2022 has revealed that there are 3 SHWS sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| A.C. LAWRENCE LEATHE<br>Facility Id: NC0000195701 | 100 WEST MAIN STREET | S 1/2 - 1 (0.969 mi.) | 29 | 65 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| WR BOYD INVESTMENTS<br>Facility Id: NONCD0002469 | 90 HOWELL MILL RD | SSW 0 - 1/8 (0.107 mi.) | A3 | 13 |
| SCHULHOFFER JUNKYARD<br>Facility Id: NCD024852675 | HOWELL MILL ROAD | ENE 1/4 - 1/2 (0.448 mi.) | H20 | 47 |

***Lists of state and tribal landfills and solid waste disposal facilities***

OLI: Old Landfill Inventory Database.

A review of the OLI list, as provided by EDR, and dated 09/11/2020 has revealed that there is 1 OLI site within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| TOWN OF WAYNESVILLE<br>Facility Id: NONCD0000356 | MAIN ST (NC23/NC276) | NW 1/4 - 1/2 (0.263 mi.) | C6 | 18 |

DEBRIS: NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency.. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency

A review of the DEBRIS list, as provided by EDR, and dated 06/13/2022 has revealed that there is 1 DEBRIS site within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | NNW 1/4 - 1/2 (0.275 mi.) | D8 | 19 |

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# EXECUTIVE SUMMARY

LCID: A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

A review of the LCID list, as provided by EDR, and dated 07/05/2022 has revealed that there are 2 LCID sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| TOWN OF WAYNESVILLE | END OF BIBLE BAPTIST | NNW 1/4 - 1/2 (0.265 mi.) | D7 | 19 |
| TOWN OF WAYNESVILLE | BIBLE BAPTIST DRIVE | NNW 1/4 - 1/2 (0.279 mi.) | C10 | 23 |

***Lists of state and tribal leaking storage tanks***

LAST: A listing of leaking aboveground storage tank site locations.

A review of the LAST list, as provided by EDR, and dated 10/14/2022 has revealed that there are 8 LAST sites within approximately 1 mile of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| GATHERING ROCK DEVEL<br>Incident Number: 89030<br>Current Status: C | PHILLIPS ROAD | W 1/2 - 1 (0.612 mi.) | 24 | 53 |
| ***HAYWOOD COUNTY BRANN***<br>Close Out: 11/21/2002<br>Incident Number: 86337<br>Current Status: A | ***BRANNER AVENUE*** | ***S 1/2 - 1 (0.738 mi.)*** | ***27*** | ***58*** |
| ***SHIRLEY ROBERTS PROP***<br>Close Out: 02/26/1997<br>Incident Number: 15001<br>Current Status: A | ***21 BRADLEY STREET*** | ***WNW 1/2 - 1 (0.792 mi.)*** | ***28*** | ***62*** |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| BROWN NCDOT PARCEL 3<br>Close Out: 02/05/2014<br>Incident Number: 89134<br>Current Status: C | 838 HOWELL MILL RD | ENE 1/4 - 1/2 (0.456 mi.) | H21 | 47 |
| PRIVATE RESIDENCE<br>Close Out: 06/22/2021 | 1460 RUSS AVENUE | NNW 1/2 - 1 (0.562 mi.) | 22 | 49 |
| TOWN OF WAYNESVILLE<br>Close Out: 01/22/2007<br>Incident Number: 87938<br>Current Status: A | 960 N. MAIN ST. | SE 1/2 - 1 (0.583 mi.) | 23 | 51 |
| MILLER'S AUTOMOTIVE<br>Incident Number: 89133<br>Current Status: C | 595 NORTH MAIN STREE | SSE 1/2 - 1 (0.637 mi.) | 25 | 55 |
| NOLAND PROPERTY (BET<br>Close Out: 08/13/2019<br>Incident Number: 89287<br>Current Status: C | 287 GOLF COURSE ROAD | N 1/2 - 1 (0.656 mi.) | 26 | 56 |

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# EXECUTIVE SUMMARY

LUST: The Leaking Underground Storage Tank Incidents Management Database contains an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environment, & Natural Resources' Incidents by Address.

A review of the LUST list, as provided by EDR, and dated 07/29/2022 has revealed that there are 9 LUST sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MOUNTAIN ENERGY STOR*** | ***843 RUSS AVE*** | ***W 1/4 - 1/2 (0.367 mi.)*** | ***F15*** | ***37*** |
| Incident Phase: CO<br>Incident Number: 41491<br>Current Status: File Located in Archives | | | | |
| ***HANDY MART*** | ***1002 RUSS AVE*** | ***WNW 1/4 - 1/2 (0.420 mi.)*** | ***G18*** | ***42*** |
| Incident Phase: CO<br>Incident Number: 28272<br>Current Status: File Located in Archives | | | | |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***PLAZA BP*** | ***598 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.261 mi.)*** | ***B5*** | ***13*** |
| Incident Phase: CO<br>Incident Number: 20417<br>Current Status: File Located in Archives | | | | |
| ***AZTEX 209*** | ***504 RUSS AVENUE*** | ***SSW 1/4 - 1/2 (0.277 mi.)*** | ***E9*** | ***19*** |
| Incident Phase: CO<br>Incident Number: 28694<br>Current Status: File Located in House | | | | |
| ***TAYLOR MOTOR CO.*** | ***601 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.280 mi.)*** | ***B11*** | ***23*** |
| Incident Phase: CO<br>Incident Number: 15745<br>Current Status: File Located in Archives | | | | |
| RUSS AVE SHELL (FORM | 800/475 RUSS AVENUE | W 1/4 - 1/2 (0.322 mi.) | F13 | 30 |
| Incident Phase: CO<br>Incident Number: 22477<br>Current Status: File Located in House | | | | |
| ***MESSER'S EXXON STATI*** | ***701 DELLWOOD ROAD*** | ***SW 1/4 - 1/2 (0.349 mi.)*** | ***14*** | ***32*** |
| Incident Phase: CO<br>Incident Number: 28141<br>Current Status: File Located in House | | | | |
| WC MINI STORAGE | 187 WEST MARSHALL ST | S 1/4 - 1/2 (0.369 mi.) | 16 | 39 |
| Incident Number: 48507<br>Current Status: File Located in House | | | | |
| ***TOWN OF WAYNESVILLE*** | ***75 VANCE STREET*** | ***SE 1/4 - 1/2 (0.413 mi.)*** | ***17*** | ***40*** |
| Incident Number: 41184<br>Current Status: File Located in House | | | | |

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# EXECUTIVE SUMMARY

LUST TRUST: This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

A review of the LUST TRUST list, as provided by EDR, and dated 07/01/2022 has revealed that there are 2 LUST TRUST sites within approximately 0.5 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***AZTEX 209***<br>Facility Id: 00-0-0000009928<br>Site ID: 28694 | ***504 RUSS AVENUE*** | ***SSW 1/4 - 1/2 (0.277 mi.)*** | ***E9*** | ***19*** |
| ***TOWN OF WAYNESVILLE***<br>Site ID: 41184 | ***75 VANCE STREET*** | ***SE 1/4 - 1/2 (0.413 mi.)*** | ***17*** | ***40*** |

***Lists of state and tribal registered storage tanks***

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Natural Resources' Petroleum Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 07/29/2022 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***INGLES GAS EXPRESS 7***<br>Facility Id: 00-0-0000037004 | ***201 BARBER BLVD*** | ***W 0 - 1/8 (0.099 mi.)*** | ***1*** | ***8*** |

***State and tribal institutional control / engineering control registries***

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring.

A review of the INST CONTROL list, as provided by EDR, and dated 06/01/2022 has revealed that there are 2 INST CONTROL sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***MOUNTAIN ENERGY STOR*** | ***843 RUSS AVE*** | ***W 1/4 - 1/2 (0.367 mi.)*** | ***F15*** | ***37*** |
| ***HANDY MART*** | ***1002 RUSS AVE*** | ***WNW 1/4 - 1/2 (0.420 mi.)*** | ***G18*** | ***42*** |

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: A listing of recycling center locations.

A review of the SWRCY list, as provided by EDR, and dated 01/31/2022 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

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| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| SCHULHOFERS, INC. | 525 HOWELL MILL ROAD | ENE 1/8 - 1/4 (0.169 mi.) | 4 | 13 |

***Records of Emergency Release Reports***

IMD: Incident Management Database.

A review of the IMD list, as provided by EDR, and dated 10/28/2022 has revealed that there are 5 IMD sites within approximately 0.5 miles of the target property.

| Equal/Higher Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| HANDY MART (HANDY PA<br>Facility Id: 28272 | 1002 RUSS AVENUE | WNW 1/4 - 1/2 (0.420 mi.) | G19 | 45 |

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| ***PLAZA BP***<br>Facility Id: 20417 | ***598 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.261 mi.)*** | ***B5*** | ***13*** |
| ***TAYLOR MOTOR CO.***<br>Facility Id: 15745<br>Facility Id: 00-0-0000010903 | ***601 RUSS AVENUE*** | ***SW 1/4 - 1/2 (0.280 mi.)*** | ***B11*** | ***23*** |
| RUSS AVE SHELL (FORM<br>Facility Id: 22477 | 475 RUSS AVENUE | SSW 1/4 - 1/2 (0.310 mi.) | E12 | 28 |
| ***MESSER'S EXXON STATI***<br>Facility Id: 28141 | ***701 DELLWOOD ROAD*** | ***SW 1/4 - 1/2 (0.349 mi.)*** | ***14*** | ***32*** |

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/20/2022 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

| Lower Elevation | Address | Direction / Distance | Map ID | Page |
|---|---|---|---|---|
| NORTH CAROLINA DEPT<br>EPA ID:: NCP090314036 | 90 HOWELL MILL RD | SSW 0 - 1/8 (0.107 mi.) | A2 | 10 |

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# EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

| Site Name | Database(s) |
|---|---|
| BARBER ORCHARD | SHWS |

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# OVERVIEW MAP - 7182357.2S

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Balsam Edge Apartments | CLIENT: | ECS Southeast, LLP |
| ADDRESS: | 271 Howell Mill Road<br>Waynesville NC 28786 | CONTACT: | Zachary Windham |
| | | INQUIRY #: | 7182357.2s |
| LAT/LONG: | 35.504754 / 82.98438 | DATE: | November 17, 2022 5:10 pm |

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# DETAIL MAP - 7182357.2S

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- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

| | | | |
|---|---|---|---|
| SITE NAME: | Balsam Edge Apartments | CLIENT: | ECS Southeast, LLP |
| ADDRESS: | 271 Howell Mill Road<br>Waynesville NC 28786 | CONTACT: | Zachary Windham |
| | | INQUIRY #: | 7182357.2s |
| LAT/LONG: | 35.504754 / 82.98438 | DATE: | November 17, 2022 5:11 pm |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| **STANDARD ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Lists of Federal NPL (Superfund) sites*** | | | | | | | | |
| NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| Proposed NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| NPL LIENS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal Delisted NPL sites*** | | | | | | | | |
| Delisted NPL | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal sites subject to CERCLA removals and CERCLA orders*** | | | | | | | | |
| FEDERAL FACILITY | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| SEMS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal CERCLA sites with NFRAP*** | | | | | | | | |
| SEMS-ARCHIVE | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA facilities undergoing Corrective Action*** | | | | | | | | |
| CORRACTS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ***Lists of Federal RCRA TSD facilities*** | | | | | | | | |
| RCRA-TSDF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of Federal RCRA generators*** | | | | | | | | |
| RCRA-LQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-SQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| RCRA-VSQG | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***Federal institutional controls / engineering controls registries*** | | | | | | | | |
| LUCIS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US ENG CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US INST CONTROLS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Federal ERNS list*** | | | | | | | | |
| ERNS | TP | | NR | NR | NR | NR | NR | 0 |
| ***Lists of state- and tribal (Superfund) equivalent sites*** | | | | | | | | |
| NC HSDS | 1.000 | | 0 | 0 | 1 | 0 | NR | 1 |
| ***Lists of state- and tribal hazardous waste facilities*** | | | | | | | | |
| SHWS | 1.000 | | 1 | 0 | 1 | 1 | NR | 3 |
| ***Lists of state and tribal landfills and solid waste disposal facilities*** | | | | | | | | |
| SWF/LF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| OLI | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| DEBRIS | 0.500 | | 0 | 0 | 1 | NR | NR | 1 |
| LCID | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| ***Lists of state and tribal leaking storage tanks*** | | | | | | | | |
| LAST | 1.000 | | 0 | 0 | 1 | 7 | NR | 8 |
| LUST | 0.500 | | 0 | 0 | 9 | NR | NR | 9 |
| INDIAN LUST | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LUST TRUST | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| ***Lists of state and tribal registered storage tanks*** | | | | | | | | |
| FEMA UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| UST | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| AST | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN UST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ***State and tribal institutional control / engineering control registries*** | | | | | | | | |
| INST CONTROL | 0.500 | | 0 | 0 | 2 | NR | NR | 2 |
| ***Lists of state and tribal voluntary cleanup sites*** | | | | | | | | |
| VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN VCP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Lists of state and tribal brownfield sites*** | | | | | | | | |
| BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **ADDITIONAL ENVIRONMENTAL RECORDS** | | | | | | | | |
| ***Local Brownfield lists*** | | | | | | | | |
| US BROWNFIELDS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Landfill / Solid Waste Disposal Sites*** | | | | | | | | |
| SWRCY | 0.500 | | 0 | 1 | 0 | NR | NR | 1 |
| HIST LF | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| INDIAN ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DEBRIS REGION 9 | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ODI | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| IHS OPEN DUMPS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| ***Local Lists of Hazardous waste / Contaminated Sites*** | | | | | | | | |
| US HIST CDL | TP | | NR | NR | NR | NR | NR | 0 |
| US CDL | TP | | NR | NR | NR | NR | NR | 0 |
| ***Local Land Records*** | | | | | | | | |
| LIENS 2 | TP | | NR | NR | NR | NR | NR | 0 |
| ***Records of Emergency Release Reports*** | | | | | | | | |
| HMIRS | TP | | NR | NR | NR | NR | NR | 0 |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| SPILLS | TP | | NR | NR | NR | NR | NR | 0 |
| IMD | 0.500 | | 0 | 0 | 5 | NR | NR | 5 |
| SPILLS 90 | TP | | NR | NR | NR | NR | NR | 0 |
| SPILLS 80 | TP | | NR | NR | NR | NR | NR | 0 |
| ***Other Ascertainable Records*** | | | | | | | | |
| RCRA NonGen / NLR | 0.250 | | 1 | 0 | NR | NR | NR | 1 |
| FUDS | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| DOD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| SCRD DRYCLEANERS | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| US FIN ASSUR | TP | | NR | NR | NR | NR | NR | 0 |
| EPA WATCH LIST | TP | | NR | NR | NR | NR | NR | 0 |
| 2020 COR ACTION | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| TSCA | TP | | NR | NR | NR | NR | NR | 0 |
| TRIS | TP | | NR | NR | NR | NR | NR | 0 |
| SSTS | TP | | NR | NR | NR | NR | NR | 0 |
| ROD | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| RMP | TP | | NR | NR | NR | NR | NR | 0 |
| RAATS | TP | | NR | NR | NR | NR | NR | 0 |
| PRP | TP | | NR | NR | NR | NR | NR | 0 |
| PADS | TP | | NR | NR | NR | NR | NR | 0 |
| ICIS | TP | | NR | NR | NR | NR | NR | 0 |
| FTTS | TP | | NR | NR | NR | NR | NR | 0 |
| MLTS | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH DOE | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH EPA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| PCB TRANSFORMER | TP | | NR | NR | NR | NR | NR | 0 |
| RADINFO | TP | | NR | NR | NR | NR | NR | 0 |
| HIST FTTS | TP | | NR | NR | NR | NR | NR | 0 |
| DOT OPS | TP | | NR | NR | NR | NR | NR | 0 |
| CONSENT | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| INDIAN RESERV | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| FUSRAP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| UMTRA | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| LEAD SMELTERS | TP | | NR | NR | NR | NR | NR | 0 |
| US AIRS | TP | | NR | NR | NR | NR | NR | 0 |
| US MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| ABANDONED MINES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| FINDS | TP | | NR | NR | NR | NR | NR | 0 |
| DOCKET HWC | TP | | NR | NR | NR | NR | NR | 0 |
| UXO | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| ECHO | TP | | NR | NR | NR | NR | NR | 0 |
| FUELS PROGRAM | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPL | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS FEDERAL SITES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS TSCA | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS RCRA MANIFEST | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ATSDR | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS WQP | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS NPDES | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS ECHO | 0.250 | | 0 | 0 | NR | NR | NR | 0 |

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# MAP FINDINGS SUMMARY

| Database | Search Distance (Miles) | Target Property | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|---|---|---|---|---|---|---|---|
| PFAS ECHO FIRE TRAINING | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS PART 139 AIRPORT | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AQUEOUS FOAM NRC | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| PFAS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| AIRS | TP | | NR | NR | NR | NR | NR | 0 |
| ASBESTOS | TP | | NR | NR | NR | NR | NR | 0 |
| COAL ASH | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| DRYCLEANERS | 0.250 | | 0 | 0 | NR | NR | NR | 0 |
| Financial Assurance | TP | | NR | NR | NR | NR | NR | 0 |
| NPDES | TP | | NR | NR | NR | NR | NR | 0 |
| UIC | TP | | NR | NR | NR | NR | NR | 0 |
| AOP | TP | | NR | NR | NR | NR | NR | 0 |
| SEPT HAULERS | TP | | NR | NR | NR | NR | NR | 0 |
| CCB | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| MINES MRDS | TP | | NR | NR | NR | NR | NR | 0 |
| PCSRP | 0.500 | | 0 | 0 | 0 | NR | NR | 0 |
| **EDR HIGH RISK HISTORICAL RECORDS** | | | | | | | | |
| ***EDR Exclusive Records*** | | | | | | | | |
| EDR MGP | 1.000 | | 0 | 0 | 0 | 0 | NR | 0 |
| EDR Hist Auto | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| EDR Hist Cleaner | 0.125 | | 0 | NR | NR | NR | NR | 0 |
| **EDR RECOVERED GOVERNMENT ARCHIVES** | | | | | | | | |
| ***Exclusive Recovered Govt. Archives*** | | | | | | | | |
| RGA HWS | TP | | NR | NR | NR | NR | NR | 0 |
| RGA LF | TP | | NR | NR | NR | NR | NR | 0 |
| RGA LUST | TP | | NR | NR | NR | NR | NR | 0 |
| - Totals -- | | 0 | 3 | 1 | 25 | 8 | 0 | 37 |

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

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**HSDS** **SCHULHOFFER JUNKYARD** **NC HSDS** **S102442589**
**Region** **N/A**
**ENE**
**1/4-1/2** **, NC**
**2001 ft.**

HSDS:

| | |
|---|---|
| Name: | SCHULHOFFER JUNKYARD |
| Address: | Not reported |
| City: | Not reported |
| Site Type: | 1 |
| Superfun Number: | Not reported |
| Total area in coverage units: | 50371.1289063 |
| Total perimeter in coverage units: | 926.11425781 |
| X-value coordinate in feet: | 816955.625 |
| Y-value coordinate in feet: | 663204.75 |
| Sites designated as superfund cleanup sites: | 468 |
| Length of feature in internal units: | 926.114259608 |
| Area of feature in internal units squared: | 50371.1278289 |

---

**1** **INGLES GAS EXPRESS 723** **UST** **U004122986**
**West** **201 BARBER BLVD** **Financial Assurance** **N/A**
**< 1/8** **WAYNESVILLE, NC 28786**
**0.099 mi.**
**524 ft.**

**Relative:**
**Higher**

**Actual:**
**2758 ft.**

UST:

| | |
|---|---|
| Name: | INGLES GAS EXPRESS 723 |
| Address: | 201 BARBER BLVD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility Id: | 00-0-0000037004 |
| Contact: | INGLES MARKETS, INCORPORATED |
| Contact Address1: | PO BOX 6676 |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | ASHEVILLE, NC 28816-6676 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.50487 |
| Longitude: | -82.9866 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1A |
| Tank Status: | Not reported |
| Installed Date: | 05/14/2008 |
| Perm Close Date: | Not reported |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 25000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | 0 |
| Commercial: | No |
| Regulated: | No |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Unknown |
| Decode for PCONS_KEY: | Unknown |

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**INGLES GAS EXPRESS 723 (Continued)** **U004122986**

Decode for PSYS_KEY: Unknown

Tank Id: 1B
Tank Status: Not reported
Installed Date: 05/14/2008
Perm Close Date: Not reported
Product Name: Gasoline, Gas Mix
Tank Capacity: 7000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: No
Regulated: No
Other CP Tank: Not reported
Overfill Protection Name: Not reported
Spill Protection Name: Not reported
Leak Detection Name: Not reported
Decode for TCONS_KEY: Unknown
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Tank Id: 2A
Tank Status: Not reported
Installed Date: 05/14/2008
Perm Close Date: Not reported
Product Name: Diesel
Tank Capacity: 5000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: No
Regulated: No
Other CP Tank: Not reported
Overfill Protection Name: Not reported
Spill Protection Name: Not reported
Leak Detection Name: Not reported
Decode for TCONS_KEY: Unknown
Decode for PCONS_KEY: Unknown
Decode for PSYS_KEY: Unknown

Tank Id: 2B
Tank Status: Not reported
Installed Date: 05/14/2008
Perm Close Date: Not reported
Product Name: Diesel
Tank Capacity: 5000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: No
Regulated: No

DRAFT

**INGLES GAS EXPRESS 723 (Continued)** **U004122986**

| | |
|---|---|
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Unknown |
| Decode for PCONS_KEY: | Unknown |
| Decode for PSYS_KEY: | Unknown |

NC Financial Assurance 1:

| | |
|---|---|
| Name: | INGLES GAS EXPRESS 723 |
| Address: | 201 BARBER BLVD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-0000037004 |
| Region: | 1 |
| Financial Responsibility Desc: | Insurance & Risk Retension |
| Financial Responsibility Name: | Ace American Insurance Company |
| Started Date: | 09/30/2013 |
| Ended Date: | 09/30/2014 |

---

**A2** **NORTH CAROLINA DEPT OF TRANSPORTATION** **RCRA NonGen / NLR** **1016958770**
**SSW** **90 HOWELL MILL RD** **NCP090314036**
**< 1/8** **WAYNESVILLE, NC 28786**
**0.107 mi.**
**565 ft.** **Site 1 of 2 in cluster A**

**Relative:** **Lower**

**Actual:** **2629 ft.**

RCRA Listings:

| | | |
|---|---|---|
| Date Form Received by Agency: | | 20150310 |
| Handler Name: | NORTH CAROLINA DEPT OF TRANSPORTATION | |
| Handler Address: | | 90 HOWELL MILL RD |
| Handler City,State,Zip: | | WAYNESVILLE, NC 28786 |
| EPA ID: | | NCP090314036 |
| Contact Name: | | GORDON BOX |
| Contact Address: | | BIRCH RIDGE DR |
| Contact City,State,Zip: | | RALEIGH, NC 27610 |
| Contact Telephone: | | 919-707-6859 |
| Contact Fax: | | Not reported |
| Contact Email: | | GHBOX@NCDOT.GOV |
| Contact Title: | | ENV PROJ MGR |
| EPA Region: | | 04 |
| Land Type: | | Private |
| Federal Waste Generator Description: | | Not a generator, verified |
| Non-Notifier: | | Not reported |
| Biennial Report Cycle: | | Not reported |
| Accessibility: | | Not reported |
| Active Site Indicator: | | Not reported |
| State District Owner: | | NC |
| State District: | | NC |
| Mailing Address: | | BIRCH RIDGE DR |
| Mailing City,State,Zip: | | RALEIGH, NC 27610 |
| Owner Name: | W.R. BOYD INVESTMENTS | |
| Owner Type: | | Private |
| Operator Name: | Not reported | |
| Operator Type: | | Not reported |
| Short-Term Generator Activity: | | No |
| Importer Activity: | | No |
| Mixed Waste Generator: | | No |
| Transporter Activity: | | No |

DRAFT

**NORTH CAROLINA DEPT OF TRANSPORTATION (Continued)** **1016958770**

| | |
|---|---|
| Transfer Facility Activity: | No |
| Recycler Activity with Storage: | No |
| Small Quantity On-Site Burner Exemption: | No |
| Smelting Melting and Refining Furnace Exemption: | No |
| Underground Injection Control: | No |
| Off-Site Waste Receipt: | No |
| Universal Waste Indicator: | No |
| Universal Waste Destination Facility: | No |
| Federal Universal Waste: | No |
| Active Site Fed-Reg Treatment Storage and Disposal Facility: | Not reported |
| Active Site Converter Treatment storage and Disposal Facility: | Not reported |
| Active Site State-Reg Treatment Storage and Disposal Facility: | Not reported |
| Active Site State-Reg Handler: | --- |
| Federal Facility Indicator: | Not reported |
| Hazardous Secondary Material Indicator: | NN |
| Sub-Part K Indicator: | Not reported |
| Commercial TSD Indicator: | No |
| Treatment Storage and Disposal Type: | Not reported |
| 2018 GPRA Permit Baseline: | Not on the Baseline |
| 2018 GPRA Renewals Baseline: | Not on the Baseline |
| Permit Renewals Workload Universe: | Not reported |
| Permit Workload Universe: | Not reported |
| Permit Progress Universe: | Not reported |
| Post-Closure Workload Universe: | Not reported |
| Closure Workload Universe: | Not reported |
| 202 GPRA Corrective Action Baseline: | No |
| Corrective Action Workload Universe: | No |
| Subject to Corrective Action Universe: | No |
| Non-TSDFs Where RCRA CA has Been Imposed Universe: | No |
| TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe: | No |
| TSDFs Only Subject to CA under Discretionary Auth Universe: | No |
| Corrective Action Priority Ranking: | No NCAPS ranking |
| Environmental Control Indicator: | No |
| Institutional Control Indicator: | No |
| Human Exposure Controls Indicator: | N/A |
| Groundwater Controls Indicator: | N/A |
| Operating TSDF Universe: | Not reported |
| Full Enforcement Universe: | Not reported |
| Significant Non-Complier Universe: | No |
| Unaddressed Significant Non-Complier Universe: | No |
| Addressed Significant Non-Complier Universe: | No |
| Significant Non-Complier With a Compliance Schedule Universe: | No |
| Financial Assurance Required: Not reported | |
| Handler Date of Last Change: | 20150310 |
| Recognized Trader-Importer: | No |
| Recognized Trader-Exporter: | No |
| Importer of Spent Lead Acid Batteries: | No |
| Exporter of Spent Lead Acid Batteries: | No |
| Recycler Activity Without Storage: | Not reported |
| Manifest Broker: | Not reported |
| Sub-Part P Indicator: | No |

Handler - Owner Operator:

| | |
|---|---|
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: W.R. BOYD INVESTMENTS | |
| Legal Status: | Private |

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**NORTH CAROLINA DEPT OF TRANSPORTATION (Continued)** **1016958770**

| | |
|---|---|
| Date Became Current: | 16010101 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 44 ACADEMY STREET |
| Owner/Operator City,State,Zip: | WAYNESVILLE, NC 28786 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |
| Owner/Operator Indicator: | Owner |
| Owner/Operator Name: W.R. BOYD INVESTMENTS | |
| Legal Status: | Private |
| Date Became Current: | 16010101 |
| Date Ended Current: | Not reported |
| Owner/Operator Address: | 44 ACADEMY STREET |
| Owner/Operator City,State,Zip: | WAYNESVILLE, NC 28786 |
| Owner/Operator Telephone: | Not reported |
| Owner/Operator Telephone Ext: | Not reported |
| Owner/Operator Fax: | Not reported |
| Owner/Operator Email: | Not reported |

Historic Generators:

| | |
|---|---|
| Receive Date: | 20150310 |
| Handler Name: NORTH CAROLINA DEPT OF TRANSPORTATION | |
| Federal Waste Generator Description: | Not a generator, verified |
| State District Owner: | NC |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | Yes |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |
| Receive Date: | 20140903 |
| Handler Name: NORTH CAROLINA DEPT OF TRANSPORTATION | |
| Federal Waste Generator Description: | Large Quantity Generator |
| State District Owner: | NC |
| Large Quantity Handler of Universal Waste: | No |
| Recognized Trader Importer: | No |
| Recognized Trader Exporter: | No |
| Spent Lead Acid Battery Importer: | No |
| Spent Lead Acid Battery Exporter: | No |
| Current Record: | No |
| Non Storage Recycler Activity: | Not reported |
| Electronic Manifest Broker: | Not reported |

List of NAICS Codes and Descriptions:

| | |
|---|---|
| NAICS Codes: | No NAICS Codes Found |

Facility Has Received Notices of Violations:

| | |
|---|---|
| Violations: | No Violations Found |

Evaluation Action Summary:

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**NORTH CAROLINA DEPT OF TRANSPORTATION (Continued)** **1016958770**

Evaluations: No Evaluations Found

---

**A3** **WR BOYD INVESTMENTS** **SHWS** **S118161282**
**SSW** **90 HOWELL MILL RD** **N/A**
**< 1/8** **WAYNESVILLE, NC**
**0.107 mi.**
**565 ft.** **Site 2 of 2 in cluster A**

**Relative:** SHWS:
**Lower**
**Actual:** Name: WR BOYD INVESTMENTS
**2629 ft.** Address: 90 HOWELL MILL RD
City,State,Zip: WAYNESVILLE, NC
EPAID: NONCD0002469
Lat/Longitude: 35.50212 / -82.98703
Geolocation Method: 31

Click here to access the North Carolina DEQ records for this facility:

---

**4** **SCHULHOFERS, INC.** **SWRCY** **S111445226**
**ENE** **525 HOWELL MILL ROAD** **N/A**
**1/8-1/4** **WAYNESVILLE, NC 28786**
**0.169 mi.**
**894 ft.**

**Relative:** SWRCY:
**Lower**
**Actual:** Name: SCHULHOFERS, INC.
**2660 ft.** Address: 525 HOWELL MILL ROAD
City,State,Zip: WAYNESVILLE, NC 28786
Mailing Address: P.O. Box 314
Mailing City: Waynesville
Mailing State: NC
Mailing Zip: 287860314
Company Type: - Broker;- Handler;- Processor;;
Company Service Area: - Western North Carolina;

---

**B5** **PLAZA BP** **LUST** **U003091652**
**SW** **598 RUSS AVENUE** **UST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786** **IMD**
**0.261 mi.** **Financial Assurance**
**1379 ft.** **Site 1 of 2 in cluster B**

**Relative:** LUST:
**Lower**
**Actual:** Name: PLAZA BP
**2640 ft.** Address: 598 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC 28786
Facility ID: 00-0-000
UST Number: AS-1804
Incident Number: 20417
Source Type: 3
Date Reported: 04/19/1999
Closure Request: Not reported
Close Out: 04/19/1999
Level Of Soil Cleanup Achieved: Not reported
# Of Supply Wells: 0

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**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 9 |
| Current Status: | A |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | False |
| CD Num: | 101 |
| Reel Num: | 0 |
| RPOW: | False |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | JCA |
| Company: | HAYWOOD OIL CO. |
| Telephone: | 8284567035 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-1804 |
| Facility Id: | 20417 |
| Date Occurred: | 2/16/1999 |
| Date Reported: | 2/16/1999 |
| Owner/Operator: | DAVID BLEVINS |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | 9/9/1999 |
| Wells Affected Y/N: | Not reported |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Not reported |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | PIRF |
| Err Type: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | Not reported |

LUST:

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**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Incident Number: | 20417 |
| Last Modified: | 6/7/2002 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | 4/19/1999 |

UST:

| | |
|---|---|
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility Id: | 00-0-0000009726 |
| Contact: | HAYWOOD OIL COMPANY, INCORPORATED |
| Contact Address1: | PO DRAWER 1110 |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | WAYNESVILLE, NC 28786 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.49909 |
| Longitude: | -82.9862 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1 |
| Tank Status: | Not reported |
| Installed Date: | 05/05/1972 |
| Perm Close Date: | 02/16/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 10000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 2 |
| Tank Status: | Not reported |
| Installed Date: | 05/05/1972 |
| Perm Close Date: | 02/16/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 10000 |

DRAFT

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 3 |
| Tank Status: | Not reported |
| Installed Date: | 05/05/1972 |
| Perm Close Date: | 02/16/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 10000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

IMD:

| | |
|---|---|
| Facility ID: | 20417 |
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Date Occurred: | 2/16/1999 |
| Submit Date: | 9/9/1999 |
| Incident Desc: | SOIL CONTAM. WAS CONFIRMED DURING CLOSURE OF THREE USTS. |
| Operator: | DAVID BLEVINS |
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 4 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 6 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Commercial |
| Responsible Party County: | Not reported |

DRAFT

**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | L |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | 9/9/1999 |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | Not reported |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.495 |
| Longitude: | -82.98527777 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | 8284567035 |
| Owner Company: | HAYWOOD OIL CO. |
| Operator Address: | P. O. DRAWER |
| Operator City,State,Zip: | WAYNESVILLE, NC 28786- |
| Operator County: | Not reported |
| Material: | GASOLINE |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 3 |

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**PLAZA BP (Continued)** **U003091652**

| | |
|---|---|
| Risk Site: | L |
| Priority Code: | L |
| Dem Contact: | JCA |
| Wells Contam: | Not reported |
| Latitude Number: | 352942 |
| Longitude Number: | 825907 |
| Latitude Decimal: | 35.495 |
| Longitude Decimal: | 82.9852777777778 |
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 20417 |
| Last Modified: | 2002-06-07 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | 1999-04-19 00:00:00 |

NC Financial Assurance 1:

| | |
|---|---|
| Name: | PLAZA BP |
| Address: | 598 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-0000009726 |
| Region: | 1 |
| Financial Responsibility Desc: | Self-Insurance |
| Financial Responsibility Name: | Haywood Oil Company, Inc. |
| Started Date: | Not reported |
| Ended Date: | Not reported |

---

**C6** **TOWN OF WAYNESVILLE DUMP** **OLI** **S109136309**
**NW** **MAIN ST (NC23/NC276) NORTH THROUGH TOWN. LEFT ON WALNUT ST,** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.263 mi.**
**1388 ft.** **Site 1 of 2 in cluster C**

**Relative:**
**Higher**

**Actual:**
**2724 ft.**

NC OLI:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE DUMP |
| Address: | MAIN ST (NC23/NC276) NORTH THROUGH TOWN. LEFT ON WALNUT ST, LTRAVEL 1/4 MI LEFT ON RUSS AVE, TRAVEL 0.65 MI RIGHT ON BIBLE BAPTIST RD DUMP IS ON THE RIGHT PAST THE CHURCH |
| Address 2: | Not reported |
| City,State,Zip: | WAYNESVILLE, NC |
| Facility ID: | NONCD0000356 |
| State Plane X: | 247987 |
| State Plane Y: | 202352 |
| Other Agency Lead: | Not reported |
| Unable to Locate: | Not reported |

DRAFT

**D7** **TOWN OF WAYNESVILLE LANDFILL** **LCID** **S123083051**
**NNW** **END OF BIBLE BAPTIST DRIVE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.265 mi.**
**1399 ft.** **Site 1 of 2 in cluster D**

**Relative:** **Higher**
**Actual:** **2761 ft.**

LCID:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE LANDFILL |
| Address: | END OF BIBLE BAPTIST DRIVE |
| City,State,Zip: | WAYNESVILLE, NC |
| Location ID: | N0593 |
| Status: | Open |
| X Coords: | -9237928.4275 |
| Y Coords: | 4233349.7091 |
| Latitude: | 35.509589 |
| Longitude: | -82.985723 |

---

**D8** **TOWN OF WAYNESVILLE** **DEBRIS** **S122873972**
**NNW** **END OF BIBLE BAPTIST DRIVE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.275 mi.**
**1452 ft.** **Site 2 of 2 in cluster D**

**Relative:** **Higher**
**Actual:** **2745 ft.**

DEBRIS:

| | |
|---|---|
| DS Number: | DS44-008 |
| Name: | TOWN OF WAYNESVILLE |
| Address: | END OF BIBLE BAPTIST DRIVE |
| City,State,Zip: | WAYNESVILLE, NC |
| Size of Site: | 2 |
| Type of Debris: | yard waste (generally smaller tree branches, leaves, brush, etc.)/land clearing waste (generally larger branches, tree trunks, etc.) |
| Contact: | Daryl Hannah |
| Contact Phone: | 828-456-3706 |
| Second Contact: | David Foster |
| Second Contact Phone: | 828-456-3706 |
| Confirm Year: | 2016 |
| Status: | Not Active |
| Latitude: | 35.509485 |
| Longitude: | -82.986475 |

---

**E9** **AZTEX 209** **LUST** **U003143883**
**SSW** **504 RUSS AVENUE** **LUST TRUST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786** **UST**
**0.277 mi.** **ASBESTOS**
**1464 ft.** **Site 1 of 2 in cluster E** **Financial Assurance**

**Relative:** **Lower**
**Actual:** **2623 ft.**

LUST:

| | |
|---|---|
| Name: | AZTEX #209 |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-3555 |
| Incident Number: | 28694 |
| Source Type: | 3 |
| Date Reported: | 02/11/2009 |
| Closure Request: | Not reported |
| Close Out: | 12/05/2019 |
| Level Of Soil Cleanup Achieved: | S2 |

DRAFT

**AZTEX 209 (Continued)** **U003143883**

| | |
|---|---|
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | 1 |
| Site Risk Reason: | Not reported |
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 1 |
| Flag1: | 0 |
| LUR Filed: | 11/25/2019 |
| GPS Confirmed: | 9 |
| Current Status: | C |
| RBCA GW: | G2 |
| PETOPT: | 3 |
| RPL: | True |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | MES |
| Company: | HACKNEY PETROLEUM, INC. |
| Telephone: | 8655849600 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-3555 |
| Facility Id: | 28694 |
| Date Occurred: | 2/10/2009 |
| Date Reported: | 2/11/2009 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 4 |
| Cause: | 4 |
| Source: | C |
| UST Number: | P |

DRAFT

**AZTEX 209 (Continued)** **U003143883**

LUST:

| | |
|---|---|
| Incident Number: | 28694 |
| Last Modified: | 12/5/2019 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

LUST TRUST:

| | |
|---|---|
| Name: | AZTEX #209 |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Facility ID: | 00-0-0000009928 |
| Site ID: | 28694 |
| Site Note: | Commercial; $20,000 deductible; 100% eligible for costs that exceed the $20,000 deductible.[CGS 6/12/17] |
| Site Eligible?: | True |
| Commercial Find: | 100% Commercial |
| Priority Rank: | Not reported |
| Deductable Amount: | 20000 |
| 3rd Party Deductable Amt: | 0 |
| Sum 3rd Party Amt Applied: | 0 |

UST:

| | |
|---|---|
| Name: | AZTEX 209 |
| Address: | 504 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility Id: | 00-0-0000009928 |
| Contact: | HACKNEY PETROLEUM, INC. |
| Contact Address1: | 1209 HILTON RD |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | KNOXVILLE, TN 37921 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.4956 |
| Longitude: | -82.9858 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | B-3 |
| Tank Status: | Not reported |
| Installed Date: | 05/07/1976 |
| Perm Close Date: | 07/18/2016 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 6000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | 0 |

DRAFT

**AZTEX 209 (Continued)** **U003143883**

Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Not reported
Spill Protection Name: Not reported
Leak Detection Name: Not reported
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Pressurized System

Tank Id: P-1
Tank Status: Not reported
Installed Date: 05/07/1976
Perm Close Date: 07/18/2016
Product Name: Gasoline, Gas Mix
Tank Capacity: 4000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Not reported
Spill Protection Name: Not reported
Leak Detection Name: Not reported
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Pressurized System

Tank Id: R-2
Tank Status: Not reported
Installed Date: 05/07/1976
Perm Close Date: 07/18/2016
Product Name: Gasoline, Gas Mix
Tank Capacity: 6000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Not reported
Spill Protection Name: Not reported
Leak Detection Name: Not reported
Decode for TCONS_KEY: Single Wall Steel
Decode for PCONS_KEY: Single Wall Steel
Decode for PSYS_KEY: Pressurized System

ASBESTOS:
Name: UNOCCUPIED COMMERCIAL BUILDING
Address: 504 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC
Permit Number: Not reported

DRAFT

**AZTEX 209 (Continued)** **U003143883**

NESHAP Number: 63707
Contractor: NEO Corporation
Owner Name: NCDOT
Phone: (910) 621-6102
Removal Start Date: Not reported
Removal End Date: Not reported
Demo Start Date: 02-09-21
Demo End Date: 02-12-21
Linear Feet: 0
Square Feet: 0
Cubic Feet: 0
Type: D

NC Financial Assurance 1:
Name: AZTEX 209
Address: 504 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC 28786
Facility ID: 00-0-0000009928
Region: 1
Financial Responsibility Desc: Self-Insurance
Financial Responsibility Name: Hackney Petroleum, Inc.
Started Date: Not reported
Ended Date: Not reported

---

**C10** **TOWN OF WAYNESVILLE LANDFILL** **LCID** **S123083113**
**NNW** **BIBLE BAPTIST DRIVE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.279 mi.**
**1475 ft.** **Site 2 of 2 in cluster C**

**Relative: Higher**
**Actual: 2733 ft.**

LCID:
Name: TOWN OF WAYNESVILLE LANDFILL
Address: BIBLE BAPTIST DRIVE
City,State,Zip: WAYNESVILLE, NC
Location ID: N0660
Status: Open
X Coords: -9237920.0785
Y Coords: 4233380.6154
Latitude: 35.509815
Longitude: -82.985648

---

**B11** **TAYLOR MOTOR CO.** **LUST** **S105892944**
**SW** **601 RUSS AVENUE** **IMD** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.280 mi.**
**1477 ft.** **Site 2 of 2 in cluster B**

**Relative: Lower**
**Actual: 2646 ft.**

LUST:
Name: AMOCO FOOD SHOP #209
Address: 601 RUSS AVENUE
City,State,Zip: WAYNESVILLE, NC 28786
Facility ID: 00-0-000
UST Number: AS-1457
Incident Number: 15745
Source Type: 3
Date Reported: 05/01/1996

DRAFT

**TAYLOR MOTOR CO. (Continued)** **S105892944**

| | |
|---|---|
| Closure Request: | Not reported |
| Close Out: | 05/27/1999 |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | Not reported |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | H |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | 75 B |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | Not reported |
| MTBE1: | Y |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 5 |
| Current Status: | A |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | False |
| CD Num: | 101 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | MES |
| Company: | SARA KAMPWERTH (CONTACT) |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-1457 |
| Facility Id: | 15745 |
| Date Occurred: | 6/19/1996 |
| Date Reported: | 7/3/1996 |
| Owner/Operator: | SARA KAMPWERTH (CONTACT) |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | 4/15/1998 |
| Wells Affected Y/N: | N |
| Samples Include: | 0 |
| 7#5 Minute Quad: | 3 |
| 5 Minute Quad: | 1 |
| Pirf/Min Soil: | Not reported |
| Release Code: | 091E |
| Source Code: | Pirf |
| Err Type: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |

DRAFT

**TAYLOR MOTOR CO. (Continued)** **S105892944**

UST Number: Not reported

LUST:
Incident Number: 15745
Last Modified: 5/27/1999
Incident Phase: CO
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

IMD:
Facility ID: 15745
Name: AMOCO FOOD SHOP #209
Address: RUSS AVENUE
City,State,Zip: WAYNESVILLE28786, NC
Date Occurred: 5/1/1996
Submit Date: 7/3/1996
Incident Desc: SOIL AND GW CONTAM. CONFIRMED AS A RESULT OF PHASE II.
Operator: HACKNEY PETROLEUM, INC.
UST ID: Not reported
Incident ID: Not reported
Initials of UST Regional Contact: Not reported
Regional Office: ASH
Responsible Party/Company Name: Not reported
Ownership: 4
Responsible Party Contact Name: Not reported
Operation: 6
Responsible Party Mailing Address: Not reported
Responsible Party City,State,Zip: Not reported
Ownership: Private
Operation Type: Commercial
Responsible Party County: Not reported
Source: Leak-underground
Type: GASOLINE/DIESEL
Location: 1
Petroleum Type: Not reported
Date Incident Reported: Not reported
Whether Tank is Commercial or Non Commercial: Not reported
Site Priority: 75 B
Whether Tank is Regulated: Not reported
Priority Update: 4/15/1998
Notice of Regulatory Requirement: Not reported
Wells Affected: No
Notice of Violation: Not reported
Phase 1 or Phase 2: Not reported
Num Affected: 0
Site Priority: Not reported
Location: Facility
Current Risk Condition: Not reported

DRAFT

**TAYLOR MOTOR CO. (Continued)** **S105892944**

| | |
|---|---|
| Sampled By: | 3 |
| Samples Include: | 1 |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | 091E |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.49555555 |
| Longitude: | -82.99111111 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | Yes, Groundwater Contamination has been detected |
| Soil Contam: | No |
| Contact Phone: | Not reported |
| Owner Company: | SARA KAMPWERTH (CONTACT) |
| Operator Address: | P. O. BOX 50038/1207 HILTON RD |
| Operator City,State,Zip: | KNOXVILLE, TN 37950-0038 |
| Operator County: | Not reported |
| Material: | GASOLINE |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 3 |
| Risk Site: | H |
| Priority Code: | H |
| Dem Contact: | MES |
| Wells Contam: | Not reported |
| Latitude Number: | 352944 |
| Longitude Number: | 825928 |
| Latitude Decimal: | 35.4955555555556 |
| Longitude Decimal: | 82.9911111111111 |
| GPS: | NOD |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 15745 |
| Last Modified: | 1999-05-27 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |

DRAFT

**TAYLOR MOTOR CO. (Continued)** **S105892944**

| | |
|---|---|
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

| | |
|---|---|
| Facility ID: | 00-0-0000010903 |
| Name: | TAYLOR MOTOR CO. |
| Address: | 601 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Date Occurred: | Not reported |
| Submit Date: | Not reported |
| Incident Desc: | Not reported |
| Operator: | Not reported |
| UST ID: | AS-2586 |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | Not reported |
| Responsible Party Contact Name: | Not reported |
| Operation: | Not reported |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | NC |
| Ownership: | Not reported |
| Operation Type: | Not reported |
| Responsible Party County: | Not reported |
| Source: | Not reported |
| Type: | Not reported |
| Location: | Not reported |
| Petroleum Type: | Not reported |
| Date Incident Reported: | 1994-09-20 00:00:00 |
| Whether Tank is Commercial or Non Commercial: | BOTH |
| Site Priority: | Not reported |
| Whether Tank is Regulated: | BOTH AT SAME SITE |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | Not reported |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Not reported |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | L |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 0 |
| Longitude: | 0 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |

DRAFT

**TAYLOR MOTOR CO. (Continued)** **S105892944**

| | |
|---|---|
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | 1994-09-20 00:00:00 |
| Extent of Contamination: | None |
| Number of Supply Wells Located on Property: | 0 |
| MTBE in Well Y/N/U Yes, No or Unknown: | 0 |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | U |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | 1994-09-20 00:00:00 |
| Record Status: | ARCHIVED RECORD |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | 49 |
| RP Owner?: | False |
| RP Operator?: | False |
| RP Landowner?: | False |
| Comments: | 1-3000 & 1-4000 HEATING OIL USTS, clean closure |
| GW Contam: | Not reported |
| Soil Contam: | Not reported |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | Not reported |
| Operator City,State,Zip: | Not reported |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | Not reported |
| Priority Code: | Not reported |
| Dem Contact: | Not reported |
| Wells Contam: | Not reported |
| Latitude Number: | Not reported |
| Longitude Number: | Not reported |
| Latitude Decimal: | Not reported |
| Longitude Decimal: | Not reported |
| GPS: | Not reported |
| Agency: | Not reported |

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**E12** **RUSS AVE SHELL (FORMER)** **IMD** **S105764104**
**SSW** **475 RUSS AVENUE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.310 mi.**
**1638 ft.** **Site 2 of 2 in cluster E**

**Relative:** IMD:
**Lower**

| | |
|---|---|
| **Actual:** Facility ID: | 22477 |
| **2617 ft.** Name: | RUSS AVE SHELL (FORMER) |
| Address: | 475 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Date Occurred: | Not reported |
| Submit Date: | 11/6/2000 |
| Incident Desc: | SOIL CONTAMINATION DISCOVERED DURING UST INVESTIGATION |
| Operator: | Not reported |
| UST ID: | Not reported |
| Incident ID: | Not reported |

DRAFT

**RUSS AVE SHELL (FORMER) (Continued)** **S105764104**

| | |
|---|---|
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 4 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 6 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Commercial |
| Responsible Party County: | Not reported |
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | H |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | 11/6/2000 |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.49944444 |
| Longitude: | -82.9875 |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |

DRAFT

**RUSS AVE SHELL (FORMER) (Continued)** **S105764104**

| | |
|---|---|
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | Not reported |
| Operator City,State,Zip: | Not reported |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 3 |
| Risk Site: | H |
| Priority Code: | H |
| Dem Contact: | DME |
| Wells Contam: | Not reported |
| Latitude Number: | 352958 |
| Longitude Number: | 825915 |
| Latitude Decimal: | 35.4994444444444 |
| Longitude Decimal: | 82.9875 |
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 22477 |
| Last Modified: | 2014-09-02 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

---

**F13** **RUSS AVE SHELL (FORMER)** **LUST** **S123344796**
**West** **800/475 RUSS AVENUE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.322 mi.**
**1701 ft.** **Site 1 of 2 in cluster F**

**Relative:** LUST:
**Lower**

**Actual:**
**2671 ft.**

| | |
|---|---|
| Name: | RUSS AVE SHELL (FORMER) |
| Address: | 800/475 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-1907 |
| Incident Number: | 22477 |
| Source Type: | 3 |
| Date Reported: | 12/30/1996 |
| Closure Request: | Not reported |
| Close Out: | 09/02/2014 |
| Level Of Soil Cleanup Achieved: | S2 |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |

DRAFT

**RUSS AVE SHELL (FORMER) (Continued)** **S123344796**

| | |
|---|---|
| Risk Classification: | H |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 9 |
| Current Status: | C |
| RBCA GW: | G2 |
| PETOPT: | Not reported |
| RPL: | False |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | False |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | STF |
| Company: | Not reported |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-1907 |
| Facility Id: | 22477 |
| Date Occurred: | 12/1/1996 |
| Date Reported: | 11/6/2000 |
| Owner/Operator: | AYDOCK DANELLEY |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | 11/6/2000 |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Not reported |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 9 |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | Not reported |

LUST:

| | |
|---|---|
| Incident Number: | 22477 |

DRAFT

**RUSS AVE SHELL (FORMER) (Continued)** **S123344796**

| | |
|---|---|
| Last Modified: | 9/2/2014 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

---

**14**
**SW**
**1/4-1/2**
**0.349 mi.**
**1843 ft.**

**MESSER'S EXXON STATION** **LUST U001192574**
**701 DELLWOOD ROAD** **UST N/A**
**WAYNESVILLE, NC 28786** **IMD**

**Relative:**
**Lower**

**Actual:**
**2641 ft.**

LUST:

| | |
|---|---|
| Name: | MESSERS EXXON |
| Address: | 701 DELLWOOD ROAD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-2881 |
| Incident Number: | 28141 |
| Source Type: | 3 |
| Date Reported: | 04/13/1999 |
| Closure Request: | Not reported |
| Close Out: | 07/14/1999 |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 9 |
| Current Status: | C |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | False |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | Not reported |
| Valid: | False |

DRAFT

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| Testlat: | Not reported |
| Regional Officer Project Mgr: | DME |
| Company: | Not reported |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-2881 |
| Facility Id: | 28141 |
| Date Occurred: | Not reported |
| Date Reported: | 4/13/1999 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | Not reported |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | s |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 2 |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | C |

LUST:

| | |
|---|---|
| Incident Number: | 28141 |
| Last Modified: | 7/14/1999 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

UST:

| | |
|---|---|
| Name: | MESSER'S EXXON STATION |
| Address: | 701 DELLWOOD ROAD |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility Id: | 00-0-0000010402 |
| Contact: | JOE MESSER |
| Contact Address1: | 701 DELLWOOD ROAD |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | WAYNESVILLE, NC 28786 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.5204 |
| Longitude: | -82.9790 |

DRAFT

**MESSER'S EXXON STATION (Continued)** **U001192574**

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1 |
| Tank Status: | Not reported |
| Installed Date: | 05/09/1971 |
| Perm Close Date: | 02/25/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 1000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 2 |
| Tank Status: | Not reported |
| Installed Date: | 05/09/1971 |
| Perm Close Date: | 02/25/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 1000 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 3 |
| Tank Status: | Not reported |
| Installed Date: | 05/09/1971 |
| Perm Close Date: | 02/25/1999 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 550 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |

DRAFT

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Single Wall Steel |
| Decode for PSYS_KEY: | Unknown |

IMD:

| | |
|---|---|
| Facility ID: | 28141 |
| Name: | MESSERS EXXON |
| Address: | 701 DELLWOOD ROAD |
| City,State,Zip: | WAYNESVILLE, NC |
| Date Occurred: | 3/22/1999 |
| Submit Date: | 4/13/1999 |
| Incident Desc: | additional samples collected, reported clean on July 9, 1999, NFA letter sent 7/14/1999 |
| Operator: | Joe Messer |
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 4 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 6 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Private |
| Operation Type: | Commercial |
| Responsible Party County: | Not reported |
| Source: | Leak-underground |
| Type: | GASOLINE/DIESEL |
| Location: | 1 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | Not reported |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | Not reported |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | Y |
| Samples Include: | s |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | 35.49916666 |
| Longitude: | -82.98916666 |
| Use of Land, Industrial: | Not reported |

DRAFT

**MESSER'S EXXON STATION (Continued)** **U001192574**

| | |
|---|---|
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | 701 Dellwood Road |
| Operator City,State,Zip: | Waynesville, NC 28786 |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | L |
| Priority Code: | Not reported |
| Dem Contact: | SEP |
| Wells Contam: | Not reported |
| Latitude Number: | 352957 |
| Longitude Number: | 825921 |
| Latitude Decimal: | 35.4991666666667 |
| Longitude Decimal: | 82.9891666666667 |
| GPS: | 7 |
| Agency: | DWM |

Status:

| | |
|---|---|
| Facility ID: | 28141 |
| Last Modified: | 1999-07-14 00:00:00 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Sighned: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

DRAFT

**F15** **MOUNTAIN ENERGY STORE #108** **LUST** **S120839860**
**West** **843 RUSS AVE** **INST CONTROL** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.367 mi.**
**1936 ft.** **Site 2 of 2 in cluster F**

**Relative:**
**Higher**

**Actual:**
**2684 ft.**

LUST:

| | |
|---|---|
| Name: | MOUNTAIN ENERGY STORE #108 |
| Address: | 843 RUSS AVE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-4435 |
| Incident Number: | 41491 |
| Source Type: | 7 |
| Date Reported: | 09/02/2016 |
| Closure Request: | Not reported |
| Close Out: | 05/30/2017 |
| Level Of Soil Cleanup Achieved: | S2 |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | 04/03/2017 |
| GPS Confirmed: | 3 |
| Current Status: | A |
| RBCA GW: | G1 |
| PETOPT: | 3 |
| RPL: | True |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | KM |
| Company: | MOUNTAIN ENERGY CORPORATION |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-4435 |
| Facility Id: | 41491 |
| Date Occurred: | 9/1/2016 |
| Date Reported: | 9/2/2016 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |

DRAFT

**MOUNTAIN ENERGY STORE #108 (Continued)** **S120839860**

| | |
|---|---|
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 3 |
| Cause: | 7 |
| Source: | G |
| UST Number: | P |

LUST:

| | |
|---|---|
| Incident Number: | 41491 |
| Last Modified: | 5/30/2017 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

INST CONTROL:

| | |
|---|---|
| Name: | MOUNTAIN ENERGY STORE #108 |
| Address: | 843 RUSS AVE |
| City,State,Zip: | WAYNESVILLE, NC |
| Project Number: | AS-4435 |
| Object ID: | Not reported |
| DWM Contact: | Asheville Regional Office (828) 296-4500 |
| DWM Program: | Underground Storage Tank Section |
| Project Status: | No Further Action |
| COC: | Multi COC |
| Contamination Source: | Unknown |
| Received Date: | 4/2/2017 |
| Restricted Media: | Soil Only |
| Allowed Use: | Media Restrictions Only |
| Certification: | None |
| Plant Reception Date: | Not reported |
| Instrument Status: | Effective |
| Deed BK: | Not reported |
| Deed PG: | Not reported |
| Plat BK: | Not reported |
| Plat PG: | Not reported |
| Instrument: | Notice and Restriction |
| Deed: | Not reported |
| Deed Date: | Recorded 4-2-2017 |
| Plat: | Not reported |
| Plat Date: | Not reported |

DRAFT

**MOUNTAIN ENERGY STORE #108 (Continued)** **S120839860**

X Coord: 812392.94092
Y Coord: 662315.67851

---

**16**
**South**
**1/4-1/2**
**0.369 mi.**
**1949 ft.**

**WC MINI STORAGE** **LUST** **S128894869**
**187 WEST MARSHALL STREET** **N/A**
**WAYNESVILLE, NC 28786**

**Relative:**
**Lower**

**Actual:**
**2625 ft.**

LUST:

| | |
|---|---|
| Name: | WC MINI STORAGE |
| Address: | 187 WEST MARSHALL STREET |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | NA |
| UST Number: | AS-29353 |
| Incident Number: | 48507 |
| Source Type: | 3 |
| Date Reported: | 06/08/2022 |
| Closure Request: | Not reported |
| Close Out: | Not reported |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | N |
| Risk Classification: | Not reported |
| Risk Class Based On Review: | Not reported |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | Not reported |
| Site Risk Reason: | Not reported |
| Land Use: | Not reported |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | Not reported |
| LUR Filed: | Not reported |
| GPS Confirmed: | 2 |
| Current Status: | C |
| RBCA GW: | Not reported |
| PETOPT: | 4 |
| RPL: | False |
| CD Num: | Not reported |
| Reel Num: | Not reported |
| RPOW: | False |
| RPOP: | True |
| Error Flag: | Not reported |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | dpm |
| Company: | NORECK, LLC. A NC LIMITED LIAB |
| Telephone: | 8280000000 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | Not reported |
| Facility Id: | 48507 |

DRAFT

**WC MINI STORAGE (Continued)** **S128894869**

| | |
|---|---|
| Date Occurred: | Not reported |
| Date Reported: | Not reported |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 6 |
| Type: | 4 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 1 |
| Cause: | 7 |
| Source: | A |
| UST Number: | 2 |

---

**17** **TOWN OF WAYNESVILLE PROPERTY** **LUST** **S115705412**
**SE** **75 VANCE STREET** **LUST TRUST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.413 mi.**
**2181 ft.**

**Relative:**
**Lower**

**Actual:**
**2630 ft.**

LUST:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE PROPERTY |
| Address: | 75 VANCE STREET |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | NA |
| UST Number: | AS-4086 |
| Incident Number: | 41184 |
| Source Type: | 3 |
| Date Reported: | 01/22/2014 |
| Closure Request: | Not reported |
| Close Out: | Not reported |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | N |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | 1 |
| Site Risk Reason: | Not reported |
| Land Use: | RES |
| MTBE: | 0 |
| MTBE1: | N |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | Not reported |
| GPS Confirmed: | 1 |
| Current Status: | C |
| RBCA GW: | Not reported |
| PETOPT: | 4 |

DRAFT

**TOWN OF WAYNESVILLE PROPERTY (Continued)** **S115705412**

| | |
|---|---|
| RPL: | True |
| CD Num: | 0 |
| Reel Num: | 0 |
| RPOW: | True |
| RPOP: | True |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | MES |
| Company: | TOWN OF WAYNESVILLE |
| Telephone: | 8284565114 |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-4086 |
| Facility Id: | 41184 |
| Date Occurred: | 1/7/2014 |
| Date Reported: | 1/22/2014 |
| Owner/Operator: | Not reported |
| Ownership: | 1 |
| Operation Type: | 3 |
| Type: | 4 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | Y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 2 |
| Cause: | 7 |
| Source: | A |
| UST Number: | P |

LUST TRUST:

| | |
|---|---|
| Name: | TOWN OF WAYNESVILLE PROPERTY |
| Address: | 75 VANCE STREET |
| City,State,Zip: | WAYNESVILLE, NC |
| Facility ID: | Not reported |
| Site ID: | 41184 |
| Site Note: | Noncommercial; first apply a $1,000 deductible then reimburse 90% of subsequent approved costs until a maximum deductible of $2,000 is reached. Then reimburse at 100%. [CGS 1/5/15] |
| Site Eligible?: | True |
| Commercial Find: | 100% Non-Commercial |
| Priority Rank: | Not reported |
| Deductable Amount: | 2000 |
| 3rd Party Deductable Amt: | 0 |
| Sum 3rd Party Amt Applied: | 0 |

DRAFT

**G18** **HANDY MART** **LUST** **U003134468**
**WNW** **1002 RUSS AVE** **UST** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786** **INST CONTROL**
**0.420 mi.**
**2217 ft.** **Site 1 of 2 in cluster G**

**Relative:**
**Higher**

**Actual:**
**2717 ft.**

LUST:

| | |
|---|---|
| Name: | HANDY MART (HANDY PANTRY #115) |
| Address: | 1002 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC 28786 |
| Facility ID: | 00-0-000 |
| UST Number: | AS-3063 |
| Incident Number: | 28272 |
| Source Type: | 3 |
| Date Reported: | 12/09/2004 |
| Closure Request: | Not reported |
| Close Out: | 10/31/2005 |
| Level Of Soil Cleanup Achieved: | Not reported |
| # Of Supply Wells: | 0 |
| Commercial/NonCommercial UST Site: | C |
| Risk Classification: | L |
| Risk Class Based On Review: | L |
| Corrective Action Plan Type: | Not reported |
| NOV Issue Date: | Not reported |
| Site Priority: | Not reported |
| Phase Of LSA Req: | 1 |
| Site Risk Reason: | Not reported |
| Land Use: | IND |
| MTBE: | 0 |
| MTBE1: | U |
| Flag: | 0 |
| Flag1: | 0 |
| LUR Filed: | 11/03/2005 |
| GPS Confirmed: | 9 |
| Current Status: | A |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | False |
| CD Num: | 373 |
| Reel Num: | 0 |
| RPOW: | False |
| RPOP: | False |
| Error Flag: | 0 |
| Error Code: | N |
| Valid: | False |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | DPM |
| Company: | Not reported |
| Telephone: | Not reported |
| 5 Min Quad: | Not reported |

LUST:

| | |
|---|---|
| ERR Type: | Not reported |
| UST Number: | AS-3063 |
| Facility Id: | 28272 |
| Date Occurred: | 12/9/2004 |
| Date Reported: | 1/6/2005 |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | Not reported |

DRAFT

**HANDY MART (Continued)** **U003134468**

| | |
|---|---|
| Type: | 3 |
| Location: | 1 |
| Priority Update: | Not reported |
| Wells Affected Y/N: | n |
| Samples Include: | Not reported |
| 7#5 Minute Quad: | y |
| 5 Minute Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Source Code: | Not reported |
| Err Type: | 2 |
| Cause: | Not reported |
| Source: | Not reported |
| UST Number: | C |

LUST:

| | |
|---|---|
| Incident Number: | 28272 |
| Last Modified: | 10/31/2005 |
| Incident Phase: | CO |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

UST:

| | |
|---|---|
| Name: | HANDY MART |
| Address: | 1002 RUSS AVE |
| City,State,Zip: | WAYNESVILLE, NC 28786-2946 |
| Facility Id: | 00-0-0000007237 |
| Contact: | WILLIAM D. SCHULHOFER |
| Contact Address1: | PO BOX 314 |
| Contact Address2: | Not reported |
| Contact City/State/Zip: | WAYNESVILLE, NC 28786-0314 |
| FIPS County Desc: | Haywood |
| Latitude: | 35.4992 |
| Longitude: | -82.9865 |

Click here to access the North Carolina DEQ records for this facility:

| | |
|---|---|
| Tank Id: | 1 |
| Tank Status: | Not reported |
| Installed Date: | 04/11/1978 |
| Perm Close Date: | 10/21/2004 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 9274 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |

DRAFT

**HANDY MART (Continued)** **U003134468**

| | |
|---|---|
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Other |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 2 |
| Tank Status: | Not reported |
| Installed Date: | 04/11/1978 |
| Perm Close Date: | 10/21/2004 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 9274 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Other |
| Decode for PSYS_KEY: | Unknown |

| | |
|---|---|
| Tank Id: | 3 |
| Tank Status: | Not reported |
| Installed Date: | 04/11/1978 |
| Perm Close Date: | 10/21/2004 |
| Product Name: | Gasoline, Gas Mix |
| Tank Capacity: | 9274 |
| Root Tank Id: | Not reported |
| Main Tank: | No |
| Compartment Tank: | No |
| Manifold Tank: | Not reported |
| Commercial: | Yes |
| Regulated: | Yes |
| Other CP Tank: | Not reported |
| Overfill Protection Name: | Not reported |
| Spill Protection Name: | Not reported |
| Leak Detection Name: | Not reported |
| Decode for TCONS_KEY: | Single Wall Steel |
| Decode for PCONS_KEY: | Other |
| Decode for PSYS_KEY: | Unknown |

INST CONTROL:

| | |
|---|---|
| Name: | HANDY MART (HANDY PANTRY #115) |
| Address: | 1002 RUSS AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Project Number: | AS-3063 |

DRAFT

**HANDY MART (Continued)** **U003134468**

| | |
|---|---|
| Object ID: | Not reported |
| DWM Contact: | Asheville Regional Office (828) 296-4500 |
| DWM Program: | Underground Storage Tank Section |
| Project Status: | No Further Action |
| COC: | Multi COC |
| Contamination Source: | UST System |
| Received Date: | 11/2/2005 |
| Restricted Media: | Multi-Media |
| Allowed Use: | Media Restrictions Only |
| Certification: | None |
| Plant Reception Date: | Not reported |
| Instrument Status: | Effective |
| Deed BK: | Not reported |
| Deed PG: | Not reported |
| Plat BK: | Not reported |
| Plat PG: | Not reported |
| Instrument: | Notice and Restriction |
| Deed: | Not reported |
| Deed Date: | Recorded 11-2-2005 |
| Plat: | Not reported |
| Plat Date: | Not reported |
| X Coord: | 812623.40536 |
| Y Coord: | 661384.23121 |

---

**G19** **HANDY MART (HANDY PANTRY #115)** **IMD** **S106799433**
**WNW** **1002 RUSS AVENUE** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.420 mi.**
**2217 ft.** **Site 2 of 2 in cluster G**

**Relative:** IMD:
**Higher**

| | | |
|---|---|---|
| Facility ID: | | 28272 |
| Name: | | HANDY MART (HANDY PANTRY #115) |
| Address: | | 1002 RUSS AVENUE |
| City,State,Zip: | | WAYNESVILLE, NC |
| Date Occurred: | | 12/9/2004 |
| Submit Date: | | 1/6/2005 |
| Incident Desc: | Not reported | |
| Operator: | | William Schulhofer |
| UST ID: | | Not reported |
| Incident ID: | | Not reported |
| Initials of UST Regional Contact: | | Not reported |
| Regional Office: | | Not reported |
| Responsible Party/Company Name: | | Not reported |
| Ownership: | | 4 |
| Responsible Party Contact Name: | | Not reported |
| Operation: | | Not reported |
| Responsible Party Mailing Address: | | Not reported |
| Responsible Party City,State,Zip: | | Not reported |
| Ownership: | | Private |
| Operation Type: | | Not reported |
| Responsible Party County: | | Not reported |
| Source: | | Leak-underground |
| Type: | | GASOLINE/DIESEL |
| Location: | | 1 |
| Petroleum Type: | | Not reported |
| Date Incident Reported: | | Not reported |
| Whether Tank is Commercial or Non Commercial: | | Not reported |

**Actual:**
**2717 ft.**

DRAFT

**HANDY MART (HANDY PANTRY #115) (Continued)** **S106799433**

| | |
|---|---|
| Site Priority: | Not reported |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | Not reported |
| Site Priority: | Not reported |
| Location: | Facility |
| Current Risk Condition: | Not reported |
| Sampled By: | y |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | Not reported |
| Longitude: | Not reported |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No Groundwater Contamination detected |
| Soil Contam: | Yes |
| Contact Phone: | Not reported |
| Owner Company: | Not reported |
| Operator Address: | PO Box 314 |
| Operator City,State,Zip: | Waynesville, NC 28786 |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | L |
| Priority Code: | Not reported |
| Dem Contact: | DPM |
| Wells Contam: | Not reported |
| Latitude Number: | Not reported |
| Longitude Number: | Not reported |

DRAFT

**HANDY MART (HANDY PANTRY #115) (Continued)** **S106799433**

Latitude Decimal: Not reported
Longitude Decimal: Not reported
GPS: 7
Agency: DWM

Status:
Facility ID: 28272
Last Modified: 2005-10-31 00:00:00
Incident Phase: CO
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Sighned: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

---

**H20** **SCHULHOFFER JUNKYARD** **SHWS** **S104919093**
**ENE** **HOWELL MILL ROAD** **N/A**
**1/4-1/2** **WAYNESVILLE, NC**
**0.448 mi.**
**2364 ft.** **Site 1 of 2 in cluster H**

**Relative:**
**Lower**
**Actual:**
**2634 ft.**

SHWS:
Name: SCHULHOFFER JUNKYARD
Address: HOWELL MILL ROAD
City,State,Zip: WAYNESVILLE, NC
EPAID: NCD024852675
Lat/Longitude: 35.50729 / -82.97605
Geolocation Method: 31

Click here to access the North Carolina DEQ records for this facility:

---

**H21** **BROWN NCDOT PARCEL 32** **LAST** **S115705216**
**ENE** **838 HOWELL MILL RD** **N/A**
**1/4-1/2** **WAYNESVILLE, NC 28786**
**0.456 mi.**
**2410 ft.** **Site 2 of 2 in cluster H**

**Relative:**
**Lower**
**Actual:**
**2640 ft.**

LAST:
Name: BROWN NCDOT PARCEL 32
Address: 838 HOWELL MILL RD
City,State,Zip: WAYNESVILLE, NC 28786
Facility ID: Not reported
UST Number: AS-88297
Incident Number: 89134
Contamination Type: SL
Source Type: Not reported
Product Type: P
Date Reported: 11/21/2013
Date Occur: 11/21/2013
Cleanup: Not reported
Closure Request: Not reported

DRAFT

**BROWN NCDOT PARCEL 32 (Continued)** **S115705216**

| | | |
|---|---|---|
| Close Out: | 02/05/2014 | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | Not reported |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | Not reported |
| Risk Classification: | | L |
| Risk Class Based On Review: | | L |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | Not reported | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | Yes | |
| Flag1: | No | |
| LUR Filed: | Not reported | |
| Release Detection: | 0 | |
| Current Status: | C | |
| RBCA GW: | Not reported | |
| PETOPT: | 3 | |
| RPL: | False | |
| CD Num: | 0 | |
| Reel Num: | 0 | |
| RPOW: | True | |
| RPOP: | False | |
| Error Flag: | 0 | |
| Error Code: | N | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.50759 -82.97581 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | JCA |
| Region: | | ASH |
| Company: | | NCDOT |
| Contact Person: | | Gordon Box |
| Telephone: | | Not reported |
| RP Address: | | 1589 Mail Service Center |
| RP City,St,Zip: | | Raleigh, NC 27699 |
| RP County: | | Not reported |
| Comments: | NCDOT requested a NFA letter 2/4/2014 NFA letter 2/5/2014 *****ALL FILES ON S LASERFICHE FOR PROCESSING***** | |
| 5 Min Quad: | Not reported | |

PIRF:

| | |
|---|---|
| Facility Id: | 89134 |
| Date Occurred: | 11/21/2013 |
| Date Reported: | 11/21/2013 |
| Description Of Incident: | MINOR SOIL NFA LETTER |
| Owner/Operator: | Not reported |
| Ownership: | 7 |
| Operation Type: | 3 |
| Type: | 1 |
| Location: | 8 |
| Site Priority: | Not reported |
| Priority Update: | Not reported |

DRAFT

**BROWN NCDOT PARCEL 32 (Continued)** **S115705216**

| | |
|---|---|
| Wells Affected Y/N: | N |
| Wells Affected Number: | Not reported |
| Samples Taken By: | Y |
| Samples Include: | N |
| 7#5 Min Quad: | 1 |
| 5 Min Quad: | 1 |
| Pirf/Min Soil: | Not reported |
| Release Code: | 9 |
| Cause: | Not reported |
| Source: | Not reported |
| Source Type: | E |
| Last Modified: | 2/5/2014 |
| **Incident Phase:** | **CO** |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

---

**22**
**NNW**
**1/2-1**
**0.562 mi.**
**2965 ft.**

**PRIVATE RESIDENCE**
**1460 RUSS AVENUE**
**WAYNESVILLE, NC**

**LAST** **S127734187**
**N/A**

**Relative:**
**Lower**

**Actual:**
**2673 ft.**

LAST:

| | | |
|---|---|---|
| Name: | PRIVATE RESIDENCE | |
| Address: | 1460 RUSS AVENUE | |
| City,State,Zip: | WAYNESVILLE, NC | |
| Facility ID: | Not reported | |
| UST Number: | AS-88490 | |
| Incident Number: | Not reported | |
| Contamination Type: | | GW |
| Source Type: | 24 | |
| Product Type: | P | |
| Date Reported: | 06/04/2021 | |
| Date Occur: | 06/04/2021 | |
| Cleanup: | Not reported | |
| Closure Request: | Not reported | |
| Close Out: | 06/22/2021 | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | N |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | N |
| Risk Classification: | | Not reported |
| Risk Class Based On Review: | | Not reported |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |

DRAFT

**PRIVATE RESIDENCE (Continued)** **S127734187**

| | |
|---|---|
| Land Use: | Not reported |
| MTBE: | No |
| MTBE1: | Unknown |
| Flag: | No |
| Flag1: | Not reported |
| LUR Filed: | Not reported |
| Release Detection: | Not reported |
| Current Status: | Not reported |
| RBCA GW: | Not reported |
| PETOPT: | 3 |
| RPL: | True |
| CD Num: | Not reported |
| Reel Num: | Not reported |
| RPOW: | False |
| RPOP: | False |
| Error Flag: | Not reported |
| Error Code: | N |
| Valid: | False |
| Lat/Long: | Not reported |
| Lat/Long Decimal: | 0 0 |
| Testlat: | Not reported |
| Regional Officer Project Mgr: | NPM |
| Region: | ASH |
| Company: | Not reported |
| Contact Person: | kyle edwards |
| Telephone: | 8284213039 |
| RP Address: | 20 kyles way |
| RP City,St,Zip: | maggie valley, NC 287517634 |
| RP County: | Not reported |
| Comments: | 6/21/2021: Last week I investigated that fuel spill observed by Amy at the referenced address. The petroleum sheen she had observed was traced back to a discharge pipe on the referenced property. I sent a NORR to the property owner (it s a rental house). The owner (82 year old man, Kyle Edwards) investigated and I just talked to him. Although he does have a fuel oil tank the source wasn t that. He said a young boy that lives there was playing in the basement and knocked over a small can (4-5 gals) of gas/oil mix used for lawn equipment. Unsure if the can was full when spilled. The fuel spilled into a floor drain which then discharged out the pipe onto the leaves, etc. Mr. Edwards bagged up the soiled leaves with any fuel staining for disposal and has it for us to see if we need to. He s willing to do anything we need and sounds very cooperative. The pipe discharged onto a concrete flume where the leaves were located, so it s not like there s any soil to excavate. Incident closed out. |
| 5 Min Quad: | Not reported |
| Last Modified: | Not reported |
| **Incident Phase:** | **Not reported** |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

DRAFT

**23**
**SE**
**1/2-1**
**0.583 mi.**
**3077 ft.**

**TOWN OF WAYNESVILLE - N. MAIN FIRE DEPT. AST**
**960 N. MAIN ST.**
**WAYNESVILLE, NC 28786**

**LAST** **S110628796**
**N/A**

**Relative:**
**Lower**

**Actual:**
**2658 ft.**

LAST:

| | | |
|---|---|---|
| Name: | TOWN OF WAYNESVILLE - N. MAIN FIRE DEPT. AST | |
| Address: | 960 N. MAIN ST. | |
| City,State,Zip: | WAYNESVILLE, NC 28786 | |
| Facility ID: | Not reported | |
| UST Number: | AS-87938 | |
| Incident Number: | 87938 | |
| Contamination Type: | | GW |
| Source Type: | 14 | |
| Product Type: | N | |
| Date Reported: | 11/28/2006 | |
| Date Occur: | 11/27/2006 | |
| Cleanup: | Not reported | |
| Closure Request: | Not reported | |
| Close Out: | 01/22/2007 | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | Not reported |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | Not reported |
| Risk Classification: | | Not reported |
| Risk Class Based On Review: | | L |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | Not reported | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | No | |
| Flag1: | No | |
| LUR Filed: | Not reported | |
| Release Detection: | 0 | |
| Current Status: | A | |
| RBCA GW: | Not reported | |
| PETOPT: | Not reported | |
| RPL: | False | |
| CD Num: | 400 | |
| Reel Num: | 0 | |
| RPOW: | False | |
| RPOP: | False | |
| Error Flag: | 0 | |
| Error Code: | Not reported | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.49711 -82.97605 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | Not reported |
| Region: | | ASH |
| Company: | | Not reported |
| Contact Person: | | Town of Waynesville |
| Telephone: | | Not reported |

DRAFT

**TOWN OF WAYNESVILLE - N. MAIN FIRE DEPT. AST (Continued)** **S110628796**

RP Address: Not reported
RP City,St,Zip: NC
RP County: Not reported
Comments: POOR PDOP ON GPS DATA SHOULD RESURVEY; NOTE PICS OF SITE IN FILE; AST SPILL WHILE EMPTYING AST IN PREPARATION FOR CONSTRUCTION; F.O. UNDERNEATH CONCRETE SLAB; 11/27/2006 EXCAVATION UNDERWAY INCLUDING SOIL REMOVAL; F.P. VISIBLE ON THE WATER TABLE DURING EXCAVATION AND POOLING IN TRENCH AREA; DRAIN TO CREEK WITHIN 1 FT. OF RELEASE AREA; CONSULTANT HAS BOOMS AND PADS OUT BUT THERE IS HIGH POTENTIAL FOR IMPACT TO CREEK VIA SUBSURFACE, ANTHROPOGENIC DRAINAGE FEATURES AT SITE UNLESS EXTENSIVE SOIL IS REMOVED.Submitted soil excavation report - got the vertical and horizontal extent of the soil contamination. Closed out.
5 Min Quad: Not reported

PIRF:
Facility Id: 87938
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 3
Operation Type: 3
Type: Not reported
Location: Not reported
Site Priority: NOD
Priority Update: Not reported
Wells Affected Y/N: Not reported
Wells Affected Number: Not reported
Samples Taken By: Not reported
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: Not reported
Cause: Not reported
Source: Not reported
Source Type: 1

Last Modified: 2/15/2007
**Incident Phase:** **CO**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: 1/22/2007

DRAFT

**24**
**West**
**1/2-1**
**0.612 mi.**
**3231 ft.**

**GATHERING ROCK DEVELOPMENT (FUTURE)**
**PHILLIPS ROAD**
**WAYNESVILLE, NC 28786**

**LAST** **S110629107**
**N/A**

**Relative:**
**Higher**

**Actual:**
**2770 ft.**

LAST:

| | | |
|---|---|---|
| Name: | GATHERING ROCK DEVELOPMENT (FUTURE) | |
| Address: | PHILLIPS ROAD | |
| City,State,Zip: | WAYNESVILLE, NC 28786 | |
| Facility ID: | Not reported | |
| UST Number: | AS-88190 | |
| Incident Number: | 89030 | |
| Contamination Type: | | SL |
| Source Type: | 14 | |
| Product Type: | P | |
| Date Reported: | 07/01/2008 | |
| Date Occur: | 06/16/2008 | |
| Cleanup: | 06/16/2008 | |
| Closure Request: | Not reported | |
| Close Out: | Not reported | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | N |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | N |
| Risk Classification: | | Not reported |
| Risk Class Based On Review: | | U |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | RES | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | Yes | |
| Flag1: | No | |
| LUR Filed: | Not reported | |
| Release Detection: | 0 | |
| Current Status: | C | |
| RBCA GW: | Not reported | |
| PETOPT: | 3 | |
| RPL: | True | |
| CD Num: | 0 | |
| Reel Num: | 0 | |
| RPOW: | False | |
| RPOP: | False | |
| Error Flag: | 0 | |
| Error Code: | N | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.50434 -82.99585 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | CEL |
| Region: | | ASH |
| Company: | | Torchlight Properties |
| Contact Person: | | Ricky Beauchamp |
| Telephone: | | Not reported |

DRAFT

**GATHERING ROCK DEVELOPMENT (FUTURE) (Continued)** **S110629107**

RP Address: 5809 Woodleigh Oaks Drive
RP City,St,Zip: Charlotte, NC 28226
RP County: Not reported
Comments: 06/30/08 - Soil Assessment Rpt: Soil samples were collected from areas identified as possible problem areas during ESA. Soil samples collected on 06/16/08 from beneath AST system (sample House #1) and in vicinity of Chicken Coop on 39.62 acre parcel (sample Chicken coop), and adj to AST on 204.54 acre parcel (sample House #3). House #3 > DRO (105 mg/kg) and House #1 < TPH (153.4 mg/kg). Soil sample from chicken coop was not analyzed for DRO, but for chlorinated pesticides/herbicides and was BDL. Recommends soil excavation to cleanup site in vicinity of House #3. 07/19/12 - IAA NORR Issued.
5 Min Quad: Not reported

PIRF:
Facility Id: 89030
Date Occurred: 6/16/2008
Date Reported: 7/1/2008
Description Of Incident: Release discovered following Phase II ESA. Soil boring advanced in vicinity fo former AST system > TPH.
Owner/Operator: Not reported
Ownership: 4
Operation Type: 5
Type: 4
Location: 7
Site Priority: Not reported
Priority Update: Not reported
Wells Affected Y/N: N
Wells Affected Number: Not reported
Samples Taken By: Y
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: 3
Cause: Not reported
Source: Not reported
Source Type: D

Last Modified: Not reported
**Incident Phase: Not reported**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

DRAFT

**25**
**SSE**
**1/2-1**
**0.637 mi.**
**3366 ft.**

**MILLER'S AUTOMOTIVE REPAIR**
**595 NORTH MAIN STREET**
**WAYNESVILLE, NC 28786**

**LAST** **S115705215**
**N/A**

**Relative:**
**Lower**

**Actual:**
**2651 ft.**

LAST:

| | | |
|---|---|---|
| Name: | MILLER'S AUTOMOTIVE REPAIR | |
| Address: | 595 NORTH MAIN STREET | |
| City,State,Zip: | WAYNESVILLE, NC 28786 | |
| Facility ID: | Not reported | |
| UST Number: | AS-88296 | |
| Incident Number: | 89133 | |
| Contamination Type: | | GW |
| Source Type: | Not reported | |
| Product Type: | P | |
| Date Reported: | 01/28/2014 | |
| Date Occur: | 01/28/2014 | |
| Cleanup: | Not reported | |
| Closure Request: | Not reported | |
| Close Out: | Not reported | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | N |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | N |
| Risk Classification: | | U |
| Risk Class Based On Review: | | U |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | Not reported | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | No | |
| Flag1: | No | |
| LUR Filed: | Not reported | |
| Release Detection: | 0 | |
| Current Status: | C | |
| RBCA GW: | Not reported | |
| PETOPT: | 4 | |
| RPL: | False | |
| CD Num: | 0 | |
| Reel Num: | 0 | |
| RPOW: | True | |
| RPOP: | False | |
| Error Flag: | 0 | |
| Error Code: | N | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.29414 -82.58547 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | dpm |
| Region: | | ASH |
| Company: | | barrett motors |
| Contact Person: | | john barrett |
| Telephone: | | 8284525553 |

DRAFT

**MILLER'S AUTOMOTIVE REPAIR (Continued)** **S115705215**

RP Address: 626 n. main street
RP City,St,Zip: waynesville, NC 28786
RP County: Not reported
Comments: AST release getting into creek, Oil Sppill Act Violation letter sent on February, 3, 2014, copied to Jeff Menzel with ARO Water Quality. RP email is john@barrettmotors.net
5 Min Quad: Not reported

PIRF:
Facility Id: 89133
Date Occurred: 1/28/2014
Date Reported: 1/28/2014
Description Of Incident: AST system, release getting into creek
Owner/Operator: Not reported
Ownership: 4
Operation Type: 8
Type: as
Location: 1
Site Priority: Not reported
Priority Update: Not reported
Wells Affected Y/N: n
Wells Affected Number: Not reported
Samples Taken By: n
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: 4
Cause: Not reported
Source: Not reported
Source Type: E

Last Modified: Not reported
**Incident Phase: Not reported**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: Not reported

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**26** **NOLAND PROPERTY (BETTY)** **LAST** **S125246424**
**North** **287 GOLF COURSE ROAD** **N/A**
**1/2-1** **WAYNESVILLE, NC 28786**
**0.656 mi.**
**3462 ft.**

**Relative:** LAST:
**Lower**
**Actual:** Name: NOLAND PROPERTY (BETTY)
**2634 ft.** Address: 287 GOLF COURSE ROAD
City,State,Zip: WAYNESVILLE, NC 28786
Facility ID: Not reported
UST Number: AS-88446
Incident Number: 89287

DRAFT

**NOLAND PROPERTY (BETTY) (Continued)** **S125246424**

| | | |
|---|---|---|
| Contamination Type: | | GW |
| Source Type: | 14 | |
| Product Type: | P | |
| Date Reported: | 05/30/2019 | |
| Date Occur: | 01/18/2019 | |
| Cleanup: | 01/19/2019 | |
| Closure Request: | Not reported | |
| Close Out: | 08/13/2019 | |
| Level Of Soil Cleanup Achieved: | | S1 |
| Tank Regulated Status: | | N |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | N |
| Risk Classification: | | L |
| Risk Class Based On Review: | | L |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | Not reported | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | RES | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | No | |
| Flag1: | No | |
| LUR Filed: | 07/09/2019 | |
| Release Detection: | 0 | |
| Current Status: | C | |
| RBCA GW: | G2 | |
| PETOPT: | 4 | |
| RPL: | True | |
| CD Num: | 0 | |
| Reel Num: | 0 | |
| RPOW: | True | |
| RPOP: | True | |
| Error Flag: | 0 | |
| Error Code: | N | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.51548 -82.98509 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | CEL |
| Region: | | ASH |
| Company: | | Not reported |
| Contact Person: | | Betty Noland |
| Telephone: | | Not reported |
| RP Address: | | 287 Golf Course Road |
| RP City,St,Zip: | | Waynesville, NC 28786 |
| RP County: | | Not reported |
| Comments: | Soil sampling > Res MSCCs. Recommends NRP for soil and GW. 06/12/19 - NRP received for signature and notary. 6/18/19 - CNFA Issued. 8/12/19 - Recorded NRP and PN received: Recorded on 7/9/19 in Book: RB 976, Pages: 1352-1357. Soil & GW. 8/13/19 - Final NFA issued. | |
| 5 Min Quad: | Not reported | |

PIRF:

| | |
|---|---|
| Facility Id: | 89287 |
| Date Occurred: | Not reported |

DRAFT

**NOLAND PROPERTY (BETTY) (Continued)** **S125246424**

| | |
|---|---|
| Date Reported: | Not reported |
| Description Of Incident: | Not reported |
| Owner/Operator: | Not reported |
| Ownership: | 4 |
| Operation Type: | 5 |
| Type: | 4 |
| Location: | 7 |
| Site Priority: | Not reported |
| Priority Update: | Not reported |
| Wells Affected Y/N: | N |
| Wells Affected Number: | Not reported |
| Samples Taken By: | Y |
| Samples Include: | Not reported |
| 7#5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | 1 |
| Cause: | Not reported |
| Source: | Not reported |
| Source Type: | P |
| Last Modified: | Not reported |
| **Incident Phase:** | **CO** |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | Not reported |

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**27** **HAYWOOD COUNTY BRANNER AVE. SITE** **LAST** **S105586623**
**South** **BRANNER AVENUE** **IMD** **N/A**
**1/2-1** **WAYNESVILLE, NC 28786**
**0.738 mi.**
**3897 ft.**

**Relative:** LAST:
**Higher**

**Actual:**
**2686 ft.**

| | | |
|---|---|---|
| Name: | HAYWOOD COUNTY BRANNER AVE. SITE | |
| Address: | BRANNER AVENUE | |
| City,State,Zip: | WAYNESVILLE, NC 28786 | |
| Facility ID: | Not reported | |
| UST Number: | AS-86337 | |
| Incident Number: | 86337 | |
| Contamination Type: | | SL |
| Source Type: | 19 | |
| Product Type: | N | |
| Date Reported: | 11/08/2002 | |
| Date Occur: | 07/11/2002 | |
| Cleanup: | Not reported | |
| Closure Request: | Not reported | |
| Close Out: | 11/21/2002 | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | N |
| # Of Supply Wells: | 0 | |

DRAFT

**HAYWOOD COUNTY BRANNER AVE. SITE (Continued)** **S105586623**

Commercial/NonCommercial UST Site: N
Risk Classification: L
Risk Class Based On Review: L
Corrective Action Plan Type: Not reported
NOV Issue Date: Not reported
NORR Issue Date: Not reported
Site Priority: 40
Phase Of LSA Req: Not reported
Site Risk Reason: Not reported
Land Use: RES
MTBE: No
MTBE1: Unknown
Flag: No
Flag1: No
LUR Filed: Not reported
Release Detection: 0
Current Status: A
RBCA GW: Not reported
PETOPT: 12
RPL: False
CD Num: 301
Reel Num: 0
RPOW: False
RPOP: False
Error Flag: 0
Error Code: Not reported
Valid: False
Lat/Long: Not reported
Lat/Long Decimal: 35.49318 -82.98712
Testlat: Not reported
Regional Officer Project Mgr: Not reported
Region: ASH
Company: HAYWOOD COUNTY EMERGENCY SERVI
Contact Person: GREG SHUPING
Telephone: Not reported
RP Address: 215 N. MAIN STREET
RP City,St,Zip: WAYNESVILLE, NC
RP County: Not reported
Comments: AS RESULT OF PURCHASE OF PROPERTY, A LIMITED PHASE II ASSESSMENT WAS PERFORMED. PROPERTY WAS FORMERLY AN AUTO SALES COMPANY CONTAINING AN AUTO DETAILING SHOP. EVIDENCE OF CONTAMINATED SOILS AS RESULT OF SPILLS WAS DISCOVERED. CONTAMINATED SOILS WERE EX
5 Min Quad: Not reported

PIRF:
Facility Id: 86337
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 7
Operation Type: 3
Type: Not reported
Location: Not reported
Site Priority: 40E
Priority Update: Not reported
Wells Affected Y/N: N
Wells Affected Number: 0

DRAFT

**HAYWOOD COUNTY BRANNER AVE. SITE (Continued)** **S105586623**

| | |
|---|---|
| Samples Taken By: | Not reported |
| Samples Include: | Not reported |
| 7#5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Pirf/Min Soil: | Not reported |
| Release Code: | Not reported |
| Cause: | Not reported |
| Source: | Not reported |
| Source Type: | 1 |
| Last Modified: | 9/16/2003 |
| **Incident Phase:** | **CO** |
| NOV Issued: | Not reported |
| NORR Issued: | Not reported |
| 45 Day Report: | Not reported |
| Public Meeting Held: | Not reported |
| Corrective Action Planned: | Not reported |
| SOC Signed: | Not reported |
| Reclassification Report: | Not reported |
| RS Designation: | Not reported |
| Closure Request Date: | Not reported |
| Close-out Report: | 11/21/2002 |

IMD:

| | |
|---|---|
| Facility ID: | 86337 |
| Name: | HAYWOOD COUNTY BRANNER AVE. SI |
| Address: | BRANNER AVENUE |
| City,State,Zip: | WAYNESVILLE, NC |
| Date Occurred: | 7/11/2002 |
| Submit Date: | 9/16/2003 |
| Incident Desc: | AS RESULT OF PURCHASE OF PROPERTY, A LIMITED PHASE II ASSESSMENT WAS PERFORMED. PROPERTY WAS FORMERLY AN AUTO SALES COMPANY CONTAINING AN AUTO DETAILING SHOP. E |
| Operator: | SHUPING, GREG |
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 7 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 3 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | State |
| Operation Type: | Residential |
| Responsible Party County: | Not reported |
| Source: | Spill-surface |
| Type: | HEATING OIL |
| Location: | Not reported |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | 40 |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |

DRAFT

**HAYWOOD COUNTY BRANNER AVE. SITE (Continued)** **S105586623**

| | |
|---|---|
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | 0 |
| Site Priority: | Not reported |
| Location: | Not reported |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | Not reported |
| Longitude: | Not reported |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No data entered (data entry person submitted a blank field |
| Soil Contam: | Not reported |
| Contact Phone: | (828)456-2391 |
| Owner Company: | HAYWOOD COUNTY EMERGENCY SERVICES D |
| Operator Address: | 215 N. MAIN STREET |
| Operator City,State,Zip: | WAYNESVILLE (828)456-239 |
| Operator County: | Not reported |
| Material: | Not reported |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | Not reported |
| Risk Site: | Not reported |
| Priority Code: | E |
| Dem Contact: | LKD |
| Wells Contam: | Not reported |
| Latitude Number: | Not reported |
| Longitude Number: | Not reported |
| Latitude Decimal: | Not reported |
| Longitude Decimal: | Not reported |
| GPS: | NOD |
| Agency: | DWQ |

DRAFT

**28**
**WNW**
**1/2-1**
**0.792 mi.**
**4184 ft.**

**SHIRLEY ROBERTS PROPERTY**
**21 BRADLEY STREET**
**WAYNESVILLE, NC 28786**

**LAST** **S103131560**
**IMD** **N/A**

**Relative:**
**Higher**

**Actual:**
**2880 ft.**

LAST:

| | | |
|---|---|---|
| Name: | SHIRLEY ROBERTS PROPERTY | |
| Address: | 21 BRADLEY STREET | |
| City,State,Zip: | WAYNESVILLE, NC 28786 | |
| Facility ID: | Not reported | |
| UST Number: | AS-15001 | |
| Incident Number: | 15001 | |
| Contamination Type: | | SL |
| Source Type: | 14 | |
| Product Type: | N | |
| Date Reported: | 01/24/1996 | |
| Date Occur: | 01/23/1996 | |
| Cleanup: | 01/24/1996 | |
| Closure Request: | Not reported | |
| Close Out: | 02/26/1997 | |
| Level Of Soil Cleanup Achieved: | | Not reported |
| Tank Regulated Status: | | Not reported |
| # Of Supply Wells: | 0 | |
| Commercial/NonCommercial UST Site: | | Not reported |
| Risk Classification: | | L |
| Risk Class Based On Review: | | L |
| Corrective Action Plan Type: | | Not reported |
| NOV Issue Date: | Not reported | |
| NORR Issue Date: | Not reported | |
| Site Priority: | 30 | |
| Phase Of LSA Req: | Not reported | |
| Site Risk Reason: | Not reported | |
| Land Use: | Not reported | |
| MTBE: | No | |
| MTBE1: | Unknown | |
| Flag: | No | |
| Flag1: | No | |
| LUR Filed: | Not reported | |
| Release Detection: | 0 | |
| Current Status: | A | |
| RBCA GW: | Not reported | |
| PETOPT: | Not reported | |
| RPL: | False | |
| CD Num: | 301 | |
| Reel Num: | 0 | |
| RPOW: | False | |
| RPOP: | False | |
| Error Flag: | 0 | |
| Error Code: | Not reported | |
| Valid: | False | |
| Lat/Long: | Not reported | |
| Lat/Long Decimal: | 35.51166 -82.99188 | |
| Testlat: | Not reported | |
| Regional Officer Project Mgr: | | Not reported |
| Region: | | ASH |
| Company: | | Not reported |
| Contact Person: | | SHIRLEY ROBERTS |
| Telephone: | | Not reported |

DRAFT

**SHIRLEY ROBERTS PROPERTY (Continued)** **S103131560**

RP Address: 21 BRADLEY STREET
RP City,St,Zip: WAYNESVILLE, NC
RP County: Not reported
Comments: APPROX. 50-70 GAL. OF FUEL OIL SPILLED WHEN AST FELL OVER DURING HEAVY RAIN. FUEL RAN ACROSS FRONT YARD QUICKLY AND UNDER NEARBY TRAILER. INSURANCE COMPANY TO CLEAN UP NEIGHBORS PROPERTY. INCIDENT CLOSED.
5 Min Quad: Not reported

PIRF:
Facility Id: 15001
Date Occurred: Not reported
Date Reported: Not reported
Description Of Incident: Not reported
Owner/Operator: Not reported
Ownership: 5
Operation Type: 5
Type: Not reported
Location: Not reported
Site Priority: 30E
Priority Update: Not reported
Wells Affected Y/N: N
Wells Affected Number: 0
Samples Taken By: Not reported
Samples Include: Not reported
7#5 Min Quad: Not reported
5 Min Quad: Not reported
Pirf/Min Soil: Not reported
Release Code: Not reported
Cause: Not reported
Source: Not reported
Source Type: 0

Last Modified: 2/16/2001
**Incident Phase:** **CO**
NOV Issued: Not reported
NORR Issued: Not reported
45 Day Report: Not reported
Public Meeting Held: Not reported
Corrective Action Planned: Not reported
SOC Signed: Not reported
Reclassification Report: Not reported
RS Designation: Not reported
Closure Request Date: Not reported
Close-out Report: 2/26/1997

IMD:
Facility ID: 15001
Name: SHIRLEY ROBERTS PROPERTY
Address: 21 BRADLEY STREET
City,State,Zip: WAYNESVILLE, NC
Date Occurred: 1/23/1996
Submit Date: 2/1/1996
Incident Desc: APPROX. 50-70 GAL. OF FUEL OIL SPILLED WHEN AST FELL OVER DURING HEAVY RAIN. FUEL RAN ACROSS FRONT YARD QUICKLY AND UNDER NEARBY TRAILER. INSURANCE COMPANY TO C
Operator: ROBERTS, SHIRLEY

DRAFT

**SHIRLEY ROBERTS PROPERTY (Continued)** **S103131560**

| | |
|---|---|
| UST ID: | Not reported |
| Incident ID: | Not reported |
| Initials of UST Regional Contact: | Not reported |
| Regional Office: | ASH |
| Responsible Party/Company Name: | Not reported |
| Ownership: | 5 |
| Responsible Party Contact Name: | Not reported |
| Operation: | 5 |
| Responsible Party Mailing Address: | Not reported |
| Responsible Party City,State,Zip: | Not reported |
| Ownership: | Federal |
| Operation Type: | Industrial |
| Responsible Party County: | Not reported |
| Source: | Dredge Spoil |
| Type: | HEATING OIL |
| Location: | 7 |
| Petroleum Type: | Not reported |
| Date Incident Reported: | Not reported |
| Whether Tank is Commercial or Non Commercial: | Not reported |
| Site Priority: | Not reported |
| Whether Tank is Regulated: | Not reported |
| Priority Update: | Not reported |
| Notice of Regulatory Requirement: | Not reported |
| Wells Affected: | No |
| Notice of Violation: | Not reported |
| Phase 1 or Phase 2: | Not reported |
| Num Affected: | 0 |
| Site Priority: | Not reported |
| Location: | Residence |
| Current Risk Condition: | Not reported |
| Sampled By: | Not reported |
| Samples Include: | Not reported |
| Initial reported risk of incident (never changes): | Not reported |
| 7.5 Min Quad: | Not reported |
| 5 Min Quad: | Not reported |
| Intermediate Condition Present: | Not reported |
| Latitude: | Not reported |
| Longitude: | Not reported |
| Use of Land, Industrial: | Not reported |
| Corrective Action Plan Selected - up to 5: | Not reported |
| RBCA: | Not reported |
| Date Close Review Requested From RP or Owner: | Not reported |
| Date Case Closed: | Not reported |
| Extent of Contamination: | Not reported |
| Number of Supply Wells Located on Property: | Not reported |
| MTBE in Well Y/N/U Yes, No or Unknown: | Not reported |
| Facility Phone Number: | Not reported |
| MTBE in Groundwater Y/N/U Yes, No or Unknown: | Not reported |
| Date Land Use Restriction Filed: | Not reported |
| Date Cleanup Initiated: | Not reported |
| Record Status: | Not reported |
| RBCA GW Codes: | Not reported |
| RBCA GW: | Not reported |
| Pollutant Type Present: | Not reported |
| Reference Number for Media Disk for Archived Record: | Not reported |
| RP Owner?: | Not reported |
| RP Operator?: | Not reported |

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**SHIRLEY ROBERTS PROPERTY (Continued)** **S103131560**

| | |
|---|---|
| RP Landowner?: | Not reported |
| Comments: | Not reported |
| GW Contam: | No data entered (data entry person submitted a blank field |
| Soil Contam: | Not reported |
| Contact Phone: | 828-456-3260 |
| Owner Company: | Not reported |
| Operator Address: | 21 BRADLEY STREET |
| Operator City,State,Zip: | WAYNESVILLE, NC 828-456-3260 |
| Operator County: | HAYWO |
| Material: | #2 FUEL OIL |
| Qty Lost 1: | Not reported |
| Qty Recovered 1: | Not reported |
| Setting: | 1 |
| Risk Site: | N |
| Priority Code: | E |
| Dem Contact: | GLD |
| Wells Contam: | Not reported |
| Latitude Number: | Not reported |
| Longitude Number: | Not reported |
| Latitude Decimal: | Not reported |
| Longitude Decimal: | Not reported |
| GPS: | NOD |
| Agency: | DWQ |

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**29** **A.C. LAWRENCE LEATHER CO** **SHWS** **S104918920**
**South** **100 WEST MAIN STREET** **N/A**
**1/2-1** **HAZELWOOD, NC**
**0.969 mi.**
**5116 ft.**

**Relative:**
**Higher**

**Actual:**
**2724 ft.**

SHWS:

| | |
|---|---|
| Name: | A.C. LAWRENCE LEATHER CO |
| Address: | 100 WEST MAIN STREET |
| City,State,Zip: | HAZELWOOD, NC |
| EPAID: | NC0000195701 |
| Lat/Longitude: | Not reported |
| Geolocation Method: | Not reported |

Click here to access the North Carolina DEQ records for this facility:

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Count: 1 records.

ORPHAN SUMMARY

| City | EDR ID | Site Name | Site Address | Zip | Database(s) |
|---|---|---|---|---|---|
| WAYNESVILLE | S125674843 | BARBER ORCHARD | BARBER HILL DRIVE | | SHWS |

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# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Number of Days to Update:** Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

**STANDARD ENVIRONMENTAL RECORDS**

***Lists of Federal NPL (Superfund) sites***

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

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Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

***Lists of Federal Delisted NPL sites***

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Quarterly

***Lists of Federal sites subject to CERCLA removals and CERCLA orders***

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 09/06/2022
Next Scheduled EDR Contact: 01/10/2023
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

***Lists of Federal CERCLA sites with NFRAP***

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

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SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

***Lists of Federal RCRA facilities undergoing Corrective Action***

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 06/28/2022
Number of Days to Update: 7

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

***Lists of Federal RCRA TSD facilities***

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 06/28/2022
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

***Lists of Federal RCRA generators***

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 06/28/2022
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

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RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 06/28/2022
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 06/28/2022
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

***Federal institutional controls / engineering controls registries***

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/16/2022
Date Data Arrived at EDR: 08/22/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/15/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/15/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

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# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

***Federal ERNS list***

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/14/2022
Date Data Arrived at EDR: 06/15/2022
Date Made Active in Reports: 06/21/2022
Number of Days to Update: 6

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/20/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

***Lists of state- and tribal (Superfund) equivalent sites***

HSDS: Hazardous Substance Disposal Site

Locations of uncontrolled and unregulated hazardous waste sites. The file includes sites on the National Priority List as well as those on the state priority list.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 11/08/2011
Date Made Active in Reports: 12/05/2011
Number of Days to Update: 27

Source: North Carolina Center for Geographic Information and Analysis
Telephone: 919-754-6580
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: No Update Planned

***Lists of state- and tribal hazardous waste facilities***

SHWS: Inactive Hazardous Sites Inventory

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 06/01/2022
Date Data Arrived at EDR: 06/07/2022
Date Made Active in Reports: 06/08/2022
Number of Days to Update: 1

Source: Department of Environment, Health and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/06/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Quarterly

***Lists of state and tribal landfills and solid waste disposal facilities***

SWF/LF: List of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/12/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/11/2022
Number of Days to Update: 85

Source: Department of Environment and Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 09/22/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Varies

OLI: Old Landfill Inventory

Old landfill inventory location information. (Does not include no further action sites and other agency lead sites).

Date of Government Version: 09/11/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/30/2020
Number of Days to Update: 82

Source: Department of Environment & Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

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DEBRIS: Solid Waste Active Disaster Debris Sites Listing
NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency.. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency

Date of Government Version: 06/13/2022
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 08/30/2022
Number of Days to Update: 77
Source: Department of Environmental Quality
Telephone: 919-707-8247
Last EDR Contact: 09/12/2022
Next Scheduled EDR Contact: 12/26/2022
Data Release Frequency: Varies

LCID: Land-Clearing and Inert Debris (LCID) Landfill Notifications
A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

Date of Government Version: 07/05/2022
Date Data Arrived at EDR: 07/06/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 75
Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

***Lists of state and tribal leaking storage tanks***

LAST: Leaking Aboveground Storage Tanks
A listing of leaking aboveground storage tank site locations.

Date of Government Version: 10/14/2022
Date Data Arrived at EDR: 10/19/2022
Date Made Active in Reports: 10/21/2022
Number of Days to Update: 2
Source: Department of Environment & Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 10/19/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

LUST: Regional UST Database
This database contains information obtained from the Regional Offices. It provides a more detailed explanation of current and historic activity for individual sites, as well as what was previously found in the Incident Management Database. Sites in this database with Incident Numbers are considered LUSTs.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/01/2022
Date Made Active in Reports: 10/18/2022
Number of Days to Update: 78
Source: Department of Environment and Natural Resources
Telephone: 919-707-8200
Last EDR Contact: 10/31/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

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INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/02/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 79

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/28/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

LUST TRUST: State Trust Fund Database
This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

Date of Government Version: 07/01/2022
Date Data Arrived at EDR: 07/06/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 75

Source: Department of Environment and Natural Resources
Telephone: 919-733-1315
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

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***Lists of state and tribal registered storage tanks***

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

UST: Petroleum Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/01/2022
Date Made Active in Reports: 10/17/2022
Number of Days to Update: 77
Source: Department of Environment and Natural Resources
Telephone: 919-733-1308
Last EDR Contact: 10/31/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

AST: AST Database
Facilities with aboveground storage tanks that have a capacity greater than 21,000 gallons.

Date of Government Version: 05/17/2022
Date Data Arrived at EDR: 06/10/2022
Date Made Active in Reports: 08/29/2022
Number of Days to Update: 80
Source: Department of Environment and Natural Resources
Telephone: 919-715-6183
Last EDR Contact: 09/08/2022
Next Scheduled EDR Contact: 12/26/2022
Data Release Frequency: Semi-Annually

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 06/02/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 79
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/07/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

DRAFT

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/28/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/14/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/17/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

***State and tribal institutional control / engineering control registries***

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring

A land use restricted site is a property where there are limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site.

Date of Government Version: 06/01/2022
Date Data Arrived at EDR: 06/07/2022
Date Made Active in Reports: 08/25/2022
Number of Days to Update: 79

Source: Department of Environmental Quality
Telephone: 919-508-8400
Last EDR Contact: 09/06/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Quarterly

DRAFT

***Lists of state and tribal voluntary cleanup sites***

VCP: Responsible Party Voluntary Action Sites
Responsible Party Voluntary Action site locations.

Date of Government Version: 06/01/2022
Date Data Arrived at EDR: 06/07/2022
Date Made Active in Reports: 08/25/2022
Number of Days to Update: 79

Source: Department of Environment and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/06/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/13/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Varies

***Lists of state and tribal brownfield sites***

BROWNFIELDS: Brownfields Projects Inventory
A brownfield site is an abandoned, idled, or underused property where the threat of environmental contamination has hindered its redevelopment. All of the sites in the inventory are working toward a brownfield agreement for cleanup and liabitliy control.

Date of Government Version: 06/01/2022
Date Data Arrived at EDR: 06/27/2022
Date Made Active in Reports: 06/29/2022
Number of Days to Update: 2

Source: Department of Environment and Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/10/2023
Data Release Frequency: Quarterly

**ADDITIONAL ENVIRONMENTAL RECORDS**

***Local Brownfield lists***

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/09/2022
Next Scheduled EDR Contact: 12/26/2022
Data Release Frequency: Semi-Annually

DRAFT

***Local Lists of Landfill / Solid Waste Disposal Sites***

SWRCY: Recycling Center Listing
A listing of recycling center locations.

Date of Government Version: 01/31/2022
Date Data Arrived at EDR: 02/02/2022
Date Made Active in Reports: 04/29/2022
Number of Days to Update: 86

Source: Department of Environment & Natural Resources
Telephone: 919-707-8137
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

HIST LF: Solid Waste Facility Listing
A listing of solid waste facilities.

Date of Government Version: 11/06/2006
Date Data Arrived at EDR: 02/13/2007
Date Made Active in Reports: 03/02/2007
Number of Days to Update: 17

Source: Department of Environment & Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

***Local Lists of Hazardous waste / Contaminated Sites***

DRAFT

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Quarterly

***Local Land Records***

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Semi-Annually

***Records of Emergency Release Reports***

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/19/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 11

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

SPILLS: Spills Incident Listing

A listing spills, hazardous material releases, sanitary sewer overflows, wastewater treatment plant bypasses and upsets, citizen complaints, and any other environmental emergency calls reported to the agency.

Date of Government Version: 06/21/2022
Date Data Arrived at EDR: 06/22/2022
Date Made Active in Reports: 07/01/2022
Number of Days to Update: 9

Source: Department of Environment & Natural Resources
Telephone: 919-807-6308
Last EDR Contact: 09/22/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Quarterly

IMD: Incident Management Database

Groundwater and/or soil contamination incidents

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Date of Government Version: 10/28/2022
Date Data Arrived at EDR: 10/31/2022
Date Made Active in Reports: 11/02/2022
Number of Days to Update: 2

Source: Department of Environment and Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 10/31/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/27/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 06/14/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

***Other Ascertainable Records***

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 06/28/2022
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 50

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/13/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

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# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/20/2022
Date Data Arrived at EDR: 06/21/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/20/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

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# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/12/2022
Next Scheduled EDR Contact: 12/26/2022
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/18/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 07/29/2022
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/18/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 12/12/2022
Data Release Frequency: Annually

RMP: Risk Management Plans

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When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/04/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 6
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/27/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

DRAFT

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/10/2022
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 08/22/2022
Number of Days to Update: 69
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 08/25/2022
Next Scheduled EDR Contact: 12/12/2022
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/25/2022
Next Scheduled EDR Contact: 12/12/2022
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

DRAFT

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/21/2022
Next Scheduled EDR Contact: 01/10/2023
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2022
Date Data Arrived at EDR: 07/21/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 71

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Biennially

DRAFT

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/27/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

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Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 08/01/2022
Date Data Arrived at EDR: 08/02/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 59

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 12/12/2022
Data Release Frequency: Quarterly

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 14

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/17/2022
Next Scheduled EDR Contact: 12/05/2022
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing
This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/17/2022
Next Scheduled EDR Contact: 12/05/2022
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing
Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/17/2022
Next Scheduled EDR Contact: 12/05/2022
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines
An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

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Date of Government Version: 06/14/2022
Date Data Arrived at EDR: 06/15/2022
Date Made Active in Reports: 08/22/2022
Number of Days to Update: 68

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/13/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 60

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 08/25/2022
Next Scheduled EDR Contact: 12/12/2022
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/25/2022
Date Data Arrived at EDR: 07/01/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/30/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 50

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

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Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 07/08/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 123

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

DRAFT

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 10/26/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

DRAFT

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS: PFAS Contamination Site Listing

List of PFAS facilities

Date of Government Version: 05/18/2022
Date Data Arrived at EDR: 05/18/2022
Date Made Active in Reports: 08/08/2022
Number of Days to Update: 82

Source: Department of Environmental Quality
Telephone: 919-707-8233
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

AIRS: Air Quality Permit Listing

A listing of facilities with air quality permits.

Date of Government Version: 06/01/2022
Date Data Arrived at EDR: 06/07/2022
Date Made Active in Reports: 08/25/2022
Number of Days to Update: 79

Source: Department of Environmental Quality
Telephone: 919-707-8726
Last EDR Contact: 08/31/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Varies

ASBESTOS: ASBESTOS

Asbestos notification sites

Date of Government Version: 04/30/2022
Date Data Arrived at EDR: 05/17/2022
Date Made Active in Reports: 08/08/2022
Number of Days to Update: 83

Source: Department of Health & Human Services
Telephone: 919-707-5973
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites

A listing of coal combustion products distribution permits issued by the Division for the treatment, storage, transportation, use and disposal of coal combustion products.

Date of Government Version: 11/12/2021
Date Data Arrived at EDR: 12/16/2021
Date Made Active in Reports: 03/11/2022
Number of Days to Update: 85

Source: Department of Environment & Natural Resources
Telephone: 919-807-6359
Last EDR Contact: 09/22/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Sites

Potential and known drycleaning sites, active and abandoned, that the Drycleaning Solvent Cleanup Program has knowledge of and entered into this database.

Date of Government Version: 12/06/2021
Date Data Arrived at EDR: 12/13/2021
Date Made Active in Reports: 02/25/2022
Number of Days to Update: 74

Source: Department of Environment & Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/16/2022
Next Scheduled EDR Contact: 12/26/2022
Data Release Frequency: Varies

DRAFT

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/01/2022
Date Made Active in Reports: 10/18/2022
Number of Days to Update: 78

Source: Department of Environment & Natural Resources
Telephone: 919-733-1322
Last EDR Contact: 10/31/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/03/2012
Date Made Active in Reports: 10/26/2012
Number of Days to Update: 23

Source: Department of Environmental & Natural Resources
Telephone: 919-508-8496
Last EDR Contact: 09/19/2022
Next Scheduled EDR Contact: 01/02/2023
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information

Hazardous waste financial assurance information.

Date of Government Version: 08/09/2022
Date Data Arrived at EDR: 08/10/2022
Date Made Active in Reports: 11/02/2022
Number of Days to Update: 84

Source: Department of Environment & Natural Resources
Telephone: 919-707-8222
Last EDR Contact: 08/09/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Varies

NPDES: NPDES Facility Location Listing

General information regarding NPDES(National Pollutant Discharge Elimination System) permits.

Date of Government Version: 04/01/2022
Date Data Arrived at EDR: 04/27/2022
Date Made Active in Reports: 07/18/2022
Number of Days to Update: 82

Source: Department of Environment & Natural Resources
Telephone: 919-733-7015
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing

A listing of uncerground injection wells locations.

Date of Government Version: 02/22/2022
Date Data Arrived at EDR: 03/01/2022
Date Made Active in Reports: 05/27/2022
Number of Days to Update: 87

Source: Department of Environment & Natural Resources
Telephone: 919-807-6412
Last EDR Contact: 09/01/2022
Next Scheduled EDR Contact: 12/12/2022
Data Release Frequency: Quarterly

AOP: Animal Operation Permits Listing

This listing includes animal operations that are required to be permitted by the state.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 05/27/2020
Number of Days to Update: 1

Source: Department of Environmental Quality
Telephone: 919-707-9129
Last EDR Contact: 09/09/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

DRAFT

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/17/2022
Next Scheduled EDR Contact: 12/05/2022
Data Release Frequency: Varies

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

SEPT HAULERS: Permitted Septage Haulers Listing
This list of all active and permitted Septage Land Application Site (SLAS) and Septage Detention and Treatment Facility (SDTF) sites in North Carolina. The purpose of this map is to provide the public and government entities a visual overview of the businesses that manage septage and septage facilities throughout the state.

Date of Government Version: 07/07/2022
Date Data Arrived at EDR: 07/07/2022
Date Made Active in Reports: 07/19/2022
Number of Days to Update: 12

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PCSRP: Petroleum-Contaminated Soil Remediation Permits
To treat petroleum-contaminated soil in order to protect North Carolinaa??s environment and the health of the citizens of North Carolina.

Date of Government Version: 07/05/2022
Date Data Arrived at EDR: 07/06/2022
Date Made Active in Reports: 09/19/2022
Number of Days to Update: 75

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

CCB: Coal Ash Structural Fills (CCB) Listing
These are not permitted Coal Ash landfills A list all of the now closed Coal Ash Structural Fills (CCB) in North Carolina, in point data form. The purpose is to provide the public and other government entities a visual overview of coal ash structural fills throughout the state and increase public awareness of their current locations.

DRAFT

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

**EDR HIGH RISK HISTORICAL RECORDS**

***EDR Exclusive Records***

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**EDR RECOVERED GOVERNMENT ARCHIVES**

***Exclusive Recovered Govt. Archives***

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RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/20/2013
Number of Days to Update: 172

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

**OTHER DATABASE(S)**

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/08/2022
Date Made Active in Reports: 10/21/2022
Number of Days to Update: 74

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

DRAFT

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 08/29/2022
Next Scheduled EDR Contact: 12/19/2022
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

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Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.
Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.
Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Child Care Facility List
Source: Department of Health & Human Services
Telephone: 919-662-4499

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

**STREET AND ADDRESS INFORMATION**

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# GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

**TARGET PROPERTY ADDRESS**

BALSAM EDGE APARTMENTS
271 HOWELL MILL ROAD
WAYNESVILLE, NC 28786

**TARGET PROPERTY COORDINATES**

| | |
|---|---|
| Latitude (North): | 35.504754 - 35ˆ 30’ 17.11’’ |
| Longitude (West): | 82.98438 - 82ˆ 59’ 3.77’’ |
| Universal Tranverse Mercator: | Zone 17 |
| UTM X (Meters): | 320025.0 |
| UTM Y (Meters): | 3930632.0 |
| Elevation: | 2681 ft. above sea level |

**USGS TOPOGRAPHIC MAP**

| | |
|---|---|
| Target Property Map: | 13896599 CLYDE, NC |
| Version Date: | 2019 |
| Southeast Map: | 13742066 WAYNESVILLE, NC |
| Version Date: | 2019 |
| Southwest Map: | 13837547 HAZELWOOD, NC |
| Version Date: | 2019 |
| Northwest Map: | 13837535 DELLWOOD, NC |
| Version Date: | 2019 |

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EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**GROUNDWATER FLOW DIRECTION INFORMATION**

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

**TOPOGRAPHIC INFORMATION**

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**TARGET PROPERTY TOPOGRAPHY**

General Topographic Gradient: General SSE

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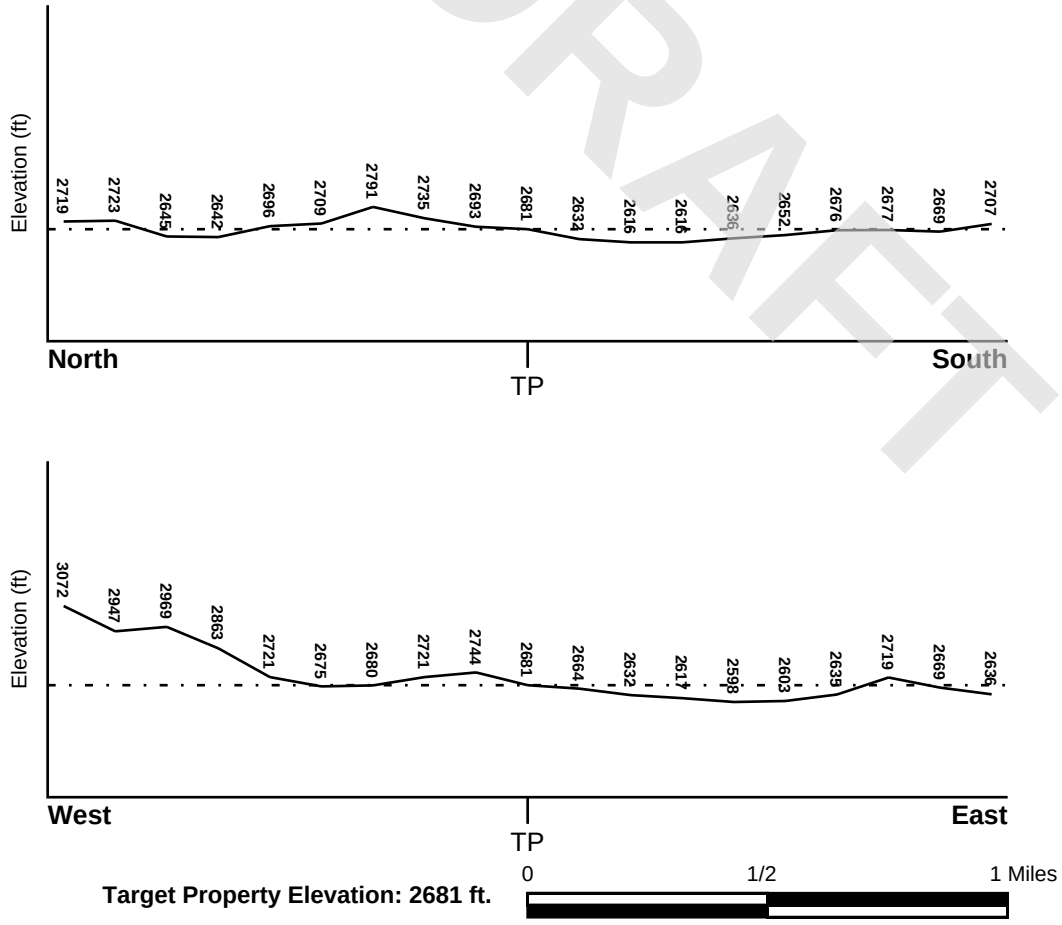
**SURROUNDING TOPOGRAPHY: ELEVATION PROFILES**




**Target Property Elevation: 2681 ft.**

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

**HYDROLOGIC INFORMATION**

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

**FEMA FLOOD ZONE**

| Flood Plain Panel at Target Property | FEMA Source Type |
|---|---|
| 3700861600J | FEMA FIRM Flood data |

| Additional Panels in search area: | FEMA Source Type |
|---|---|
| 3700860600J | FEMA FIRM Flood data |
| 3700861500J | FEMA FIRM Flood data |
| 3700860500J | FEMA FIRM Flood data |

**NATIONAL WETLAND INVENTORY**

| NWI Quad at Target Property | NWI Electronic Data Coverage |
|---|---|
| CLYDE | YES - refer to the Overview Map and Detail Map |

**HYDROGEOLOGIC INFORMATION**

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

**AQUIFLOW®**

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| MAP ID | LOCATION FROM TP | GENERAL DIRECTION GROUNDWATER FLOW |
|---|---|---|
| Not Reported | | |

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# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

## GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

**ROCK STRATIGRAPHIC UNIT**

| | |
|---|---|
| Era: | Precambrian |
| System: | Precambrian |
| Series: | Paragneiss and schist |
| Code: | Ym *(decoded above as Era, System & Series)* |

**GEOLOGIC AGE IDENTIFICATION**

Category: Metamorphic Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

**DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY**

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

| | |
|---|---|
| Soil Component Name: | BRADDOCK |
| Soil Surface Texture: | loam |
| Hydrologic Group: | Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures. |
| Soil Drainage Class: | Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet. |

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

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# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

| Soil Layer Information | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Boundary | | | Classification | | | |
| Layer | Upper | Lower | Soil Texture Class | AASHTO Group | Unified Soil | Permeability Rate (in/hr) | Soil Reaction (pH) |
| 1 | 0 inches | 9 inches | loam | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay | Max: 6.00<br>Min: 0.60 | Max: 5.50<br>Min: 3.60 |
| 2 | 9 inches | 48 inches | clay loam | Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils. | FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay. | Max: 2.00<br>Min: 0.60 | Max: 5.50<br>Min: 3.60 |
| 3 | 48 inches | 85 inches | loam | Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand. | COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. | Max: 6.00<br>Min: 0.60 | Max: 5.50<br>Min: 3.60 |

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**OTHER SOIL TYPES IN AREA**

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: gravelly - loam

Surficial Soil Types: gravelly - loam

Shallow Soil Types: loam

Deeper Soil Types: sandy loam
very gravelly - loam
fine sandy loam
stratified

**LOCAL / REGIONAL WATER AGENCY RECORDS**

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## WELL SEARCH DISTANCE INFORMATION

| DATABASE | SEARCH DISTANCE (miles) |
|---|---|
| Federal USGS | 1.000 |
| Federal FRDS PWS | Nearest PWS within 1 mile |
| State Database | 1.000 |

## FEDERAL USGS WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No PWS System Found | | |

Note: PWS System location is not always the same as well location.

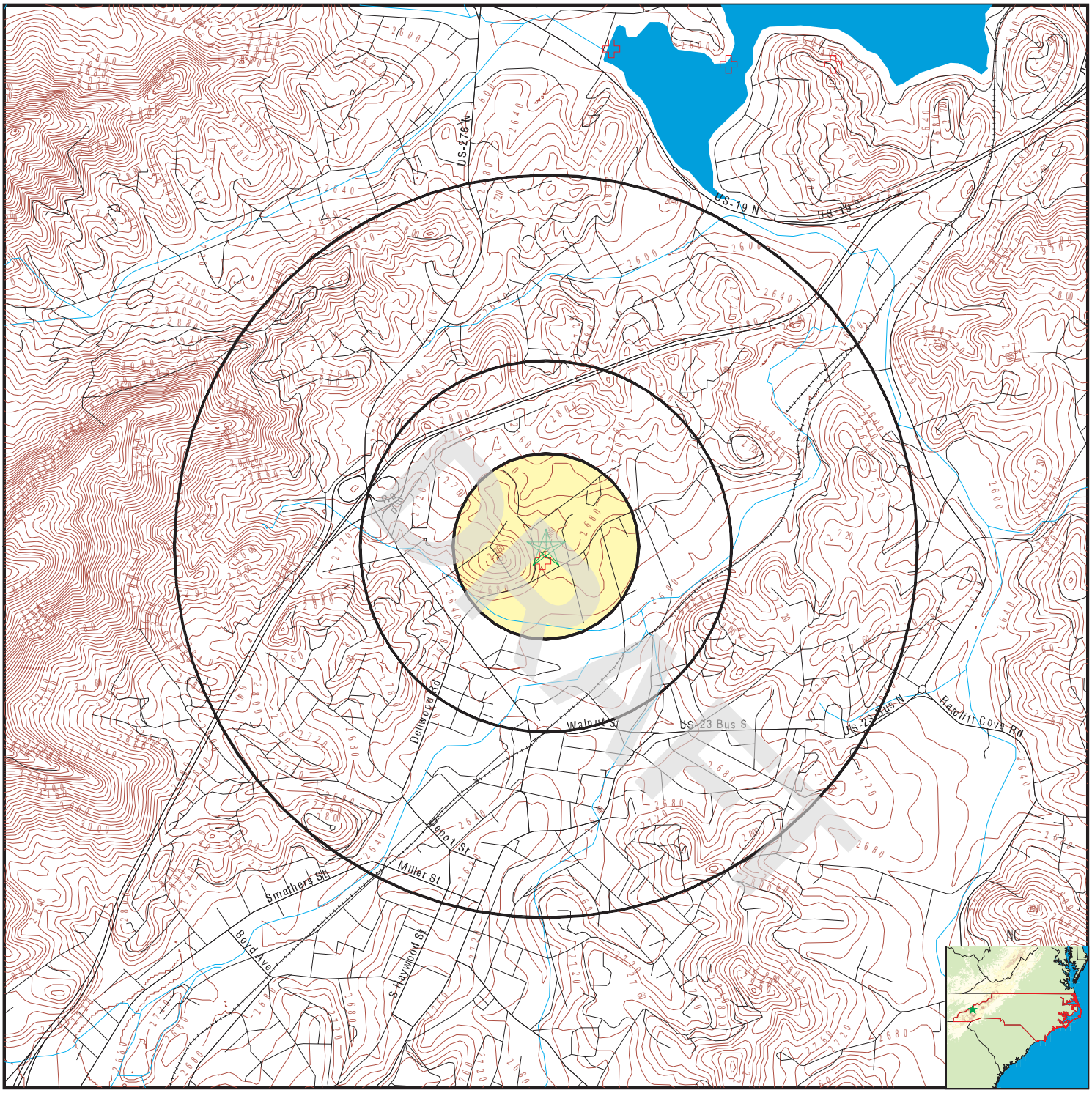
## STATE DATABASE WELL INFORMATION

| MAP ID | WELL ID | LOCATION FROM TP |
|---|---|---|
| No Wells Found | | |

## OTHER STATE DATABASE INFORMATION

DRAFT

# PHYSICAL SETTING SOURCE MAP - 7182357.2s




0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- Wildlife Areas
- Natural Areas
- Rare & Endangered Species

| | | | |
|---|---|---|---|
| SITE NAME: | Balsam Edge Apartments | CLIENT: | ECS Southeast, LLP |
| ADDRESS: | 271 Howell Mill Road<br>Waynesville NC 28786 | CONTACT: | Zachary Windham |
| | | INQUIRY #: | 7182357.2s |
| LAT/LONG: | 35.504754 / 82.98438 | DATE: | November 17, 2022 5:11 pm |

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

| | | | Database | EDR ID Number |
|---|---|---|---|---|
| | | | **NC_NHEO** | **NC50003350** |
| Elclass: | P | Precision1: | M | |
| Eostat: | H | Gisid: | 43077 | |
| Edr id: | NC50003350 | | | |

---

| | | | Database | EDR ID Number |
|---|---|---|---|---|
| | | | **NC_NHEO** | **NC50006657** |
| Elclass: | P | Precision1: | M | |
| Eostat: | H | Gisid: | 83200 | |
| Edr id: | NC50006657 | | | |

---

| | | | Database | EDR ID Number |
|---|---|---|---|---|
| | | | **NC_NHEO** | **NC50007402** |
| Elclass: | I | Precision1: | G | |
| Eostat: | H | Gisid: | 82275 | |
| Edr id: | NC50007402 | | | |

---

| | | | Database | EDR ID Number |
|---|---|---|---|---|
| | | | **NC_NHEO** | **NC50018313** |
| Elclass: | P | Precision1: | G | |
| Eostat: | H | Gisid: | 11145 | |
| Edr id: | NC50018313 | | | |

DRAFT

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
# RADON

**AREA RADON INFORMATION**

State Database: NC Radon

Radon Test Results

| Num Results | Avg pCi/L | Min pCi/L | Max pCi/L |
|---|---|---|---|
| 133 | 4.17 | 0.5 | 9.1 |
| 15 | 3.87 | 0.6 | 9.3 |
| 1 | 8.50 | 8.5 | 8.5 |
| 1 | 0.30 | 0.3 | 0.3 |

Federal EPA Radon Zone for HAYWOOD County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 28786

Number of sites tested: 5

| Area | Average Activity | % <4 pCi/L | % 4-20 pCi/L | % >20 pCi/L |
|---|---|---|---|---|
| Living Area - 1st Floor | 1.025 pCi/L | 100% | 0% | 0% |
| Living Area - 2nd Floor | Not Reported | Not Reported | Not Reported | Not Reported |
| Basement | 3.500 pCi/L | 60% | 40% | 0% |

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# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

## HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

## HYDROGEOLOGIC INFORMATION

AQUIFLOW$^{R}$ Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

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# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

North Carolina Public Water Supply Wells
Source: Department of Environmental Health
Telephone: 919-715-3243

## OTHER STATE DATABASE INFORMATION

North Carolina Wildlife Resources/Game Lands
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
All publicly owned game lands managed by the North Carolina Wildlife Resources Commission and as listed in Hunting and Fishing Maps.

NC Natural Heritage Sites: Natural Heritage Element Occurrence Sites
Source: Natural Heritage Occurrence Sites Center for Geographic Information and Analysis
Telephone: 919-733-2090
A point coverage identifying locations of rare and endangered species, occurrences of exemplary or unique natural ecosystems (terrestrial or aquatic), and special animal habitats (e.g., colonial waterbird nesting sites).

NC Natural Areas: Significant Natural Heritage Areas
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
A polygon converage identifying sites (terrestrial or aquatic) that have particular biodiversity significance. A site's significance may be due to the presenceof rare species, rare or high quality natural communities, or other important ecological features.

RADON

State Database: NC Radon
Source: Department of Environment & Natural Resources
Telephone: 919-733-4984
Radon Statistical and Non Statiscal Data

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

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# PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

**STREET AND ADDRESS INFORMATION**

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# Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft$^2$ - hr - people and 10,000 BTU/ft$^2$ - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Sitting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

**Note:** Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

DRAFT

## Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | **Yes:** ☑ **No:** ☐ |
| Is the container under pressure? | **Yes:** ☐ **No:** ☑ |
| Does the container hold a cryogenic liquified gas? | **Yes:** ☐ **No:** ☐ |
| Is the container diked? | **Yes:** ☐ **No:** ☑ |
| What is the volume (gal) of the container? | 275 |
| What is the Diked Area Length (ft)? | |
| What is the Diked Area Width (ft)? | |
| Calculate Acceptable Separation Distance | |
| Diked Area (sqft) | |
| | |
| ASD for Blast Over Pressure (ASDBOP) | |

| | |
|---|---|
| ASD for Blast Overpressure (ASDBOP) | |
| ASD for Thermal Radiation for People (ASDPPU) | 161.52 |
| ASD for Thermal Radiation for Buildings (ASDBPU) | 27.68 |
| ASD for Thermal Radiation for People (ASDPNPD) | |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | |

**For mitigation options, please click on the following link:** Mitigation Options **(/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)**

## Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us (https://www.hudexchange.info/contact-us/)** form.

## Related Information

- **ASD User Guide (/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)**
- **ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)**

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DRAFT

## Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | **Yes:** ☑ **No:** ☐ |
| Is the container under pressure? | **Yes:** ☐ **No:** ☑ |
| Does the container hold a cryogenic liquified gas? | **Yes:** ☐ **No:** ☐ |
| Is the container diked? | **Yes:** ☑ **No:** ☐ |
| What is the volume (gal) of the container? | |
| What is the Diked Area Length (ft)? | 130 |
| What is the Diked Area Width (ft)? | 30 |
| Calculate Acceptable Separation Distance | |
| Diked Area (sqft) | 3900 |
| | |
| ASD for Blast Over Pressure (ASDBOP) | |

| | |
|---|---|
| ASD for Blast Overpressure (ASDBOP) | |
| ASD for Thermal Radiation for People (ASDPPU) | |
| ASD for Thermal Radiation for Buildings (ASDBPU) | |
| ASD for Thermal Radiation for People (ASDPNPD) | 273.25 |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | 49.78 |

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DRAFT

## Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | **Yes:** ☑ **No:** ☐ |
| Is the container under pressure? | **Yes:** ☑ **No:** ☐ |
| Does the container hold a cryogenic liquified gas? | **Yes:** ☐ **No:** ☑ |
| Is the container diked? | **Yes:** ☐ **No:** ☐ |
| What is the volume (gal) of the container? | 10000 |
| What is the Diked Area Length (ft)? | |
| What is the Diked Area Width (ft)? | |
| Calculate Acceptable Separation Distance | |
| Diked Area (sqft) | |
| | |
| ASD for Blast Over Pressure (ASDBOP) | 468.92 |

| | |
|---|---|
| ASD for Blast Overpressure (ASDBOP) | 108.92 |
| ASD for Thermal Radiation for People (ASDPPU) | 721.77 |
| ASD for Thermal Radiation for Buildings (ASDBPU) | 145.78 |
| ASD for Thermal Radiation for People (ASDPNPD) | |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | |

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DRAFT

## Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | **Yes:** ☑ **No:** ☐ |
| Is the container under pressure? | **Yes:** ☐ **No:** ☑ |
| Does the container hold a cryogenic liquified gas? | **Yes:** ☐ **No:** ☐ |
| Is the container diked? | **Yes:** ☐ **No:** ☑ |
| What is the volume (gal) of the container? | 10000 |
| What is the Diked Area Length (ft)? | |
| What is the Diked Area Width (ft)? | |
| Calculate Acceptable Separation Distance | |
| Diked Area (sqft) | |
| | |
| ASD for Blast Over Pressure (ASDBOP) | |

| | |
|---|---|
| ASD for Blast Overpressure (ASDBOP) | |
| ASD for Thermal Radiation for People (ASDPPU) | 721.77 |
| ASD for Thermal Radiation for Buildings (ASDBPU) | 145.78 |
| ASD for Thermal Radiation for People (ASDPNPD) | |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | |

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DRAFT

## Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | **Yes:** ☑ **No:** ☐ |
| Is the container under pressure? | **Yes:** ☑ **No:** ☐ |
| Does the container hold a cryogenic liquified gas? | **Yes:** ☐ **No:** ☑ |
| Is the container diked? | **Yes:** ☐ **No:** ☐ |
| What is the volume (gal) of the container? | 30000 |
| What is the Diked Area Length (ft)? | |
| What is the Diked Area Width (ft)? | |
| Calculate Acceptable Separation Distance | |
| Diked Area (sqft) | |
| | |
| ASD for Blast Over Pressure (ASDBOP) | 674.27 |

| | |
|---|---|
| ASD for Blast Overpressure (ASDBOP) | 674.27 |
| ASD for Thermal Radiation for People (ASDPPU) | 1140.69 |
| ASD for Thermal Radiation for Buildings (ASDBPU) | 242.26 |
| ASD for Thermal Radiation for People (ASDPNPD) | |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | |

**For mitigation options, please click on the following link:** Mitigation Options **(/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)**

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DRAFT

## Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | **Yes:** ☑ **No:** ☐ |
| Is the container under pressure? | **Yes:** ☑ **No:** ☐ |
| Does the container hold a cryogenic liquified gas? | **Yes:** ☐ **No:** ☑ |
| Is the container diked? | **Yes:** ☐ **No:** ☐ |
| What is the volume (gal) of the container? | 72000 |
| What is the Diked Area Length (ft)? | |
| What is the Diked Area Width (ft)? | |

| | |
|---|---|
| What is the Diked Area Width (ft): | |
| Calculate Acceptable Separation Distance | |
| Diked Area (sqft) | |
| ASD for Blast Over Pressure (ASDBOP) | 900.60 |
| ASD for Thermal Radiation for People (ASDPPU) | 1642.72 |
| ASD for Thermal Radiation for Buildings (ASDBPU) | 363.12 |
| ASD for Thermal Radiation for People (ASDPNPD) | |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | |

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**For mitigation options, please click on the following link:** Mitigation Options (/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

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- **ASD Flow Chart (/resource/3840/acceptable-separation-distance-asd-flowchart/)**

DRAFT

## Zach Windham

**From:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Sent:** Wednesday, February 15, 2023 4:08 PM
**To:** Zach Windham
**Subject:** [EXTERNAL] Re: 333 Howell Mill Road - HUD Information Request

Zach, I finally found someone in the office at Suburban Propane. They will be the only thing in your mile with the requirements you have sent.
They have three 30,000(90,000) gallon LPG Above ground tanks. They keep them at 60% or at about 24,000 gallons(72,000). That should be all other than some of the other small things mentioned. I hope that helps.

***Darrell R Calhoun*** | *Fire Marshal*
*Fire and Injury Prevention Specialist*
*Town of Waynesville, NC*
*1022 N. Main Street | Waynesville, NC 28786*
*(c) 828.734.7316*
*(o) 828.456.3516*
***dcalhoun@waynesvillenc.gov | www.waynesvillenc.gov***

***Pursuant to North Carolina General Statutes Chapter 132, Public Records, this electronic mail message and any attachments hereto, as well as any electronic mail message(s) sent in response to it, may be considered public record and as such are subject to request and review by anyone at any time.***

DRAFT

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Monday, February 6, 2023 8:43 AM
**To:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Subject:** RE: 333 Howell Mill Road - HUD Information Request

Good morning Darrell,

Sorry to just be getting back to you, I was out of the office all week last week. I believe we mainly need to know the tank size and explosion radius. Our main concern is to make sure we are out of the explosion radius for the ASTs. I received an email from Sunoco stating they old had five plastic resin (pellets) silos and one small (<500 gallons) used oil tank. Thanks for all of your help with this.

Thanks again,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

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**From:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Sent:** Monday, January 30, 2023 4:26 PM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [EXTERNAL] Re: 333 Howell Mill Road - HUD Information Request

Do you need chemical, tank size, and explosion radius?
Or do you just want where things are. These are things that i want to know as well it is just going to take some time. Most of this is in smaller amounts.
I am working on going to these places and getting that information butt this is what I know so far.

The two biggest things in your area are Suburban and Sunocco. The others are probably below your threshold. Suburban is on the edge of your address.

Evergreen Packaging-Rail cars, Plastics, LPG
Suburban Propane-Rail Car with LPG And several tanks of LPG.
Sunocco Plastics-
Waynesville Rec Center-Chlorine less than 500 lbs
Henson Junkyard
MR. Tire-disposed oil and 55 gal drums of oil and other fluids
O-Reilly's Auto Parts-batteries, acetylene, oil,
NAPA-same
Taylor Ford-Paint Booth, oil, other fluids
Hometown Hardware- you name it
Haywood Builders-you name it
Giles Chemical-they make bath salt, Hydrogen sulfide via rail car.
Waynesville Gas-LPG
Southern Concrete-Concrete
Snappy Lube-oil and other fluids
Autozone-Same as NAPA
Advance Auto-same as NAPA
Snappy Lube 2-oil and other fluids.

DRAFT

***Darrell R Calhoun*** | *Fire Marshal*
*Fire and Injury Prevention Specialist*
*Town of Waynesville, NC*
*1022 N. Main Street | Waynesville, NC 28786*
*(c) 828.734.7316*
*(o) 828.456.3516*
***dcalhoun@waynesvillenc.gov*** | ***www.waynesvillenc.gov***

***Pursuant to North Carolina General Statutes Chapter 132, Public Records, this electronic mail message and any attachments hereto, as well as any electronic mail message(s) sent in response to it, may be considered public record and as such are subject to request and review by anyone at any time.***

---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Friday, January 27, 2023 8:30 AM
**To:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Subject:** RE: 333 Howell Mill Road - HUD Information Request

Thanks for doing this for me Darrell!

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Sent:** Thursday, January 26, 2023 3:09 PM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [EXTERNAL] Re: 333 Howell Mill Road - HUD Information Request

Just a quick email to let you know I am still putting this together, and should have it completed Monday. I hope!

***Darrell R Calhoun*** | *Fire Marshal*
*Fire and Injury Prevention Specialist*
*Town of Waynesville, NC*
*1022 N. Main Street | Waynesville, NC 28786*
*(c) 828.734.7316*
*(o) 828.456.3516*
***dcalhoun@waynesvillenc.gov | www.waynesvillenc.gov***

***Pursuant to North Carolina General Statutes Chapter 132, Public Records, this electronic mail message and any attachments hereto, as well as any electronic mail message(s) sent in response to it, may be considered public record and as such are subject to request and review by anyone at any time.***

---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Wednesday, January 18, 2023 9:08 AM
**To:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Subject:** 333 Howell Mill Road - HUD Information Request

Good morning Darrell,

I am assisting with a proposed multi-family housing and urban development (HUD) project located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. As part of the assessment, I would like to request any available information on existing and
proposed aboveground storage tanks (ASTs) or other thermal/explosive hazards within a one-mile radius of the site. This request is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Please let me know if any additional information is necessary and thank you for any assistance you can provide with
this request.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP**
**T** 864.987.1610 **D** 864.987.1818
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DRAFT

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DRAFT

## Zach Windham

**From:** Stacy L. Henson <Stacy.Henson@haywoodcountync.gov>
**Sent:** Wednesday, January 18, 2023 9:18 AM
**To:** Zach Windham
**Cc:** Amy L. Stevens; Tracy Wells
**Subject:** [EXTERNAL] RE: 333 Howell Mill Road - HUD Information Request

Good morning,

The subject property is in the ETJ of the Town of Waynesville and not in my jurisdiction. Please contact the Town of Waynesville at: www.waynesvillenc.gov

Thank you,

*Stacy C Henson, Administrative Assistant II*
*Permitting Supervisor*
Haywood County Development Services
157 Paragon Parkway, Suite 200
Clyde, NC 28721
Phone: (828) 356-2131
Email: stacy.henson@haywoodcountync.gov

DRAFT

---

**From:** Amy L. Stevens <Amy.Stevens@haywoodcountync.gov>
**Sent:** Wednesday, January 18, 2023 9:11 AM
**To:** Stacy L. Henson <Stacy.Henson@haywoodcountync.gov>
**Cc:** Tracy Wells <Tracy.Wells@haywoodcountync.gov>
**Subject:** FW: 333 Howell Mill Road - HUD Information Request

Hi, Stacy—please see the information request below. Thanks!

---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Wednesday, January 18, 2023 9:10 AM
**To:** publicrecordsrequest <publicrecords@haywoodcountync.gov>
**Subject:** 333 Howell Mill Road - HUD Information Request

Good morning,

I am assisting with a proposed multi-family housing and urban development (HUD) project located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. As part of the assessment, I would like to request any available information on existing and proposed aboveground storage tanks (ASTs) or other thermal/explosive hazards within a one-mile radius of the site. This request is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Please let me know if any additional information is necessary and thank you for any assistance you can provide with this request.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP**
**T** 864.987.1610 **D** 864.987.1818
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DRAFT

## Zach Windham

**From:** Ed Harrington <Edward.Harrington@Sonoco.com>
**Sent:** Thursday, January 5, 2023 5:03 PM
**To:** Zach Windham
**Subject:** [EXTERNAL] Sonoco Plastics Waynesville NC

Zach,
Our facility in Waynesville is a plastics thermoforming plant. We have five plastic resin (pellets) silos and one small (<500 gallons) used oil tank. Please let me know if you have any other questions.
Regards,

*Ed Harrington*
*Global Environmental Director*
*Sonoco*
*One North 2nd St P20*
*Hartsville, S. C. 29550*
*edward.harrington@sonoco.com*
*office: +1 843.339.6333*
*Mobile: +1 843.858.9846*

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DRAFT

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# Thermal and Explosive Hazards

| Project Name | Investigator(s) | Site Visit Date |
|---|---|---|
| Balsam Edge | Thomas Hawkins | November 18, 2022 |

## Part I –Above Ground Storage Tanks – Site Review

Are any above ground storage tanks visible from the site?

[X] Yes [ ] No

If yes, are these tanks 100-gallons or larger?

[X] Yes [ ] No

| List visible tanks | | | | | | |
|---|---|---|---|---|---|---|
| Tank Identifier | Tank Distance (ft) | Tank Size/Contents | Flammable? (Yes or No) | Pressurized? (Yes or No) | ASD[1] (ft) Thermal Radiation | ASD (ft) Blast Pressure |
| 11 Palmer Dr | 60 | 275-gal, heating oil | Yes | No | 161.52 | N/A |
| Sonoco Plastic | 530 | Silos - plastic resin | No | No | 273.25 | N/A |
| | | | | | | |
| | | | | | | |

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

Is the project site within the ASD of any above ground storage tank visible from the site?

[X] Yes [ ] No

If yes, list the proposed mitigation strategies or reject the site?

| Mitigation (attach additional documentation |
|---|
| Based on the site plans, distance from the AST, and the calculated ASD, the AST would not pose a risk for |
| structures or individuals within congregation areas (structures, parking areas, sidewalks) of the subject property. |
| |

## Part II –Above Ground Storage Tanks – Agency Consultation

Has consultation with the Local Planning, Building, Public Safety or Fire Department indicated the presence of existing or planned thermal/explosive hazards that may affect the site (Attach record of consultation)?

[ ] Yes [X] No

If yes, list the proposed mitigation strategies or reject the site?

| Mitigation (attach additional documentation |
|---|
| |
| |
| |

## Part III – Above Ground Storage Tanks – Record Review

Are above ground storage tanks, which are visible on aerial photographs and USGS topographic maps, located within 1-mile of the site (Attach copies of documents reviewed)?

[X] Yes [ ] No

If yes, are these tanks 100-gallons or larger?

[X] Yes [ ] No

| List visible tanks | | | | | | |
|---|---|---|---|---|---|---|
| Tank Identifier | Tank Distance (ft) | Tank Size/Contents | Flammable? (Yes or No) | Pressurized? (Yes or No) | ASD[1] (ft) Thermal Radiation | ASD (ft) Blast Pressure |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

See Attached

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

Is the project site within the ASD of any above ground storage tank?

[ ] Yes [X] No

If yes are there acceptable barriers (natural or manmade) between the site and the tank?

[ ] Yes [ ] No

| Identify Acceptable Barriers[2] |
|---|
| |
| |
| |

[2]Acceptable barriers must meet the conditions of 24 CFR § 51.205

If no, list the proposed mitigation strategies or reject the site?

| Mitigation (attach additional documentation |
|---|
| |
| |
| |

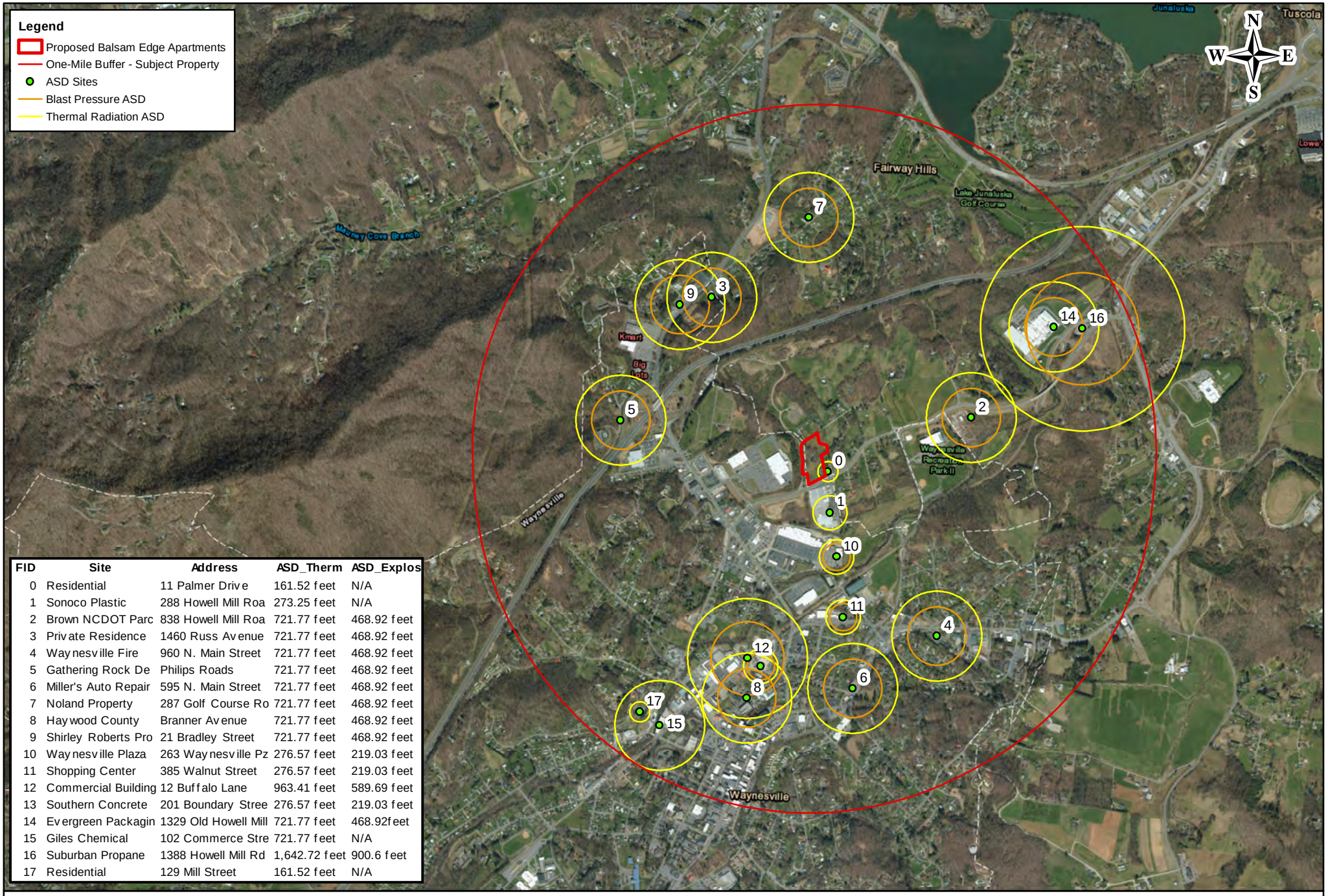
| Additional Comments or Recommendations | |
|---|---|
| | |
| | |
| | |

Lead Investigator's Signature

June 1, 2023
Date

| Part III - Above Ground Storage Tanks - Record Review | | | | | | |
|---|---|---|---|---|---|---|
| Tank Identifier | Tank Distance (ft) | Tank Size/Contents | Flammable? (Yes or No) | Pressurized? (Yes or No) | ASD (ft) Thermal Radiation | ASD (ft) Blast Pressure |
| Brown NCDOT Parcel 32, 828 Howell Mill Road | 2,410 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Private Residence, 1460 Russ Avenue | 2,965 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Town of Waynesville N. Main Fire Department, 960 N. Main Street | 3,077 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Gathering Rock Development, Phillips Road | 3,231 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Miller's Automotive Repair, 595 N. Main Street | 3,366 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Noland Property (Betty), 287 Golf Course Road | 3,462 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Haywood County Branner Avenue, Branner Avenue | 3,897 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Shirley Roberts Property, 21 Bradley Street | 4,184 | Not observed - 10,000 gallons presumed | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |
| Waynesville Plaza, 263 Waynesville Plaza | 1,400 | 1,000 gallon propane | Yes | Yes | 276.57 | 219.03 |
| Shopping Center, 385 Walnut Street | 2,100 | 1,000-gallon propane | Yes | Yes | 276.57 | 219.03 |
| Commercial Building, 12 Buffalo Lane | 2,800 | Several 1,000 to 20,000 gallon propane | Yes | Yes | 963.41 | 589.69 |
| Southern Concrete Materials, 201 Boundary Street | 2,900 | Two 1,000 gallon, unknown contents | Yes (presumed) | Yes (presumed) | 276.57 | 219.03 |
| Evergreen Packaging, 1329 Old Howell Mill Road | 3,700 | Six silos, unknown contents or size, presumed 10,000 gallon | Yes (presumed) | Yes (presumed) | 721.77 | 468.92 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Giles Chemical, 102 Commerce Street | 4,200 | Several 500 to 10,000 gallon , unknown contents, presumed cryogenic liquified gas as possible | Yes (presumed) | No (presumed) | 721.77 | N/A |
| Suburban Propane, 1388 Howell Mill Road | 4,400 | Multiple 1,000 to 30,000 gallon propane | Yes | Yes | 1,642.72 | 900.6 |
| Residential, 129 Mill Street | 4,500 | 275 gallon heating oil | Yes | No | 161.52 | N/A |



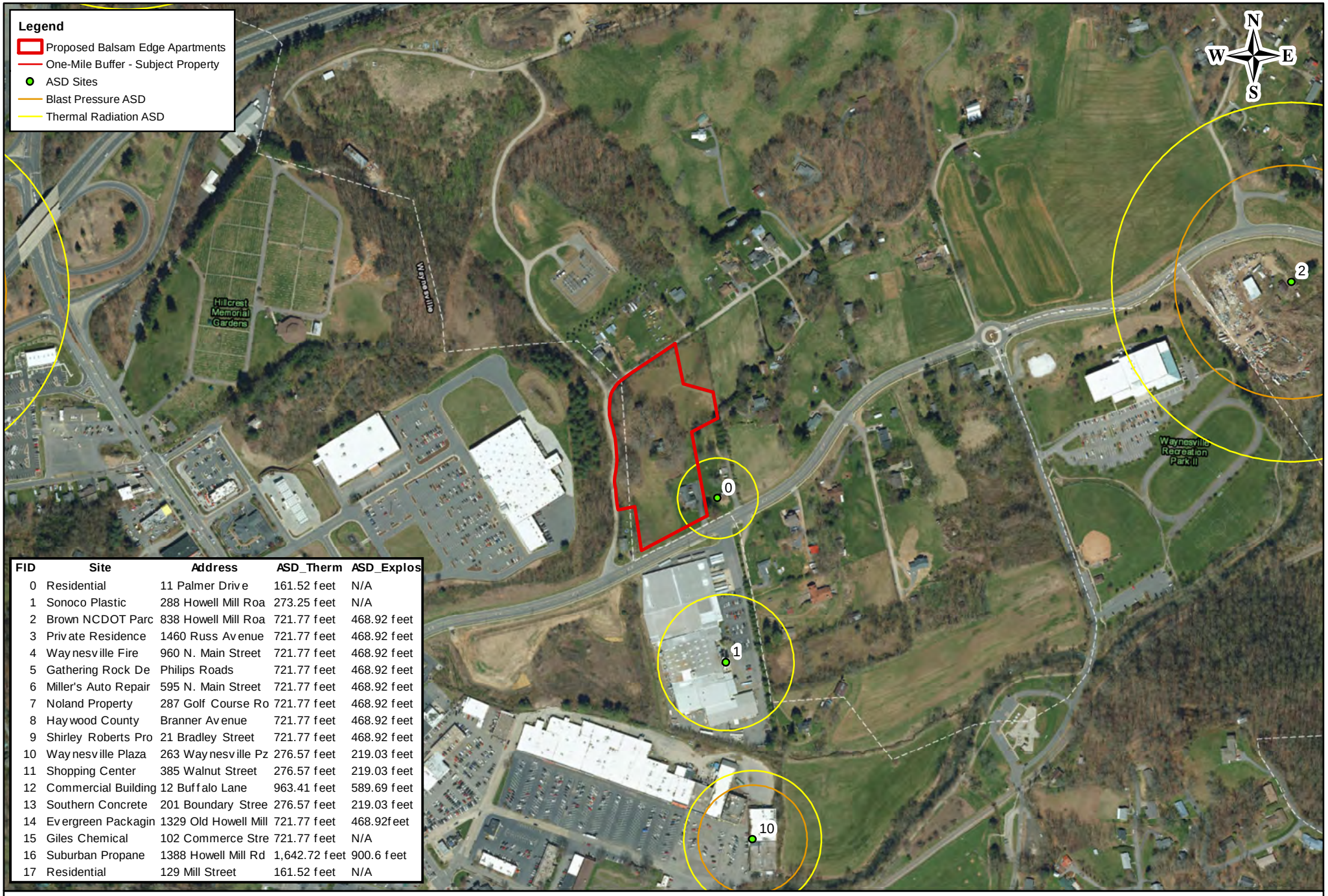

| FID | Site | Address | ASD_Therm | ASD_Explos |
|---|---|---|---|---|
| 0 | Residential | 11 Palmer Drive | 161.52 feet | N/A |
| 1 | Sonoco Plastic | 288 Howell Mill Roa | 273.25 feet | N/A |
| 2 | Brown NCDOT Parc | 838 Howell Mill Roa | 721.77 feet | 468.92 feet |
| 3 | Private Residence | 1460 Russ Avenue | 721.77 feet | 468.92 feet |
| 4 | Waynesville Fire | 960 N. Main Street | 721.77 feet | 468.92 feet |
| 5 | Gathering Rock De | Philips Roads | 721.77 feet | 468.92 feet |
| 6 | Miller's Auto Repair | 595 N. Main Street | 721.77 feet | 468.92 feet |
| 7 | Noland Property | 287 Golf Course Ro | 721.77 feet | 468.92 feet |
| 8 | Haywood County | Branner Avenue | 721.77 feet | 468.92 feet |
| 9 | Shirley Roberts Pro | 21 Bradley Street | 721.77 feet | 468.92 feet |
| 10 | Waynesville Plaza | 263 Waynesville Pz | 276.57 feet | 219.03 feet |
| 11 | Shopping Center | 385 Walnut Street | 276.57 feet | 219.03 feet |
| 12 | Commercial Building | 12 Buffalo Lane | 963.41 feet | 589.69 feet |
| 13 | Southern Concrete | 201 Boundary Stree | 276.57 feet | 219.03 feet |
| 14 | Evergreen Packagin | 1329 Old Howell Mill | 721.77 feet | 468.92feet |
| 15 | Giles Chemical | 102 Commerce Stre | 721.77 feet | N/A |
| 16 | Suburban Propane | 1388 Howell Mill Rd | 1,642.72 feet | 900.6 feet |
| 17 | Residential | 129 Mill Street | 161.52 feet | N/A |

1 " = 2,000 feet

0 1,000 2,000 4,000 Feet

**Acceptable Separation Distance (ASD) Map of ASTs**

Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, Haywood County, North Carolina
ECS Project No. 49-18762




| FID | Site | Address | ASD_Therm | ASD_Explos |
|---|---|---|---|---|
| 0 | Residential | 11 Palmer Drive | 161.52 feet | N/A |
| 1 | Sonoco Plastic | 288 Howell Mill Roa | 273.25 feet | N/A |
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| 8 | Haywood County | Branner Avenue | 721.77 feet | 468.92 feet |
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| 11 | Shopping Center | 385 Walnut Street | 276.57 feet | 219.03 feet |
| 12 | Commercial Building | 12 Buffalo Lane | 963.41 feet | 589.69 feet |
| 13 | Southern Concrete | 201 Boundary Stree | 276.57 feet | 219.03 feet |
| 14 | Evergreen Packagin | 1329 Old Howell Mill | 721.77 feet | 468.92feet |
| 15 | Giles Chemical | 102 Commerce Stre | 721.77 feet | N/A |
| 16 | Suburban Propane | 1388 Howell Mill Rd | 1,642.72 feet | 900.6 feet |
| 17 | Residential | 129 Mill Street | 161.52 feet | N/A |

1 " = 500 feet

0 250 500 1,000 Feet

**Acceptable Separation Distance (ASD) Map of ASTs**

Proposed Balsam Edge Apartments
333 Howell Mill Road
Waynesville, Haywood County, North Carolina
ECS Project No. 49-18762

## Zach Windham

**From:** Amy L. Stevens <Amy.Stevens@haywoodcountync.gov>
**Sent:** Wednesday, January 18, 2023 9:12 AM
**To:** Zach Windham; publicrecordsrequest
**Subject:** [EXTERNAL] RE: 333 Howell Mill Road - HUD Information Request

Good Morning, Mr. Windham:

Thank you for your request. I have forwarded it to the appropriate department for response.

---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Wednesday, January 18, 2023 9:10 AM
**To:** publicrecordsrequest <publicrecords@haywoodcountync.gov>
**Subject:** 333 Howell Mill Road - HUD Information Request

Good morning,

I am assisting with a proposed multi-family housing and urban development (HUD) project located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. As part of the assessment, I would like to request any available information on existing and
proposed aboveground storage tanks (ASTs) or other thermal/explosive hazards within a one-mile radius of the site. This request is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Please let me know if any additional information is necessary and thank you for any assistance you can provide with
this request.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP**
**T** 864.987.1610 **D** 864.987.1818
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## Zach Windham

**From:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Sent:** Wednesday, February 15, 2023 4:08 PM
**To:** Zach Windham
**Subject:** [EXTERNAL] Re: 333 Howell Mill Road - HUD Information Request

Zach, I finally found someone in the office at Suburban Propane. They will be the only thing in your mile with the requirements you have sent.
They have three 30,000(90,000) gallon LPG Above ground tanks. They keep them at 60% or at about 24,000 gallons(72,000). That should be all other than some of the other small things mentioned. I hope that helps.

***Darrell R Calhoun*** | *Fire Marshal*
*Fire and Injury Prevention Specialist*
*Town of Waynesville, NC*
*1022 N. Main Street | Waynesville, NC 28786*
*(c) 828.734.7316*
*(o) 828.456.3516*
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---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Monday, February 6, 2023 8:43 AM
**To:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Subject:** RE: 333 Howell Mill Road - HUD Information Request

Good morning Darrell,

Sorry to just be getting back to you, I was out of the office all week last week. I believe we mainly need to know the tank size and explosion radius. Our main concern is to make sure we are out of the explosion radius for the ASTs. I received an email from Sunoco stating they old had five plastic resin (pellets) silos and one small (<500 gallons) used oil tank. Thanks for all of your help with this.

Thanks again,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Sent:** Monday, January 30, 2023 4:26 PM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [EXTERNAL] Re: 333 Howell Mill Road - HUD Information Request

Do you need chemical, tank size, and explosion radius?
Or do you just want where things are. These are things that i want to know as well it is just going to take some time. Most of this is in smaller amounts.
I am working on going to these places and getting that information butt this is what I know so far.

The two biggest things in your area are Suburban and Sunocco. The others are probably below your threshold. Suburban is on the edge of your address.

Evergreen Packaging-Rail cars, Plastics, LPG
Suburban Propane-Rail Car with LPG And several tanks of LPG.
Sunocco Plastics-
Waynesville Rec Center-Chlorine less than 500 lbs
Henson Junkyard
MR. Tire-disposed oil and 55 gal drums of oil and other fluids
O-Reilly's Auto Parts-batteries, acetylene, oil,
NAPA-same
Taylor Ford-Paint Booth, oil, other fluids
Hometown Hardware- you name it
Haywood Builders-you name it
Giles Chemical-they make bath salt, Hydrogen sulfide via rail car.
Waynesville Gas-LPG
Southern Concrete-Concrete
Snappy Lube-oil and other fluids
Autozone-Same as NAPA
Advance Auto-same as NAPA
Snappy Lube 2-oil and other fluids.

***Darrell R Calhoun*** | *Fire Marshal*
*Fire and Injury Prevention Specialist*
*Town of Waynesville, NC*
*1022 N. Main Street | Waynesville, NC 28786*
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---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Friday, January 27, 2023 8:30 AM
**To:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Subject:** RE: 333 Howell Mill Road - HUD Information Request

Thanks for doing this for me Darrell!

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

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**From:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Sent:** Thursday, January 26, 2023 3:09 PM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [EXTERNAL] Re: 333 Howell Mill Road - HUD Information Request

Just a quick email to let you know I am still putting this together, and should have it completed Monday. I hope!

***Darrell R Calhoun*** | *Fire Marshal*
*Fire and Injury Prevention Specialist*
*Town of Waynesville, NC*
*1022 N. Main Street | Waynesville, NC 28786*
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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Wednesday, January 18, 2023 9:08 AM
**To:** Darrell Calhoun <dcalhoun@waynesvillenc.gov>
**Subject:** 333 Howell Mill Road - HUD Information Request

Good morning Darrell,

I am assisting with a proposed multi-family housing and urban development (HUD) project located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. As part of the assessment, I would like to request any available information on existing and
proposed aboveground storage tanks (ASTs) or other thermal/explosive hazards within a one-mile radius of the site. This request is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Please let me know if any additional information is necessary and thank you for any assistance you can provide with
this request.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP**
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**Department of Environmental Quality**
Public Records Information Request – Regional Office Routing Form

This form is to assist in the identification of public records in the regional office for a specific project, permit, property and/or facility. After circulation of this routing form, the requestor will be notified if records exist and provided the appropriate division(s) contact information. Learn more about public records in North Carolina.
**Note:** Use of this form is optional. Any format for a public records request is acceptable. However, responses by agencies are limited by the level of detail and quality of information provided by the requestor. Additionally, information volunteered by the requestor may help fill the request more efficiently. This form identifies public records in the regional offices; email correspondence is not included unless specifically requested.

**Requestor Information:**

**Name (Last, First, and Middle Names):** Windham, Zach **Date:** (1/23/2023)
**Address (Street Number and Name):** 1200 Woodruff Road, Suite H-12
**City:** Greenville **State:** SC **Zip:** 29607
**Daytime Telephone:** 404-985-9014 **Email:** zwindham@ecslimited.com

**Information Requested:**

***Please note that inclusion of current and historic site information will better facilitate our records search.***
**Identify the documents, records or information you are seeking:** Any available information on existing and proposed aboveground storage tanks (ASTs) or other thermal/explosive hazards within a one-mile radius of the site.
**Physical location of subject site (include city and county):** 271 & 333 Howell Mill Road, Waynesville, Haywood County, NC, 28786
**Property Owner(s):** MOUNTAIN HOUSING OPPORTUNITIES INC
**Project Name:** Proposed Balsam Edge Apartments
**Facility Name:** Click here to enter text.
**Project ID Number/Permit Number/Facility ID Number (include with which agency this coincides):**
Click here to enter text.
**Provide any unique identifiers which exist on the property (e.g. wells, ponds, dams, UST's, current and previous land uses, etc.):**
Click here to enter text.
**Provide below any additional information you feel may be helpful in the records search (e.g. GIS *map image*, *PIN, Latitude & Longitude, etc.):***
PIN: 8616-42-5402, coordinates: 35.504478, -82.984339
***Email or fax the completed form to the appropriate regional staff member.***

- Asheville Region - Alison Davidson, Phone: (828) 296-4698, Email: alison.davidson@ncdenr.gov
- Fayetteville Region - Johnathan Watts, Phone: (910) 433-3353, Email: johnathan.watts@ncdenr.gov
- Mooresville Region - Jesse McDonnell, Phone: (704) 235-2107, Email: jesse.mcdonnell@ncdenr.gov
- Raleigh Region - David Lee, Phone: (919) 791-4204, Email: david.lee@ncdenr.gov
- Washington Region - Lyn Hardison, Phone: (252) 948-3842, Email: lyn.hardison@ncdenr.gov
- Wilmington Region - Cameron Weaver, Phone: (910) 796-7265, Email: cameron.weaver@ncdenr.gov
- Winston-Salem Region - Paul Williams, Phone: (336) 776-9631, Email: paul.e.williams@ncdenr.gov

**Need help in determining which regional office to send your request? Visit our regional office webpage for an interactive map and text version of counties showing their associated regional office:** https://deq.nc.gov/contact/regional-offices.

**File Locations for DEQ Central Offices and Online Records - Important Please Read:**
This form does not identify public records which may exist in the central offices of DEQ and online. The following webpage "Requesting Public Records" and the information below will guide you in accessing ***additional files which may be located in our online public resources and in the Raleigh central offices.***

- **Division of Air Quality:** For state air quality records, call (919) 707-8400.
- **Division of Waste Management:** Waste Management Online Documents and File Room Procedures
  - Brownfields Program: For access to a specific Brownfields Program file, please call Shirley Liggins at (919) 707-8383.
  - Hazardous Waste: For access to a specific Hazardous Waste Section file, please call Scott Ross: (919) 707-8272.
  - Solid Waste Section: For access to a specific Solid Waste Section file, please call Carmen Johnson: (919) 707-8271.
  - Superfund Section: For access to a specific Superfund Section file, please call Scott Ross: (919) 707-8272.
  - Underground Storage Tank Section: For access to a specific UST file, visit the following for more information.
- **Division of Water Resources:** DWR Public Records Access, Policies and Fees
  - **Water Quality Permitting** records contact - Diane Rodman (919) 707-3683 or diane.rodman@ncdenr.gov.

- **Other Division of Water Resources Records Requests**: Anna Gurney (919) 707-8604 or anna.gurney@ncdenr.gov

- **Division of Energy, Mineral and Land Resources:**
  To review files on mining activities, dams, sedimentation and erosion control and stormwater in the Division of Energy, Mineral and Land Resources, call (919) 707-9200.
- **Division of Coastal Management**: 400 Commerce Ave., Morehead City, NC 28557. For information, call (252) 808-2808
- **For assistance with public records requests in the Raleigh Central Offices**, visit the following: https://deq.nc.gov/about/divisions/environmental-education-public-affairs/contacts-media for Division Public Information Officers.

| ***To Be Completed by The Requester*** **Regional Office:** | ***To Be Completed by The Requester*** **Division Records Review:** | ***For DEQ Use Only*** **Records Available** ***Due Date: 2/6/2023*** | | |
|---|---|---|---|---|
| **Asheville** ☒<br>**Fayetteville** ☐<br>**Mooresville** ☐<br>**Raleigh** ☐<br>**Washington** ☐<br>**Wilmington** ☐<br>**Winston-Salem** ☐ | **Air Quality** ☐ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | **Coastal Management** ☐ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | **Energy, Mineral and Land Resources** ☐ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | **Marine Fisheries** ☐ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | **Waste Management:**<br>Brownfields Program ☒ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | Hazardous Waste Section ☒ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | Inactive Hazardous Sites Branch - IHSB ☒ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | Solid Waste Section ☒ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☒ | Initial:LH |
| | Underground Storage Tank Section ☒ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☒ | Initial: CEL |
| | **Water Resources:**<br>Public Water Supply Section ☐ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |
| | Water Quality Regional Operations ☐ | Yes:<br>Available for file review: ☐<br>Provided: ☐ | No ☐ | Initial: |

Learn more about public records in North Carolina (e.g., fees).

More information about file access procedures in the N.C. Department of Environmental Quality can be found online at http://deq.nc.gov/about/divisions/environmental-assistance-customer-service/deacs-permit-guidance/faq#fileaccess. If you make an appointment to review files, be sure to inquire about copying procedures, directions to buildings, parking and visitor passes.

***TO BE COMPLETED BY DEQ STAFF***

| Staff Representative/ Contact Information | Date Comments Provided | Findings of Records Review |
|---|---|---|
| Air Quality: Click here to enter text. | Date Provided | Click here to enter text. |
| Coastal Management: Click here to enter text. | Date Provided | Click here to enter text. |
| Energy, Mineral, and Land Resources: Click here to enter text. | Date Provided | Click here to enter text. |
| Marine Fisheries: Click here to enter text. | Date Provided | Click here to enter text. |
| Brownfields Program: Click here to enter text. | Date Provided | From: Liggins, Shirley <shirley.liggins@ncdenr.gov><br>Sent: Friday, January 27, 2023 8:17 AM<br>To: Davidson, Alison <alison.davidson@ncdenr.gov><br>Subject: RE: [External] 333 Howell Mill Road, Waynesville, NC - HUD Information Request<br><br>Nothing was found for that address.<br><br>Shirley Liggins<br>Administrative Specialist<br>North Carolina Department of Environmental Quality<br>Division of Waste Management – Brownfields Program<br>Office: (919) 707-8383<br>Shirley.Liggins@ncdenr.gov<br><br>*Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.*<br><br>**********<br>Brownfields Website: http://www.ncbrownfields.org<br><br>Brownfields Public Records Link: (Portal Access to Recent Electronic Records in Laserfiche) |

| | | |
|---|---|---|
| | | http://edocs.deq.nc.gov/WasteManagement/Search.aspx?cr=1<br><br>Brownfields Land Use Restriction Forms Link:<br>http://deq.nc.gov/brownfields-sites-and-boundaries |
| Hazardous Waste Section:<br>Click here to enter text. | Date provided | From: Guglielmi, Nicholas J <nick.guglielmi@ncdenr.gov><br>Sent: Tuesday, February 7, 2023 6:04 PM<br>To: Davidson, Alison <alison.davidson@ncdenr.gov><br>Subject: RE: [External] 333 Howell Mill Road, Waynesville, NC - HUD Information Request<br><br>Good afternoon Alison,<br><br>My response is below:<br><br>Based on the information provided, I did not locate any data to indicate that a site visit/inspection has ever been conducted by the NC Hazardous Waste Section's Compliance Branch at the subject property as it does not appear that either of the addresses associated with the subject property have been assigned an EPA Hazardous Waste ID Number.<br><br>Within a 1 mile radius, two (2) properties with assigned EPA ID numbers were located. 90 Howell Mill Road notified as a temporary large quantity generator of hazardous waste for removing soils impacted by automotive debris and was assigned a temporary EPA ID Number (NCP090314036). The Hazardous Waste Section did not conduct an inspection of the property, and the ID Number was re-notified as Not a Generator of hazardous waste. 1329 Howell Mill Road is notified under the name of Waynesville Extrusion Coating Facility as a Very Small Quantity Generator of hazardous waste and was assigned EPA ID Number NCD982145047. The Hazardous Waste Section has conducted one Compliance Evaluation Inspection in 1992, and no violations were cited.<br><br>Nick Guglielmi<br>Environmental Specialist II<br>Hazardous Waste Section<br>Division of Waste Management<br>NC Department of Environmental Quality<br>P.O. Box 727<br>Swannanoa, NC 28778<br>919-935-2010-mobile<br>Nick.Guglielmi@ncdenr.gov |
| Inactive Hazardous Sites Branch:<br>Click here to enter text. | Date Provided | To determine whether there are any Inactive Hazardous Sites at or near a given address, use the following links to identify a site or multiple sites of interest.<br>Then, search Laserfiche to determine how many records exist for the site or multiple sites of interest.<br>Inactive Hazardous Sites Branch website: |

| | | |
|---|---|---|
| | | https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program<br>List of Sites By Name:<br>https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program (scroll down to link titled "List of Sites By Name" and click)<br>List of Sites By County:<br>https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program (scroll down to link titled "List of Sites By County" and click)<br>Pre-Regulatory Landfill Inventory:<br>https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program (scroll down to link titled "Pre-Regulatory Landfill Inventory" and click)<br>GIS Map:<br>http://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/waste-management-gis-maps/ihs-map-viewer<br>GIS Data:<br>http://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/waste-management-gis-maps<br>Laserfiche, our online Document Management System, where you may view and download electronic records:<br>https://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/e-documents<br>I recommend searching for site electronic records by the site ID. You may use an asterisk (*) as a wildcard if you do not know the whole site ID. Instructions for accessing the electronic files have been prepared by the Superfund Section and may be found here:<br>http://deq.nc.gov/about/divisions/waste-management/superfund-section/sf-file-records.<br>IHSB staff contact information:<br>Microsoft Word - Inactive-Hazardous-Sites-Branch-Contacts040522.docx<br>IHSB Regional Map:<br>Microsoft Word - UST62-040110.doc (nc.gov)<br>Parties seeking information on potentially contaminated sites should also contact the IHSB's sister programs in the North Carolina Department of Environmental Quality (NCDEQ). These include the following:<br>Division of Waste Management's (DWM's) Hazardous Waste Section:<br>https://deq.nc.gov/about/divisions/waste-management/hazardous-waste-section<br>DWM's Solid Waste Section:<br>https://deq.nc.gov/about/divisions/waste-management/solid-waste-section<br>DWM's UST Section:<br>https://deq.nc.gov/about/divisions/waste-management/underground-storage-tanks-section<br>Division of Water Resources (DWR):<br>https://deq.nc.gov/about/divisions/water-resources<br><br>Contact: IHSB Western Region Supervisor: Collin Day<br>450 W. Hanes Mill Road<br>Winston-Salem, NC 27105<br>(336) 776-9800 |

| | | |
|---|---|---|
| | | |
| Solid Waste Section:<br>Lee Hill | 1/25/2023 | No solid waste records were found relating to the properties identified as 271 & 333 Howell Mill Rd, Waynesville, Haywood County. |
| Underground Storage Tank Section:<br>Caroline LaFond | 1/24/23 | I searched the Petroleum Underground Storage Tank (UST) and Non-UST Databases and did not identify any petroleum Incidents on or adjacent to the proposed project area.<br><br>The following comments are pertinent to my review:<br><br>The Asheville Regional Office (ARO) UST Section recommends removal of any abandoned or out-of-use petroleum USTs or petroleum ASTs within the project area. The UST Section should be contacted regarding use of any proposed or on-site petroleum USTs or ASTs. We may be reached at (828) 296-4500.<br><br>Any petroleum USTs or ASTs must be installed and maintained in accordance with applicable local, state, and federal regulations. For additional information on petroleum ASTs it is advisable that the North Carolina Department of Insurance at (919) 661-5880 ext. 239, USEPA (404) 562-8761, local fire department, and Local Building Inspectors be contacted.<br><br>Any petroleum spills must be contained and the area of impact must be properly restored. Petroleum spills of significant quantity must be reported to the North Carolina Department of Environmental Quality (NCDEQ) – Division of Waste Management (DWM) UST Section in the ARO.<br><br>Any soils excavated during demolition or construction that show evidence of petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosive or inhalation hazards exist. Also, notify the UST Section of the ARO. Petroleum contaminated soils must be handled in accordance with all applicable regulations.<br><br>Any questions or concerns regarding spills from petroleum USTs, ASTs, or vehicles should be directed to the UST Section at (828) 296-4500. If you have any questions or need additional information, please contact me via email at caroline.lafond@ncdenr.gov or by phone at (828) 296-4644. |
| Public Water Supply Section:<br>Click here to enter text. | Date Provided | Click here to enter text. |
| Water Quality Regional Operations Section:<br>Click here to enter text. | Date Provided | Click here to enter text. |

**Disclaimer:** DEQ staff will fulfill this request in accordance with the requirements of the North Carolina Public Records Act ("the Act"), N.C. Gen. Stat. § 132-1 et seq., based on the information received from the requester. While the Act addresses the availability of records, the Act does not address the accuracy of those records. Accordingly, the production of records pursuant to the Act does not insure that the records (many of which have been previously submitted to DEQ from outside sources) are accurate, complete or current with regard to all environmental issues at a property. The scope of the search for records is determined by the data provided by the requester; limited or incomplete data may constrain and limit the discovery and production of available records. To obtain the best information available, please provide as much specific information as possible about the topic, location and type of data being requested.

## Zach Windham

**From:** Stacy L. Henson <Stacy.Henson@haywoodcountync.gov>
**Sent:** Wednesday, January 18, 2023 9:18 AM
**To:** Zach Windham
**Cc:** Amy L. Stevens; Tracy Wells
**Subject:** [EXTERNAL] RE: 333 Howell Mill Road - HUD Information Request

Good morning,

The subject property is in the ETJ of the Town of Waynesville and not in my jurisdiction. Please contact the Town of Waynesville at: www.waynesvillenc.gov

Thank you,

*Stacy C Henson, Administrative Assistant II*
*Permitting Supervisor*
Haywood County Development Services
157 Paragon Parkway, Suite 200
Clyde, NC 28721
Phone: (828) 356-2131
Email: stacy.henson@haywoodcountync.gov

---

**From:** Amy L. Stevens <Amy.Stevens@haywoodcountync.gov>
**Sent:** Wednesday, January 18, 2023 9:11 AM
**To:** Stacy L. Henson <Stacy.Henson@haywoodcountync.gov>
**Cc:** Tracy Wells <Tracy.Wells@haywoodcountync.gov>
**Subject:** FW: 333 Howell Mill Road - HUD Information Request

Hi, Stacy—please see the information request below. Thanks!

---

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Wednesday, January 18, 2023 9:10 AM
**To:** publicrecordsrequest <publicrecords@haywoodcountync.gov>
**Subject:** 333 Howell Mill Road - HUD Information Request

Good morning,

I am assisting with a proposed multi-family housing and urban development (HUD) project located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. As part of the assessment, I would like to request any available information on existing and proposed aboveground storage tanks (ASTs) or other thermal/explosive hazards within a one-mile radius of the site. This request is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Please let me know if any additional information is necessary and thank you for any assistance you can provide with this request.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP**
**T** 864.987.1610 **D** 864.987.1818
1200 Woodruff Road, Suite H-12, Greenville, SC 29607
ZWindham@ecslimited.com | www.ecslimited.com

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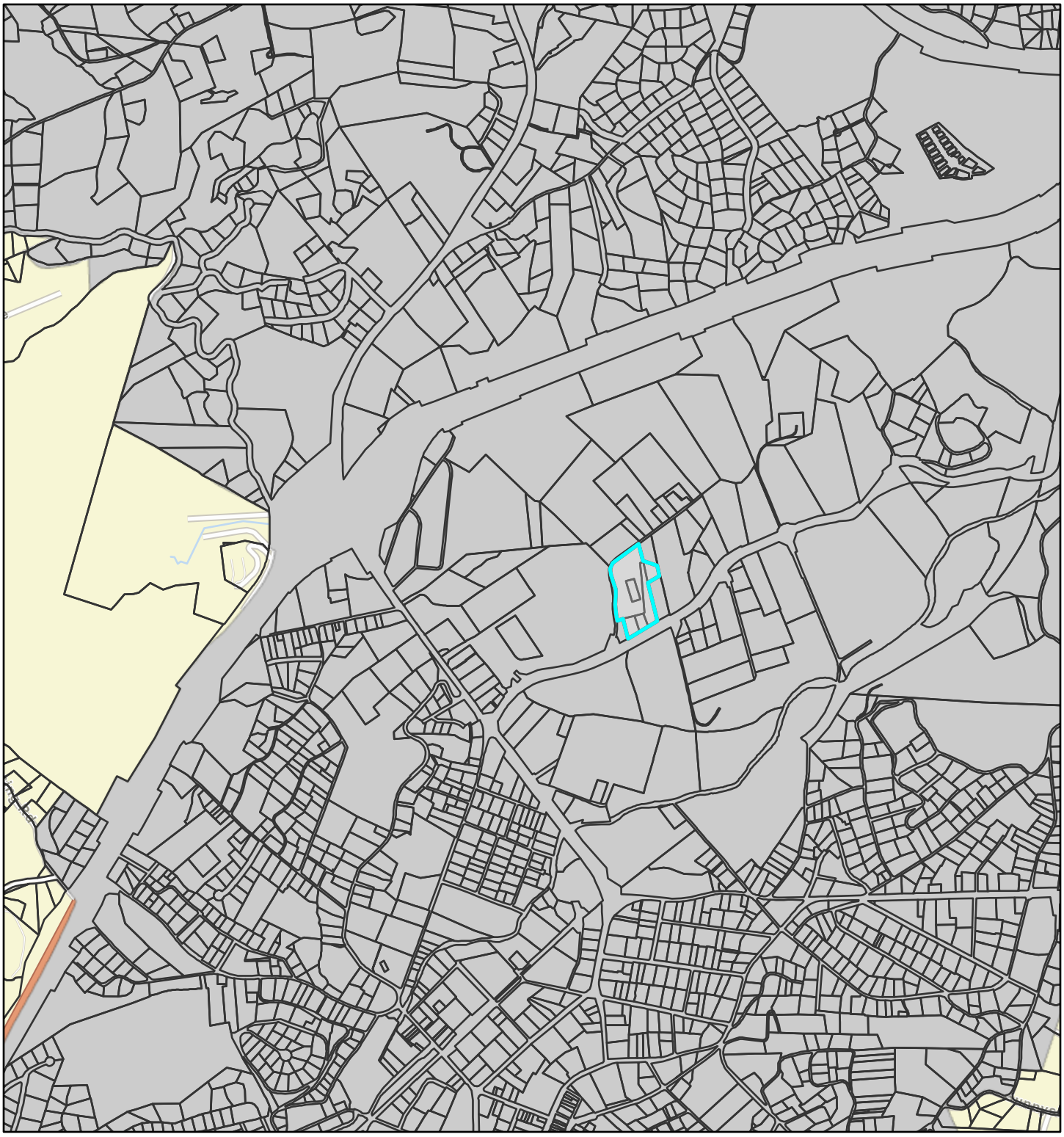
*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

# ATTACHMENT 10:

# Farmlands Protection

# Balsam Edge - Urban Areas Map



January 20, 2025

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Balsam Edge

Haywood County Parcels

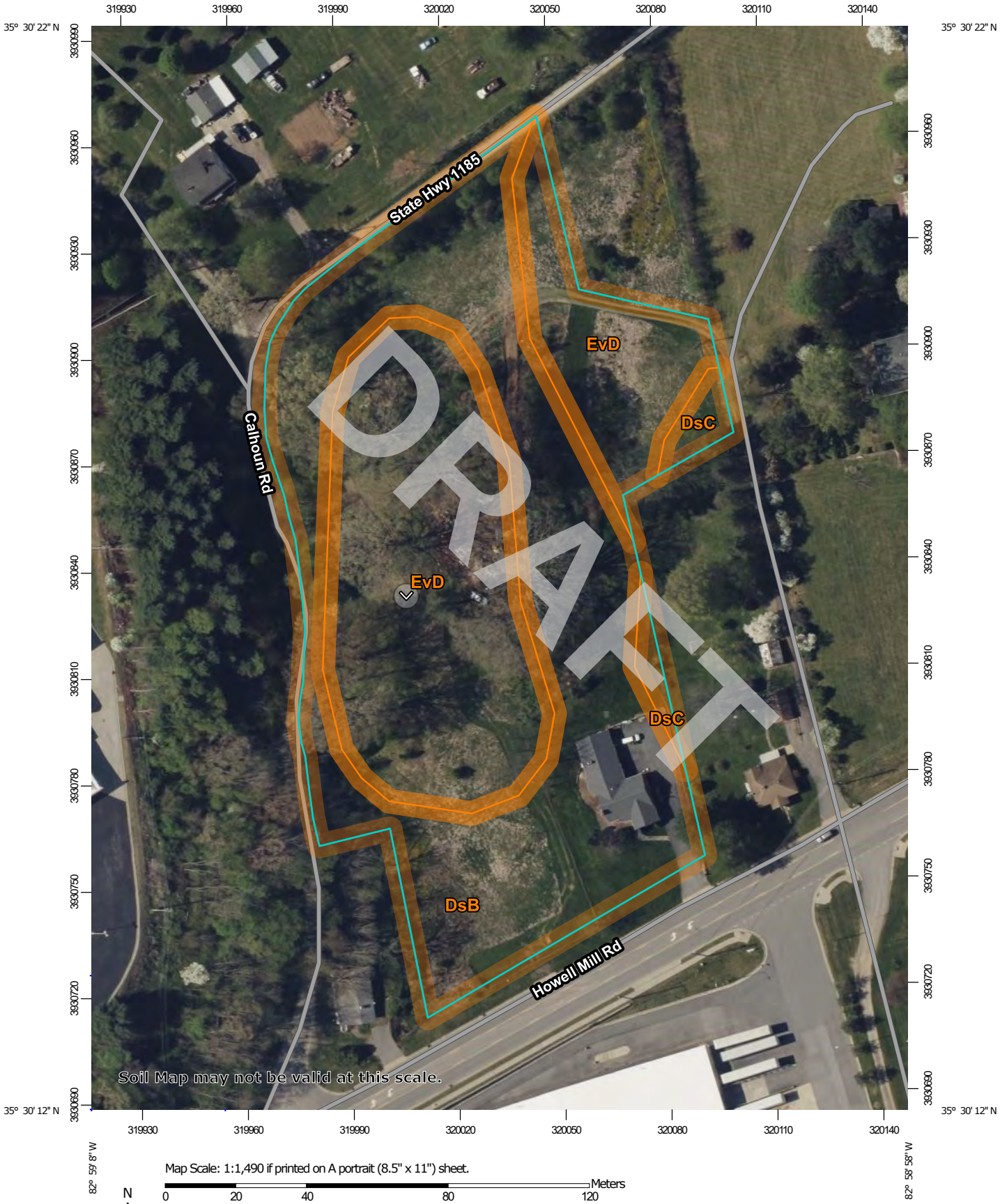
Urban Areas

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, EPA OEI

# Appendix I

# Farmlands Protection

Soil Map—Haywood County Area, North Carolina
(Proposed Balsam Edge Apartments Site)




Map Scale: 1:1,490 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Haywood County Area, North Carolina
Survey Area Data: Version 24, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2022—May 9, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

DRAFT

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| DsB | Dillsboro loam, 2 to 8 percent slopes | 2.8 | 53.1% |
| DsC | Dillsboro loam, 8 to 15 percent slopes | 0.1 | 2.5% |
| EvD | Evard-Cowee complex, 15 to 30 percent slopes | 2.3 | 44.5% |
| **Totals for Area of Interest** | | **5.3** | **100.0%** |

DRAFT

# Farmland Classification—Haywood County Area, North Carolina
(Proposed Balsam Edge Apartments Site)

Map Scale: 1:856 if printed on B portrait (11" x 17") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 40 80 160 240

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

# MAP LEGEND

**Area of Interest (AOI)**

- Area of Interest (AOI)

**Soils**

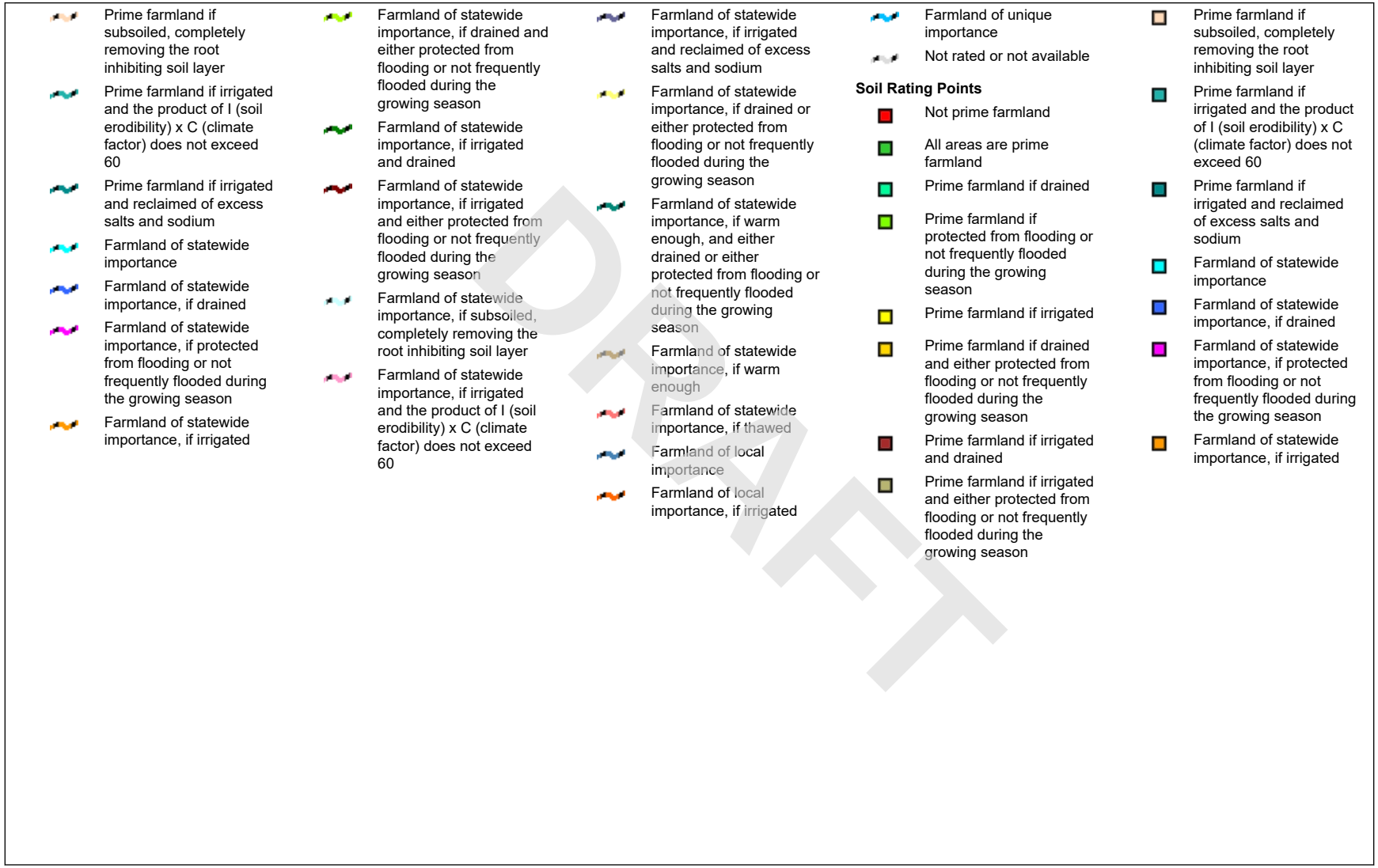
**Soil Rating Polygons**

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of statewide importance, if drained
- Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated
- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

**Soil Rating Lines**

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

DRAFT


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

DRAFT

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

**Water Features**

- Streams and Canals

**Transportation**

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**

- Aerial Photography

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Haywood County Area, North Carolina
Survey Area Data: Version 24, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2022—May 9, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

DRAFT

# Farmland Classification

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| DsB | Dillsboro loam, 2 to 8 percent slopes | All areas are prime farmland | 2.8 | 53.1% |
| DsC | Dillsboro loam, 8 to 15 percent slopes | Farmland of statewide importance | 0.1 | 2.5% |
| EvD | Evard-Cowee complex, 15 to 30 percent slopes | Farmland of local importance | 2.3 | 44.5% |
| **Totals for Area of Interest** | | | **5.3** | **100.0%** |

## Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

## Rating Options

*Aggregation Method:* No Aggregation Necessary

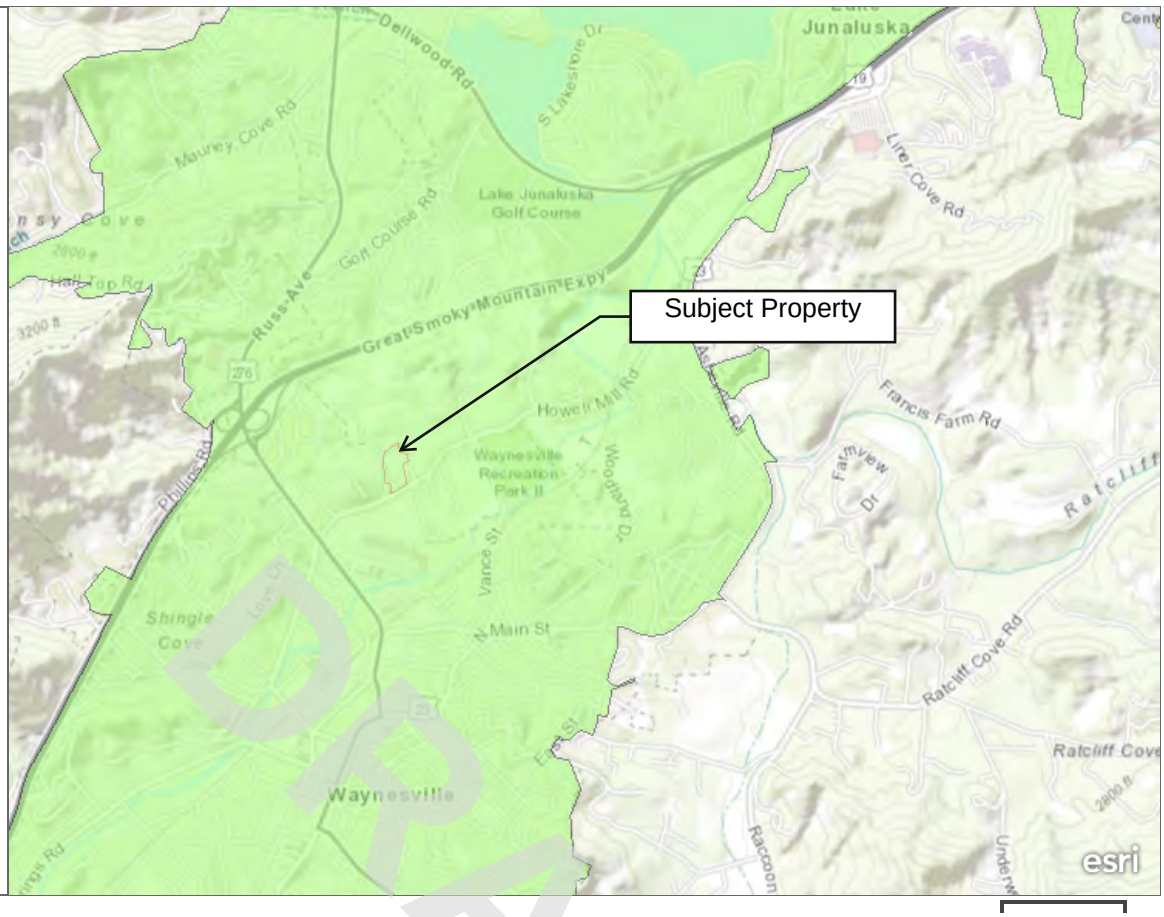
*Tie-break Rule:* Lower

DRAFT

# My Map

**Proposed Balsam Edge Apartments Site**

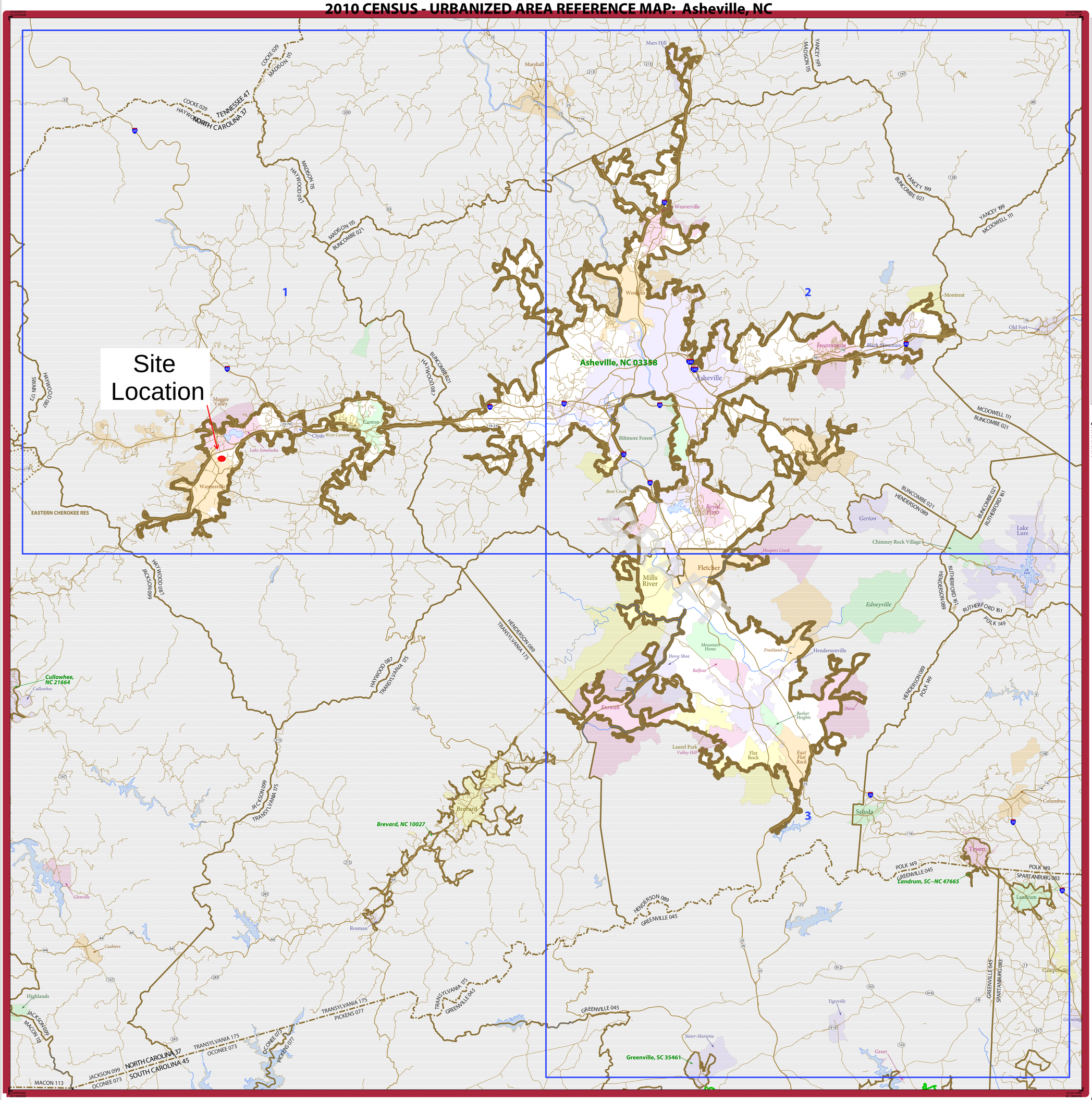
**2010 Census Urban Areas**




State of North Carolina DOT, Tennessee STS GIS, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA

DRAFT

# 2010 CENSUS - URBANIZED AREA REFERENCE MAP: Asheville, NC




## LEGEND

| SYMBOL DESCRIPTION | SYMBOL | LABEL STYLE |
|---|---|---|
| International | | CANADA |
| Federal American Indian Reservation | | L'ANSE RES 1880 |
| Off-Reservation Trust Land | | T1880 |
| Urbanized Area | | Dover, DE 24580 |
| Urban Cluster | | *Tooele, VT 88057* |
| State (or statistically equivalent entity) | | NEW YORK 36 |
| County (or statistically equivalent entity) | | ERIE 029 |
| Minor Civil Division (MCD) [1,2] | | Bristol town 07485 |
| Consolidated City | | MILFORD 47500 |
| Incorporated Place [1,3] | | Davis 18100 |
| Census Designated Place (CDP) [3] | | *Incline Village 35100* |

| DESCRIPTION | SYMBOL | DESCRIPTION | SYMBOL |
|---|---|---|---|
| Interstate | 40 | Water Body | Pleasant Lake |
| U.S. Highway | 2 | Military | Fort Belvoir |
| State Highway | 4 | Outside Subject Area | |
| Other Road | Marsh Ln | | |
| Railroad | Southern RR | | |
| Perennial Stream | Tumbling Cr | | |
| Intermittent Stream | Piney Cr | | |

Where international, state, county, and/or MCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries.

1 A '*' following an MCD name denotes a false MCD. A '°' following a place name indicates that a false MCD exists with the same name and FIPS code as the place; the false MCD label is not shown.

2 MCD boundaries are shown in the following states in which some or all MCDs function as general-purpose governmental units: Connecticut, Illinois, Indiana, Kansas, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin. (Note that Illinois and Nebraska have some counties covered by nongovernmental precincts and Missouri has most counties covered by nongovernmental townships.)

3 Place label color corresponds to the place fill color.
Label colors: Davis Davis Davis Davis Davis

**COUNTIES IN SUBJECT URBANIZED AREA**

| | |
|---|---|
| 37021 | Buncombe |
| 37087 | Haywood |
| 37089 | Henderson |
| 37111 | McDowell |
| 37115 | Madison |
| 37175 | Transylvania |

All legal boundaries and names are as of January 1, 2010. Urban areas are based on results from the 2010 Decennial Census. The boundaries shown on this map are for Census Bureau statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement.

Geographic Vintage: 2010 Census (reference date: January 1, 2010)
Data Source: U.S. Census Bureau's MAF/TIGER database (TAB10)
Map Created by Geography Division: March 09, 2012

U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Projection: Albers Equal Area Conic
Datum: NAD 83
Spheroid: GRS 80
1st Standard Parallel: 34 13 30
2nd Standard Parallel: 36 06 55
Central Meridian: -79 51 40
Latitude of Projection's Origin: 33 45 09
False Easting: 0
False Northing: 0

0 3 6 9 12 15 Kilometers
0 2 4 6 8 10 Miles
The plotted map scale is 1:129698

INDEX SHEET

Total Sheets: 4
- Index Sheets: 1
- Parent Sheets: 3

UA NAME: Asheville, NC
UA CODE: 03358
ENTITY TYPE: Urbanized Area (UA)
ST: North Carolina (37)

HAYWOOD COUNTY | NC



**Table of Contents**

**Legend**

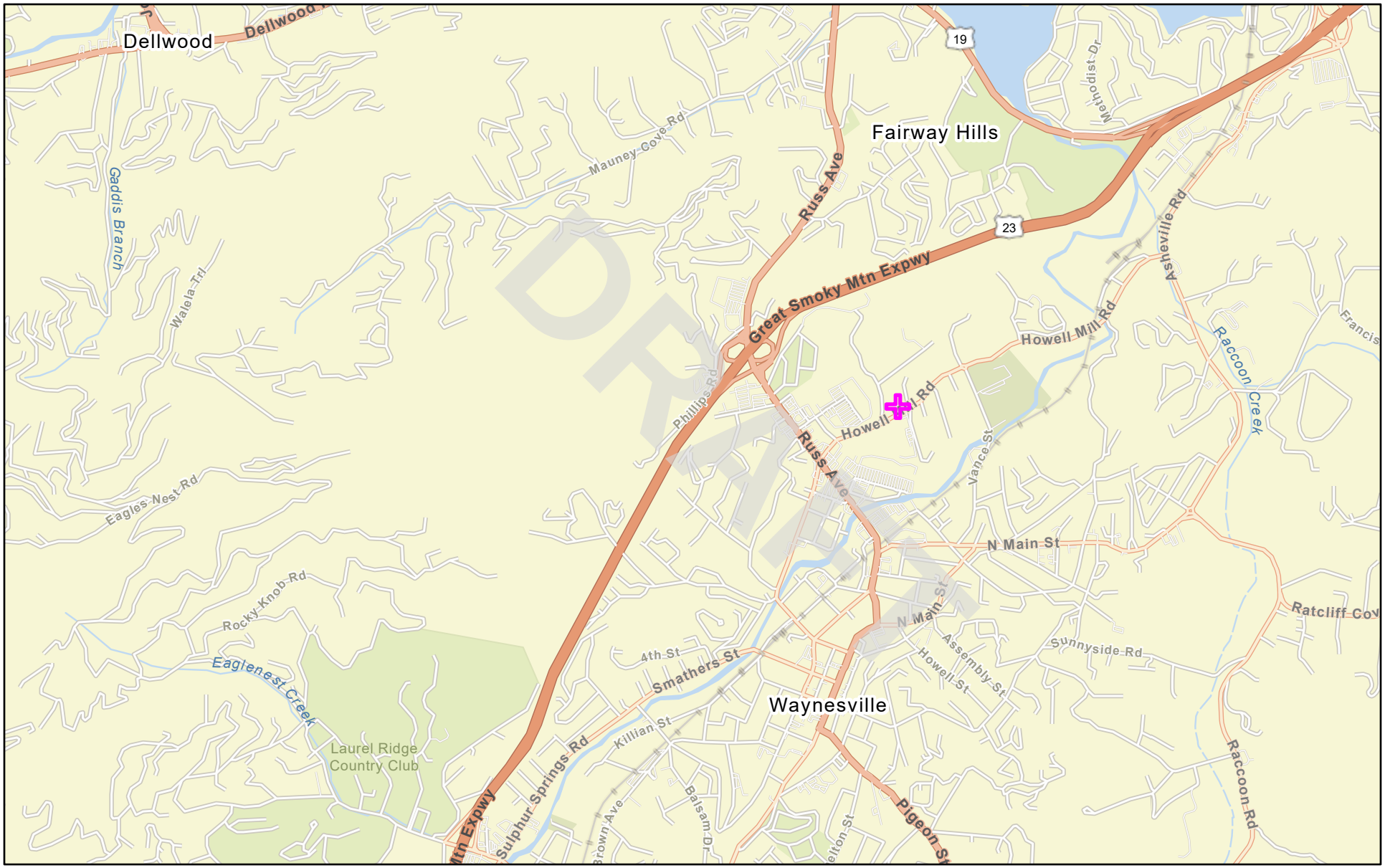
Farmland Preservation

Transportation

Streets

- Interstate
- Highway
- Local

# Location Map




December 6, 2022

Search Result (point)

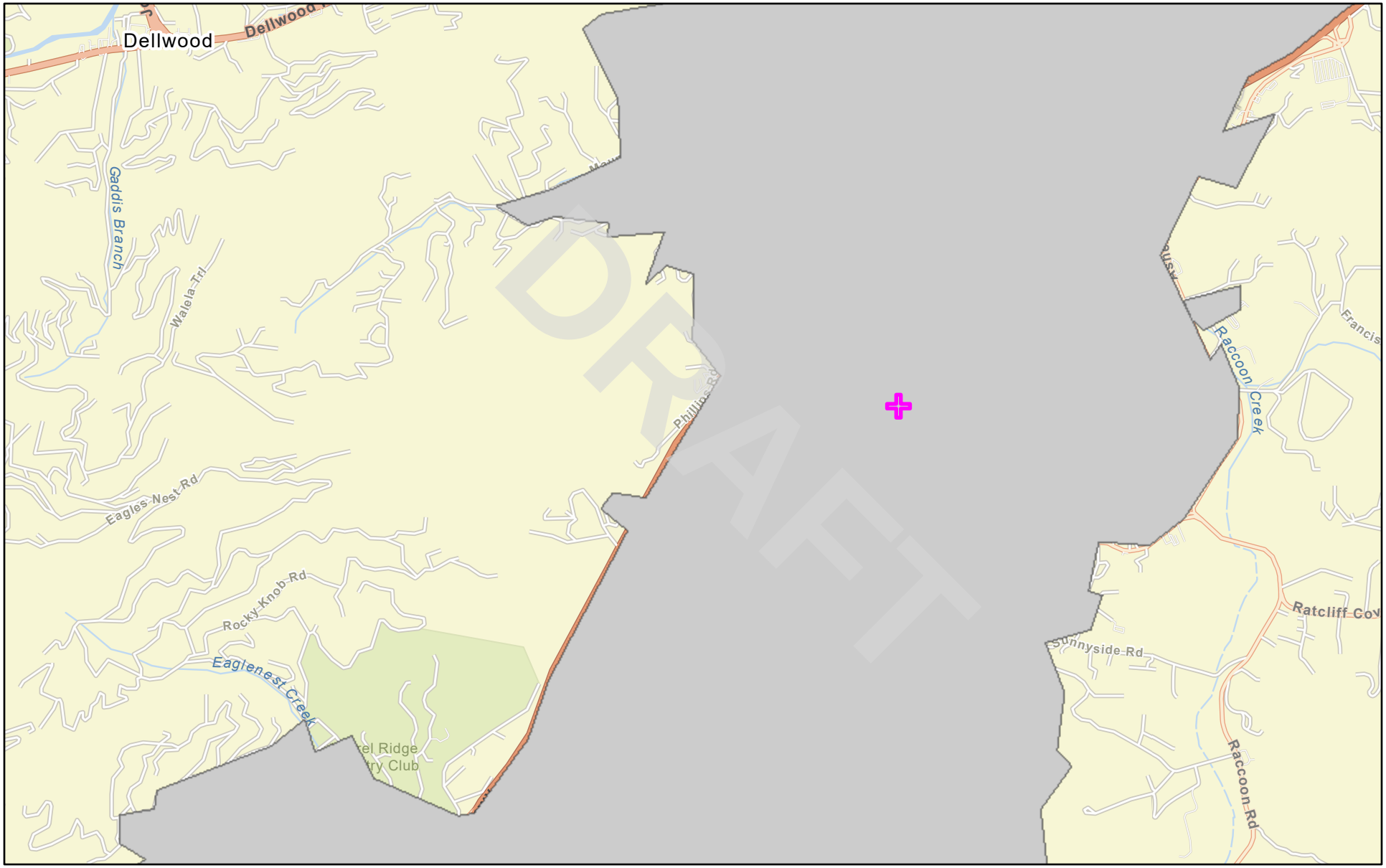
1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,

# Urbanized Areas Map




December 6, 2022

Search Result (point)

Urbanized Areas

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,

## Thomas S Hawkins, PWS

**From:** Ferguson, Mark - NRCS, Waynesville, NC <mark.ferguson@usda.gov>
**Sent:** Wednesday, January 18, 2023 6:02 PM
**To:** Thomas S Hawkins, PWS
**Subject:** [EXTERNAL] Re: [External Email]FW: Proposed Balsam Edge Apartments - Waynesville, Haywood County, NC

Thomas

I was mistaken. After revisiting FPPA policy, you will not need to have an AD-1006 completed since it is showing the tract to be in an urbanized area on the Census Bureau map.

Mark

Get Outlook for iOS

---

**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Wednesday, January 18, 2023 3:02:45 PM
**To:** Ferguson, Mark - NRCS, Waynesville, NC <mark.ferguson@usda.gov>; Hall, Lynne - FSA, Waynesville, NC <lynne.hall@usda.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** RE: [External Email]FW: Proposed Balsam Edge Apartments - Waynesville, Haywood County, NC

Hi Mark,

Tried giving you a call earlier today. What fields will I need to complete on the form? Looks like they either request the federal agency or NRCS to complete each section. Should I do my best to complete each section and then send over to your team for review?

Thanks,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

---

**From:** Ferguson, Mark - NRCS, Waynesville, NC <mark.ferguson@usda.gov>
**Sent:** Wednesday, January 18, 2023 7:15 AM
**To:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>; Hall, Lynne - FSA, Waynesville, NC <lynne.hall@usda.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [EXTERNAL] RE: [External Email]FW: Proposed Balsam Edge Apartments - Waynesville, Haywood County, NC

Thomas:

I'm sorry for the delay. I have looked into this and you will need the complete a Farmland Conversion Impact Rating Form (AD1006). Please send to me and I will forward to our Resource Soil Scientist for review. Thanks.

DRAFT

**Mark A. Ferguson**
Assistant State Conservationist-Field Operations
Waynesville Area Office
Natural Resources Conservation Service
United States Department of Agriculture
Office: (828) 558-3240
Cell: (828) 507-0856
mark.ferguson@usda.gov

**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Tuesday, January 17, 2023 4:40 PM
**To:** Ferguson, Mark - NRCS, Waynesville, NC <mark.ferguson@usda.gov>; Hall, Lynne - FSA, Waynesville, NC <lynne.hall@usda.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [External Email]FW: Proposed Balsam Edge Apartments - Waynesville, Haywood County, NC

[External Email]
If this message comes from an **unexpected sender** or references a **vague/unexpected topic;**
Use caution before clicking links or opening attachments.
Please send any concerns or suspicious messages to: Spam.Abuse@usda.gov

Hi Mark & Lynne,

I wanted to follow up on the request below. Please feel free to reach out to me at (864) 350-2414 if you have any questions or wish to discuss the project further.

Thanks,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Friday, December 23, 2022 11:58 AM
**To:** mark.ferguson@usda.gov
**Cc:** lynne.hall@usda.gov; Zach Windham <ZWindham@ecslimited.com>
**Subject:** Proposed Balsam Edge Apartments - Waynesville, Haywood County, NC

Greetings Mark,

I just spoke with Lynne and wanted to request information on a proposed multi-family development located at 333 Howell Mill Road in Waynesville. The property is identified on the Haywood County GIS as Parcel #8616-42-5402. We're completing an environmental assessment for HUD financing of the project and I had some questions regarding whether the project would be in compliance with the Farmland Protection Policy Act. According to the USDA Web Soil Survey, the property has been mapped to contain Dillsboro loam (DsB, DsC) and Evard-Cowee Complex (EvD) which are classified as prime farmland, farmland of statewide importance, and farmland of local importance, respectively. However, the 2010 US Census and NEPA Assist tools both show the property is located within an urbanized area. The property is also not shown on the Haywood County GIS website when viewing the farmland preservation area layer.

DRAFT

Based on our findings, I wanted to check and see whether we would need to have a Farmland Conversion Impact Rating Form (AD1006) completed for the project. I've attached a set of figures and a KMZ which depict the property boundary. When you return to the office, could you please contact me at thawkins@ecslimited.com or (864) 350-2414 to discuss?

Thank you,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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DRAFT

This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

# ATTACHMENT 11:

# Floodplain Management

# FFRMS Freeboard Value Approach Report

Report generated by the Federal Flood Standard Support Tool on Tue Dec 03 2024. For more information on FFRMS and the data, visit https://floodstandard.climate.gov.

## Summary

Based on the user-defined location and non-critical designation, the proposed action is not in the coastal or riverine FFRMS floodplain. However, there are additional resilience measures you might consider. Check on the resources below to learn more.

Projects located in the FFRMS floodplain should be designed consistent with the applicable policies and directives of the agency taking or approving the action.

## Proposed Action Details

Location centroid (Latitude, Longitude): Y: 35.504776 X: -82.984331

Service criticality: Non-critical Service Life: Through 2080

Consult with the applicable agency to identify any agency-specific policies, guidance, protocols, or direction on the critical action determination. The services of a professional engineer, architect, or other licensed design professional are recommended for designing critical actions or assets with long intended service life, and for other situations where risk tolerance is low because of unique characteristics of the action.

## Considerations of Freeboard approach at this location

No additional considerations at this location.

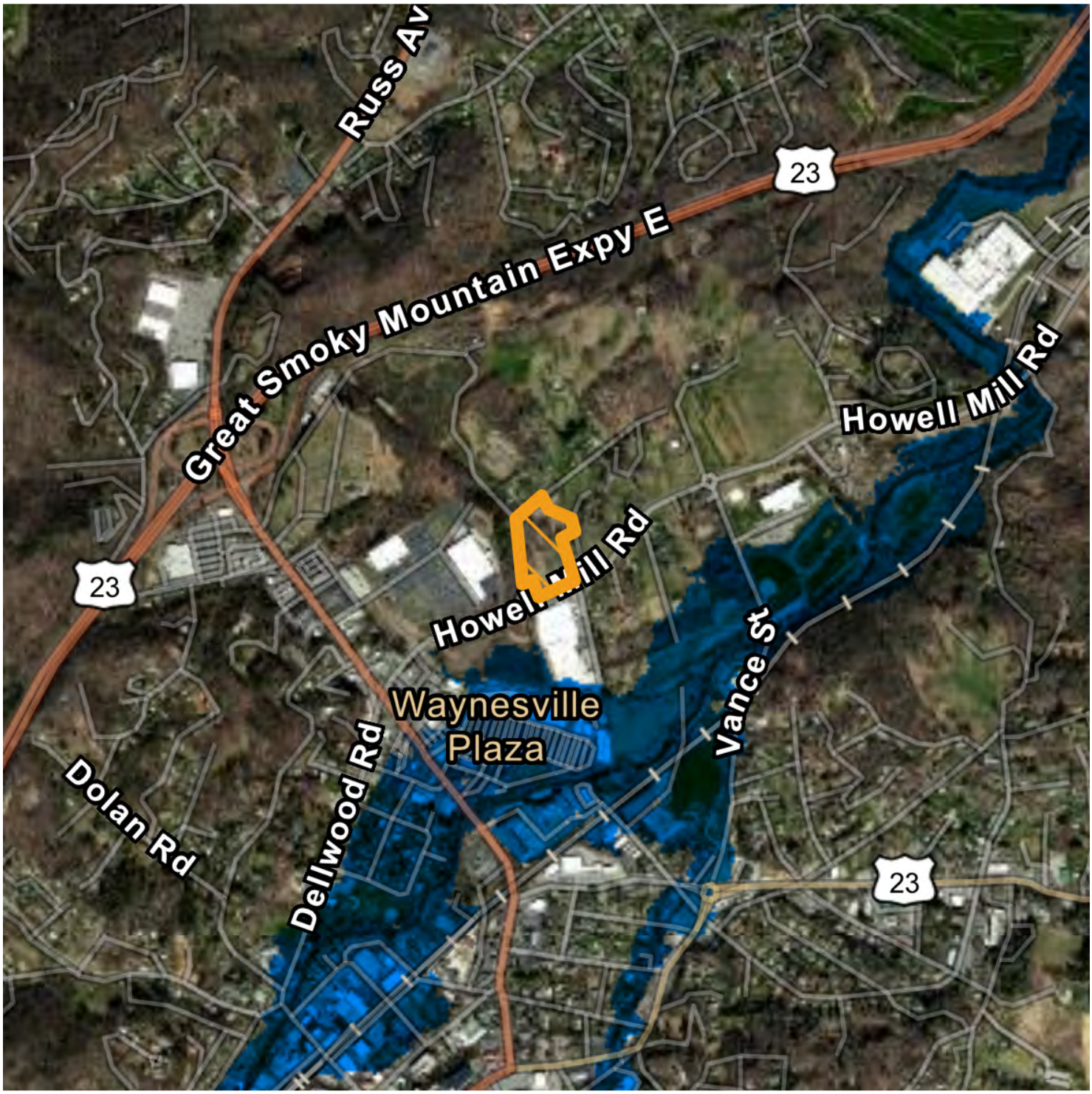
## Next Steps

This is the Step 1 of the 8-step decision-making process required in section 2(a) of Executive Order 11988, Floodplain Management (Determine if the proposed action within the FFRMS floodplain). Follow the remainder of the 8-step process outlined in the Implementation Guidelines (2015), page 4, including Step 5 which include minimizing harm and restoring and preserving natural and beneficial values. (Please refer to the Nature Based Solutions section). A licensed design professional should be contacted for the design or engineering of the action. If an action is in the FFRMS floodplain and its location is the only practicable alternative, then you may need the services of a professional engineer, architect, or other licensed design professional to determine how to minimize the impacts of flood and make the action resilient (e.g., elevation, flood-proofing and/or nature-based solutions), especially when dealing with critical actions.

## Assistance

To contact the FEMA Regional Floodplain Management & Insurance FFRMS Point of Contact for assistance, e-mail FEMA at FEMA-FFRMS-SUPPORT-REQUEST@fema.dhs.gov.

# Project Location




1:36,112

FFRMS Floodplain

Project Location

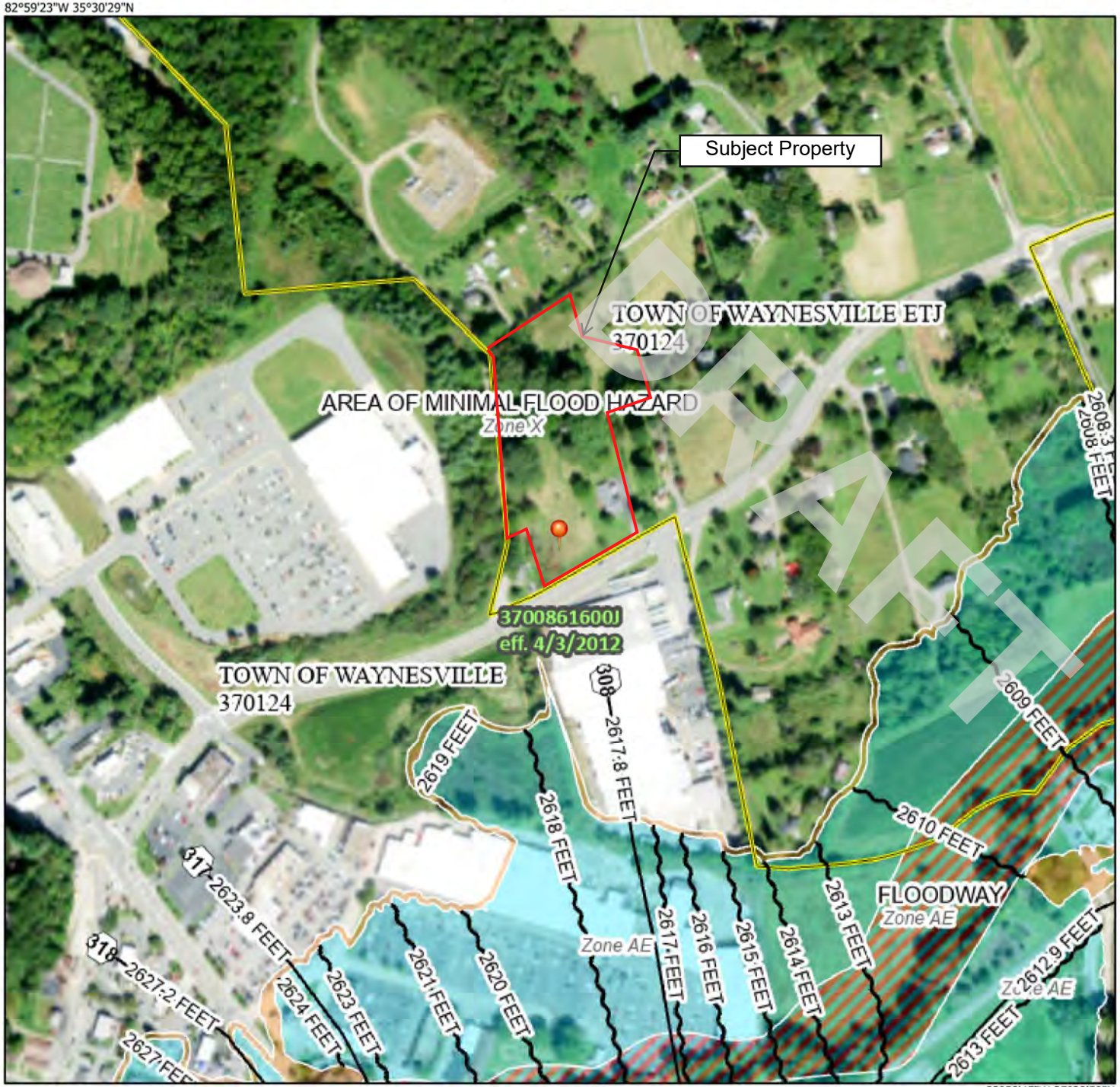
# Appendix J

# Floodplain Management

# National Flood Hazard Layer FIRMette

FEMA

82°59'23"W 35°30'29"N




82°58'45"W 35°29'59"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

*Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020*

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/8/2022 at 2:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# ATTACHMENT 12:

## Historic Preservation

SHPO Response; NCORR SHPO Submission Package; HUD TDAT Results; THPO Responses from the Catawba Indian Nation, Cherokee Nation, and Muscogee (Creek) Nation; and Chief and THPO Section 106 Review Packages Submitted to the Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee (Creek) Nation

# North Carolina Department of Natural and Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.


December 24, 2024

MEMORANDUM

TO: Andrea Gievers andrea.l.gievers@rebuild.nc.gov
Office of Resiliency and Recovery
NC Department of Public Safety

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer
RMB for Ramona M. Bartos

SUBJECT: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, 25-E-0000-0109, ER 22-3051

Thank you for your email of December 13, 2024, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We concur with NCORR's determination for the above-referenced project. We have determined that the project as proposed will not have an effect on any historic structures.

Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 12, 2024

Ms. Renee Gledhill-Earley
Environmental Review Coordinator
NC State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

Sent via email to the State Environmental Clearinghouse:
State.Clearinghouse@doa.nc.gov
kadisha.molyneaux@doa.nc.gov

RE: State Historic Preservation Office Request for Concurrence
Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Ms. Gledhill-Earley:

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800, we are providing information for your review and concurrence regarding the above-referenced project. The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and request for consultation. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office.** According to the NC SHPO's May 24, 2023 response to NCHFA, ***"[w]e have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed."*** (**Attachment 1**).

**Mailing Address:**
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

**Phone: (984) 833-5350**
www.ncdps.gov
www.rebuild.nc.gov

*An Equal Opportunity Employer*

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 2** for your review.

Proposed Project Description: Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. The proposed project site plans are included in **Attachment 2**.

NCORR completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review, there are publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. On the Subject Property, the Decatur Phillips House is reported gone in 2022 and was deemed ineligible in 2004. The adjacent 1-story cottage located at 11 Palmer Hill Drive and Phillips-Messer House were both deemed ineligible in 2004. The east adjacent HW0163 Phillips-Palmer House was determined eligible in 2004. The results are included in **Attachment 2**.

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

Attached for your review are copies of relevant documents supporting our finding, along with photographs and maps showing the location of the Subject Property. This documentation satisfies requirements set forth at §800.11(d). NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. A consultation request for the proposed project described herein will also be sent to the Catawba Indian Nation, Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee Creek Nation. In accordance with Section 101(d)(6)(B) of the NHPA of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action.

NCORR respectfully requests your review of the proposed project described herein. In accordance with §800.4(d)(1)(i), your office has *thirty days* to object to this finding. Please respond within this timeframe, otherwise we will assume that you concur with our finding. If you concur, please sign on the line below and return a copy of this letter by email to Andrea Gievers at Andrea.L.Gievers@Rebuild.NC.gov.

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Proposed Balsam Edge Enclosures:**

**Attachment 1:** NC SHPO Response to NCHFA Consultation dated May 24, 2023
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

# Section 106 ATTACHMENT 1:

# Previous NC SHPO Response for NCHFA Consultation

# North Carolina Department of Natural and Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.


May 24, 2023

MEMORANDUM

TO: Claudia Young csyoung@nchfa.com
NC Housing Finance Agency

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer

RSL for Ramona M. Bartos

SUBJECT: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, ER 22-3051

Thank you for your email of May 17, 2023, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

# Section 106 ATTACHMENT 2:

# Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

# Balsam Edge - NRHP Map

December 4, 2024

Balsam Edge

Haywood County Parcels

National Register of Historic Places

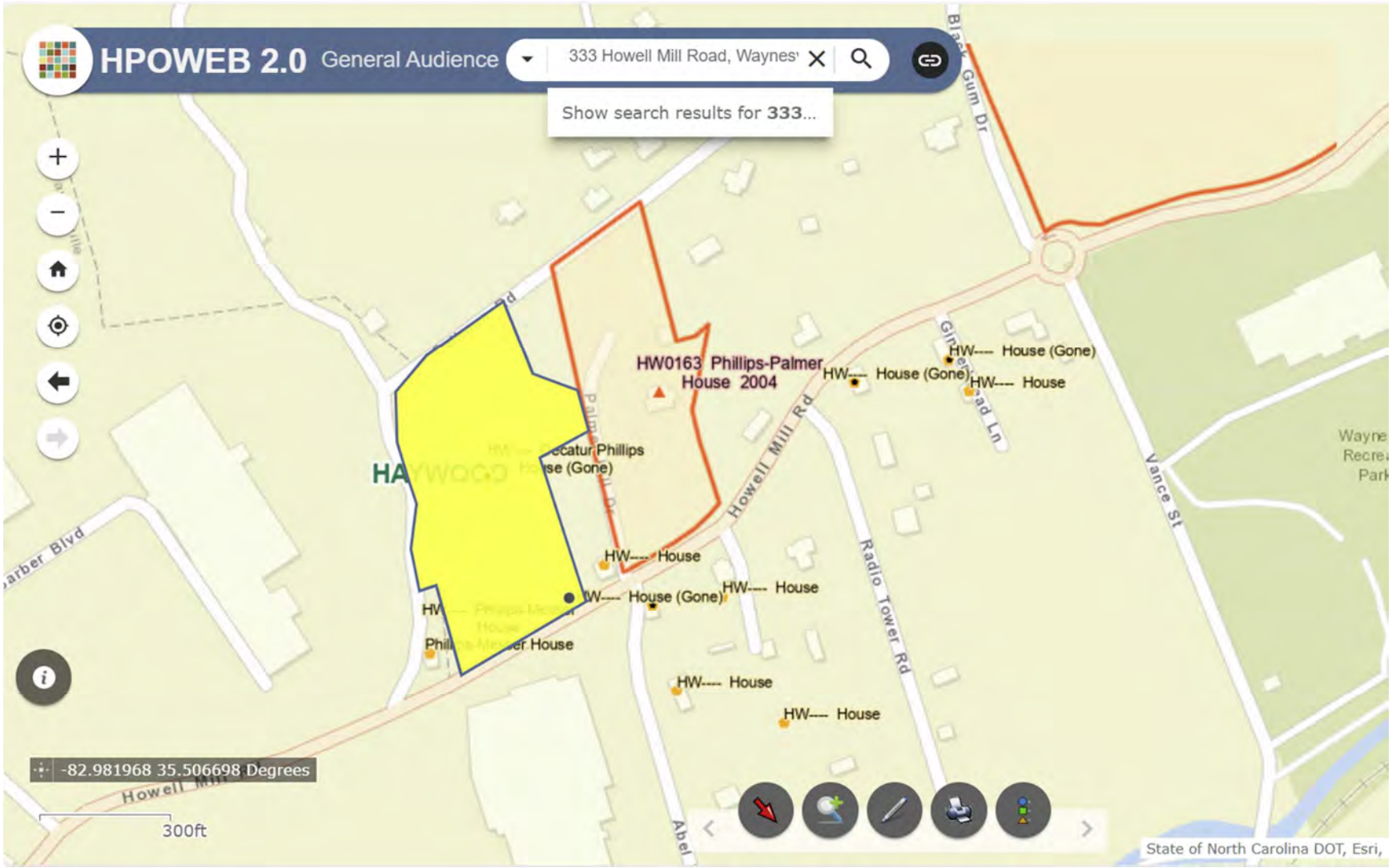
1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

# Balsam Edge – NC HPOWEB Map

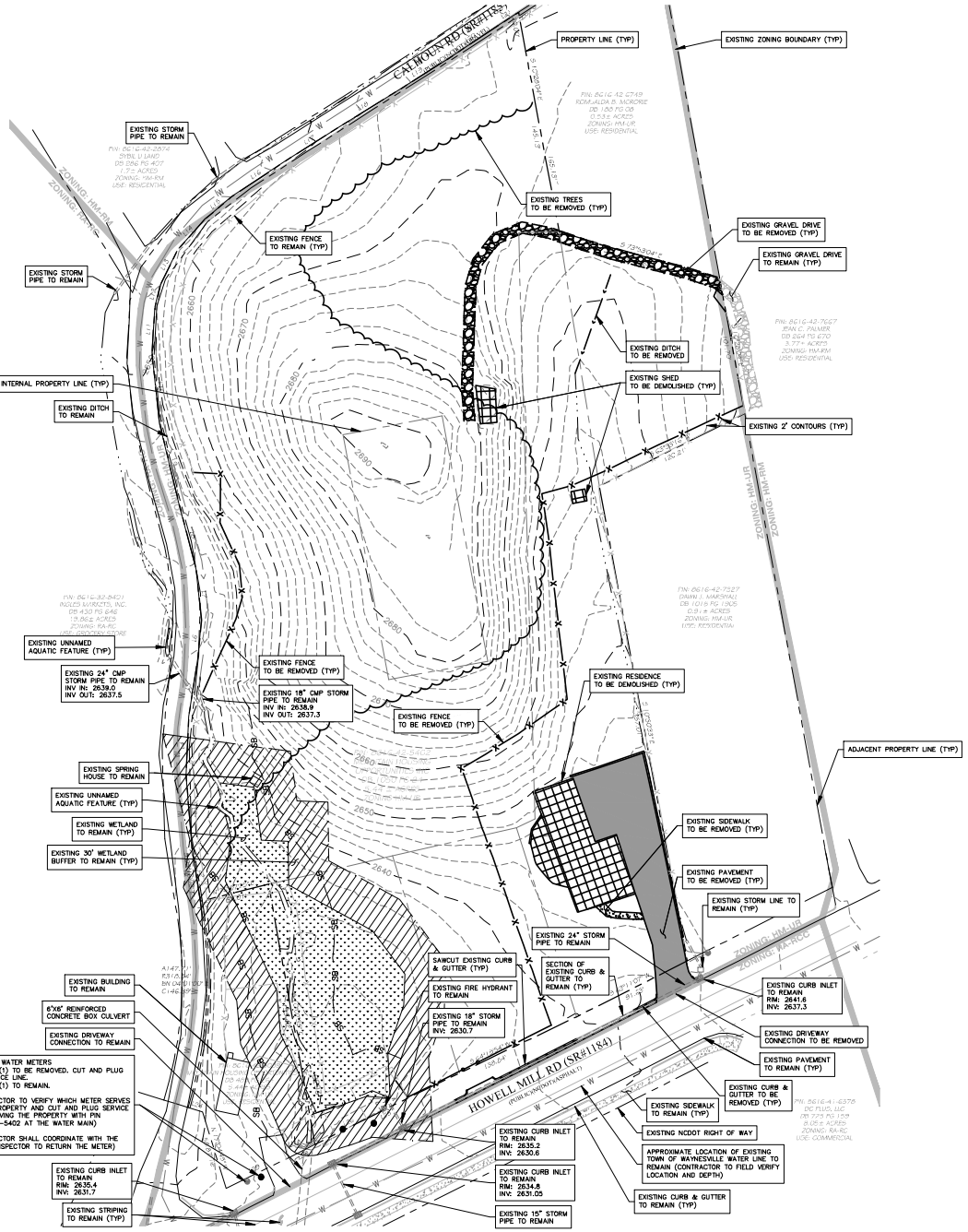


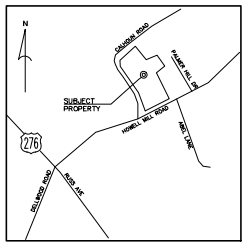
NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTION@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN - 1.5 SPACES PER UNIT
MAX - 1 SPACE PER 20 SPACES
UNITS - 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-771-4755 OR INSPECTION@CDCGO.COM

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
828.252.5388

BOONE OFFICE
1594 HWY 105 EXTENSION
SUITE 100-PMB 1077
BOONE, NC 28607
828.719.4477


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

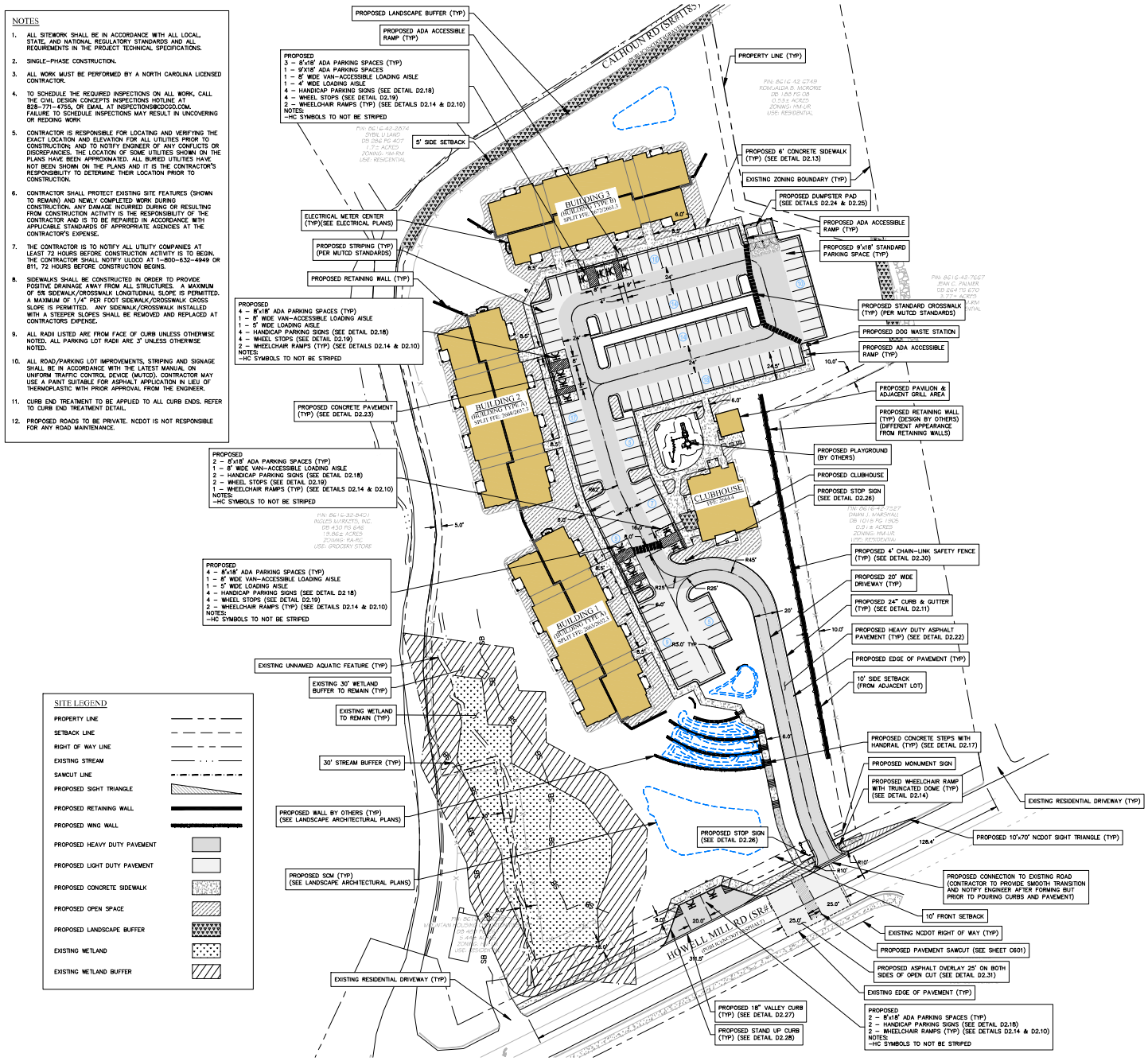
FOR REVIEW ONLY

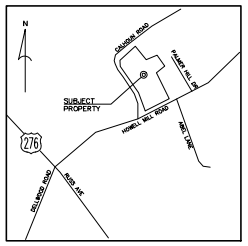
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101

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| CONTACT: | CHAD ASKEW, A.I.A. (704) 333-7862 |

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| | |
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REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

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GRAPHIC SCALE
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( IN FEET )
1 inch = 40 ft.

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Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
(828) 252-5388
NC FIRM LICENSE #: C-2439
SURVEYING OFFICE
104 MAST STORE MARKET
MOUNTAINAIR, NC 28761
(828) 252-5388
NC FIRM LICENSE #: C-4294

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

# Section 106 ATTACHMENT 3:

# Subject Property Photographs

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

15 - View of the northern adjoining property (residential).

16 - View of the eastern adjoining property (residential).

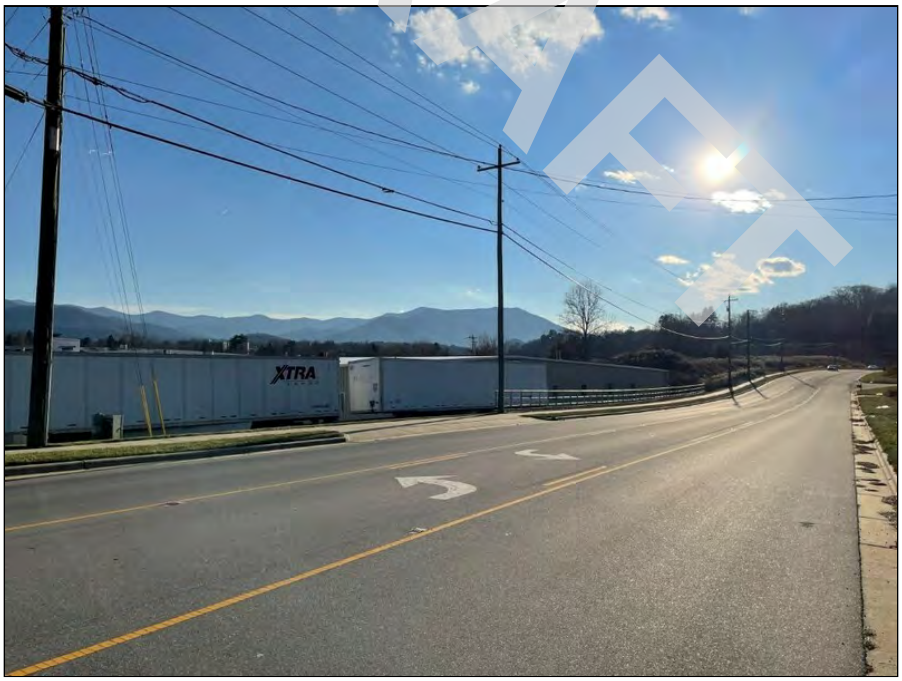
DRAFT

17 - View of the eastern adjoining property (residential) and an approximate 275-gallon heating oil AST.

18 - View along Howell Mill Road and the southern boundary of the subject property.

DRAFT

19 - View along Howell Mill Road and the southern boundary of the subject property.




20 - View of the southern adjoining property - Sunoco Plastics.

DRAFT

21 - View of the southwestern adjoining property (vacant residential).

22 - View of the western adjoining property (wooded).

DRAFT

# Tribal Directory Assessment Information

**Contact Information for Tribes with Interests in Haywood County, North Carolina**

| | Tribal Name | County Name |
|---|---|---|
| − | Catawba Indian Nation (aka Catawba Indian Tribe of South Carolina) | Haywood |

| Contact Name | Title | Mailing Address | Work Phone | Fax Number | Email Address | URL |
|---|---|---|---|---|---|---|
| Brian Harris | Chief | 996 Avenue of the Nations, Rock Hill, SC - 29730 | (803) 366-4792 | (803) 327-4853 | brian.harris@catawba.com | www.CatawbaCulture.org |
| Caitlin Rogers | Cultural Division Program Manager | 1536 Tom Steven Road, Rock Hill, SC - 29730 | (803) 328-2427 ext. 226 | (803) 328-5791 | caitlin.rogers@catawba.com | www.CatawbaCulture.org |
| Dr. Wenonah G. Haire | THPO and Catawba Cultural Center Executive Director | 1536 Tom Steven Road, Rock Hill, SC - 29730 | (803) 328-2427 ext. 224 | (803) 328-5791 | wenonah.haire@catawba.com | www.CatawbaCulture.org |

| | | |
|---|---|---|
| − | Cherokee Nation | Haywood |

| Contact Name | Title | Mailing Address | Work Phone | Fax Number | Email Address | URL |
|---|---|---|---|---|---|---|
| Elizabeth Toombs | THPO | PO Box 948, Tahlequah, OK - 74465 | (918) 453-5389 | | elizabeth-toombs@cherokee.org | http://www.cherokee.org |

| | | |
|---|---|---|
| − | Eastern Band of Cherokee Indians | Haywood |

| Contact Name | Title | Mailing Address | Work Phone | Fax Number | Email Address | URL |
|---|---|---|---|---|---|---|
| Richard Sneed<br>Michell Hicks | Principal Chief | 88 Council House Loop Road, Cherokee, NC - 28719 | (828) 359-7000<br>PO Box 1927, Cherokee, NC 28719 | (828) 359-0344 | ashlstep@nc-cherokee.com | https://ebci.com/ |
| Russell Townsend | Tribal Historic Preservation Specialist | Qualla Boundary P.O. Box 455, Cherokee, NC - 28719 | (828) 554-6851<br>PO Box 455, Qualla Boundary Reservation, Cherokee, NC 28719 | (828) 497-1590 | syerka@nc-cherokee.com | https://ebci.com/ |

| − | Muscogee (Creek) Nation | Muscogee Creek Nation | Haywood |
|---|---|---|---|

| Contact Name | Title | Mailing Address | Work Phone | Fax Number | Email Address | URL |
|---|---|---|---|---|---|---|
| Turner Hunt | THPO | Po Box 580, Okmulgee, OK - 74447 | 918-732-7759 | 918-758-0649 | section106@muscogeenation.com | http://www.mcn-nsn.gov |
| David Hill | Principal Chief | 1007 East Eufaula Street, Okmulgee, OK - 74447 | (800) 482-1979 | (918) 756-2911 | section106@muscogeenation.com | http://www.mcn-nsn.gov |

1 - 4 of 4 results PO Box 580, Okmulgee, OK 74447 918-732-7601 « ‹ 1 › » 10

**Catawba Indian Nation**
**Tribal Historic Preservation Office**
**1536 Tom Steven Road**
**Rock Hill, South Carolina 29730**

**Office 803-328-2427**
**Fax 803-328-5791**

January 17, 2025

Attention: Andrea Gievers
NCORR – Environmental
P.O. Box 110465
Durham, NC 27709

| Re. THPO # | TCNS # | Project Description |
|---|---|---|
| 2025-1119-1 | | Balsam Edge – 333 Howell Mill Road, Waynesville, NC |

Dear Ms. Gievers,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

## Gievers, Andrea

**From:** Shadow Hardbarger <shadow-hardbarger@cherokee.org>
**Sent:** Tuesday, January 28, 2025 4:02 PM
**To:** Gievers, Andrea
**Subject:** [External] Balsam Ridge - HUD CDBG-DR Program

You don't often get email from shadow-hardbarger@cherokee.org. Learn why this is important

**CAUTION:** External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Good Afternoon, Andrea Gievers:

Thank you for the proposed report for Balsam Ridge. We previously responded with a no impact letter and still concur with this response.

GV,
Shadow Hardbarger, Historic Preservation Technician
Cherokee Nation
Tribal Historic Preservation Office
P.O. Box 948
Tahlequah, OK 74465-0948
918-453-5000 Ext. 7209

## Gievers, Andrea

**From:** Logan Guthrie <lguthrie@muscogeenation.com>
**Sent:** Thursday, December 26, 2024 3:54 PM
**To:** Gievers, Andrea
**Subject:** [External] Section 106 Review - HUD CDBG-DR Program Balsam Edge 333 Howell Mill Road Waynesville, NC 28786

You don't often get email from lguthrie@muscogeenation.com. Learn why this is important

**CAUTION:** External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Good afternoon.

Thank you for your correspondence regarding the proposal to update and adopt the EA completed by the NCHFA for the Balsam Edge project. After review, the Muscogee Nation is unaware of any Muscogee sacred sites, burial grounds, or significant cultural resources located within the immediate project area. However, as the project is located in an area that is of general historic interest to the Tribe, we request that work be stopped and our office contacted immediately if any Native American cultural materials are encountered. This stipulation should be placed on the construction plans to ensure contractors are aware of it. If construction should affect subsurface areas beyond the defined APE, further consultation will be necessary. Please feel free to contact me with any further questions or concerns.

Mvto,

**Logan Guthrie**
Cultural Technician
Historic and Cultural Preservation Department
The Muscogee (Creek) Nation
P.O. Box 580 | Okmulgee, OK 74447
T (918) 732-7759 | F (918) 758-0649
lguthrie@mucogeenation.com
www.MuscogeeNation.com

DISCLAIMER: This communication, along with any documents, files or attachments, is intended only for the use of the addressee and may contain legally privileged and confidential information. If you are not the intended recipient, you are hereby notified that any dissemination, distribution or copying of any information contained in or attached to this communication is strictly prohibited. If you have received this message in error, please notify the sender immediately and destroy the original communication and its attachments without reading, printing or saving in any manner. Please consider the environment before printing this e-mail.

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 16, 2024

Chief Brian Harris
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, SC 29730

RE: Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Chief Harris:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office** (**Attachment 1**). In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 2** for your review.

Proposed Project Description: Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. The proposed project site plans are included in **Attachment 2**.

NCORR completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review, there are publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. On the Subject Property, the Decatur Phillips House is reported gone in 2022 and was deemed ineligible in 2004. The adjacent 1-story cottage located at 11 Palmer Hill Drive and Phillips-Messer House were both deemed ineligible in 2004. The east adjacent HW0163 Phillips-Palmer House was determined eligible in 2004. The results are included in **Attachment 2**.

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in Attachment 3. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

The proposed project information has been sent to the NC SHPO and the Cherokee Nation, Eastern Band of Cherokee Indians, and Muscogee Creek Nation in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Catawba Indian Nation Response for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

cc: Dr. Wenonah George Haire, THPO, Catawba Indian Nation, 1536 Tom Steven Road, Rock Hill, SC 29730

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 16, 2024

Dr. Wenonah George Haire
ATTN: THPO
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, SC 29730

RE: Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Dr. Wenonah George Haire:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office** (**Attachment 1**). In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed

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ATTN: THPO Comments
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Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Catawba Indian Nation Response for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

cc: Chief Brian Harris, Catawba Indian Nation, 996 Avenue of the Nations, Rock Hill, SC 29730

# Section 106 ATTACHMENT 1:

# Previous Catawba Indian Nation Response for NCHFA Consultation

**Catawba Indian Nation**
**Tribal Historic Preservation Office**
**1536 Tom Steven Road**
**Rock Hill, South Carolina 29730**

**Office 803-328-2427**
**Fax 803-328-5791**

June 26, 2023

Attention: Claudia Young
NC Housing Finance Agency
3508 Bush Street
Raleigh, NC 27611-8066

| Re. THPO # | TCNS # | Project Description |
|---|---|---|
| 2023-872-7 | | Proposed Balsam Edge – 291 Howell Mill Road, Waynesville, NC 28786 |

Dear Ms. Young,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

# Section 106 ATTACHMENT 2:

# Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

# Balsam Edge - NRHP Map

December 4, 2024

Balsam Edge

Haywood County Parcels

National Register of Historic Places

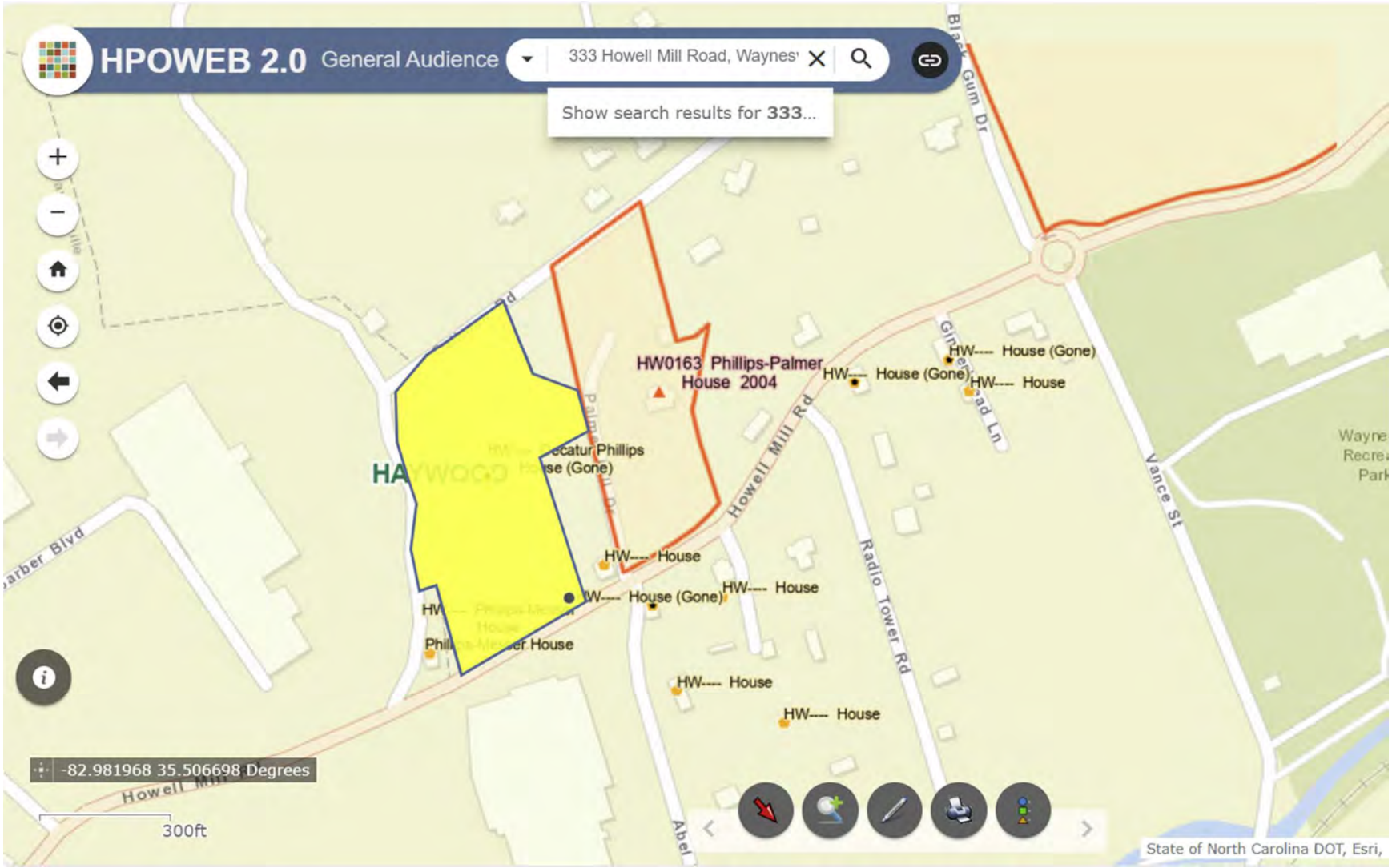
1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

# Balsam Edge – NC HPOWEB Map

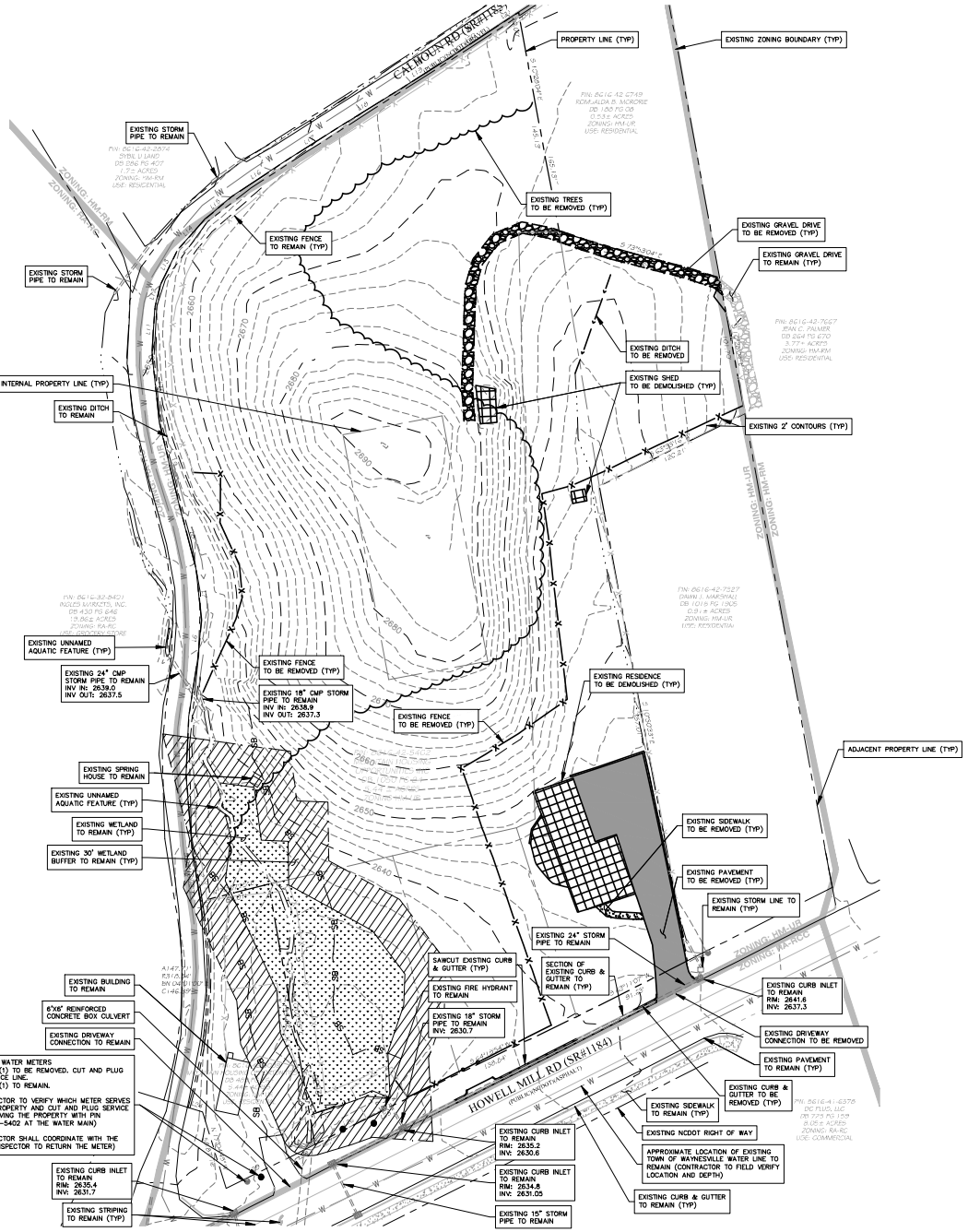


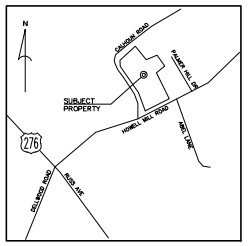
NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTION@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN - 1.5 SPACES PER UNIT
MAX - 1 SPACE PER 20 SPACES
UNITS - 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-771-4755 OR INSPECTION@CDCGO.COM

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
828.252.5388

BOONE OFFICE
1594 HWY 105 EXTENSION
SUITE 100-PMB 1077
BOONE, NC 28607
828.719.4477


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

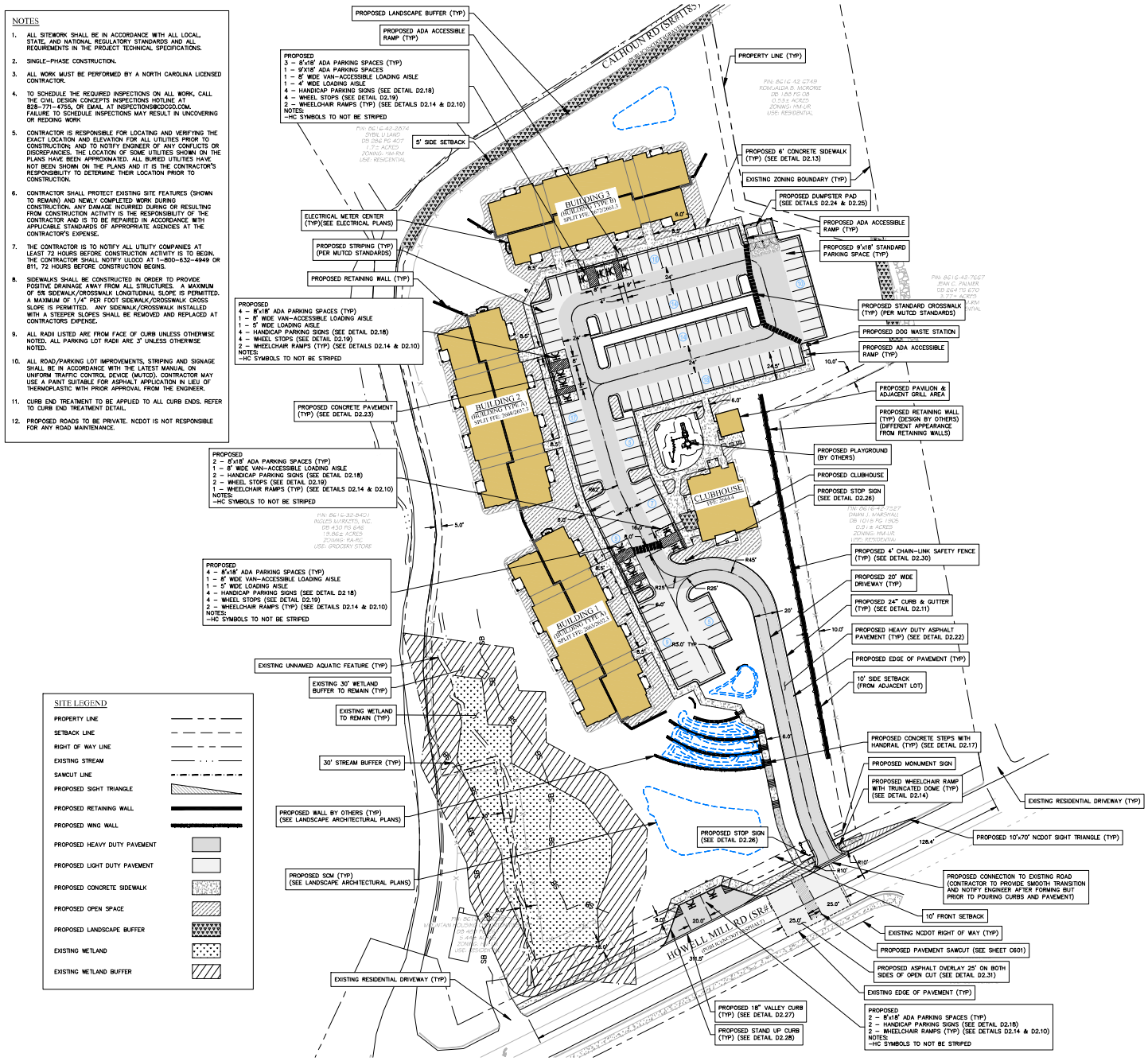
FOR REVIEW ONLY

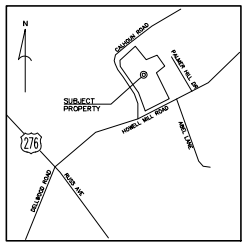
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101

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ASHEVILLE, NC 28801
(828) 252-5388
NC FIRM LICENSE #: C-2439
SURVEYING OFFICE
104 MAST STORE MARKET
MOUNTAINAIR, NC 28761
(828) 252-5388
NC FIRM LICENSE #: C-4294

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

# Section 106 ATTACHMENT 3:

# Subject Property Photographs

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 16, 2024

Ms. Elizabeth Toombs
Cherokee Nation
P.O. Box 948
Tahlequah, OK 74465

RE: Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Ms. Toombs:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office** (**Attachment 1**). In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 2** for your review.

Proposed Project Description: Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. The proposed project site plans are included in **Attachment 2**.

NCORR completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review, there are publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. On the Subject Property, the Decatur Phillips House is reported gone in 2022 and was deemed ineligible in 2004. The adjacent 1-story cottage located at 11 Palmer Hill Drive and Phillips-Messer House were both deemed ineligible in 2004. The east adjacent HW0163 Phillips-Palmer House was determined eligible in 2004. The results are included in **Attachment 2**.

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in Attachment 3. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south

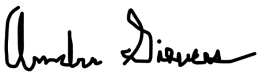
Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

The proposed project information has been sent to the NC SHPO and the Catawba Indian Nation, Eastern Band of Cherokee Indians, and Muscogee Creek Nation in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,



Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Cherokee Nation Response for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

# Section 106 ATTACHMENT 1:

# Previous Cherokee Nation Response for NCHFA Consultation

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CHEROKEE NATION®
P.O. Box 948 • Tahlequah, OK 74465-0948
918-453-5000 • www.cherokee.org

**Chuck Hoskin Jr.**
*Principal Chief*
ᏩᏊ ᎦᎸᏊ ᏕᏁᏕ
ᏅᎩᏫᏳᎯ

**Bryan Warner**
*Deputy Principal Chief*
ᏕᏃᎯᏊᏙᎯ
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June 23, 2023

Caludia Young
North Carolina Housing Finance Agency
P.O. Box 28066
Raleigh, NC 27611-8066

Re: Balsam Edge – 291 Howell Mill Rd

Ms. Caludia Young:

The Cherokee Nation (Nation) is in receipt of your correspondence about **Balsam Edge**, and appreciates the opportunity to provide comment upon this project. Please allow this letter to serve as the Nation's interest in acting as a consulting party to this proposed project.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office (Office) reviewed this project, cross referenced the project's legal description against our information, and found no instances where this project intersects or adjoins such resources. Thus, the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time.

However, the Nation requests that the North Carolina Housing Finance Agency (NCHFA) halt all project activities immediately and re-contact our Offices for further consultation if items of cultural significance are discovered during the course of this project. Additionally, the Nation requests that the NCHFA conduct appropriate inquiries with other pertinent Tribal and Historic Preservation Office regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer
Cherokee Nation Tribal Historic Preservation Office
elizabeth-toombs@cherokee.org
918.453.5389

# Section 106 ATTACHMENT 2:

# Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

# Balsam Edge - NRHP Map

December 4, 2024

Balsam Edge

Haywood County Parcels

National Register of Historic Places

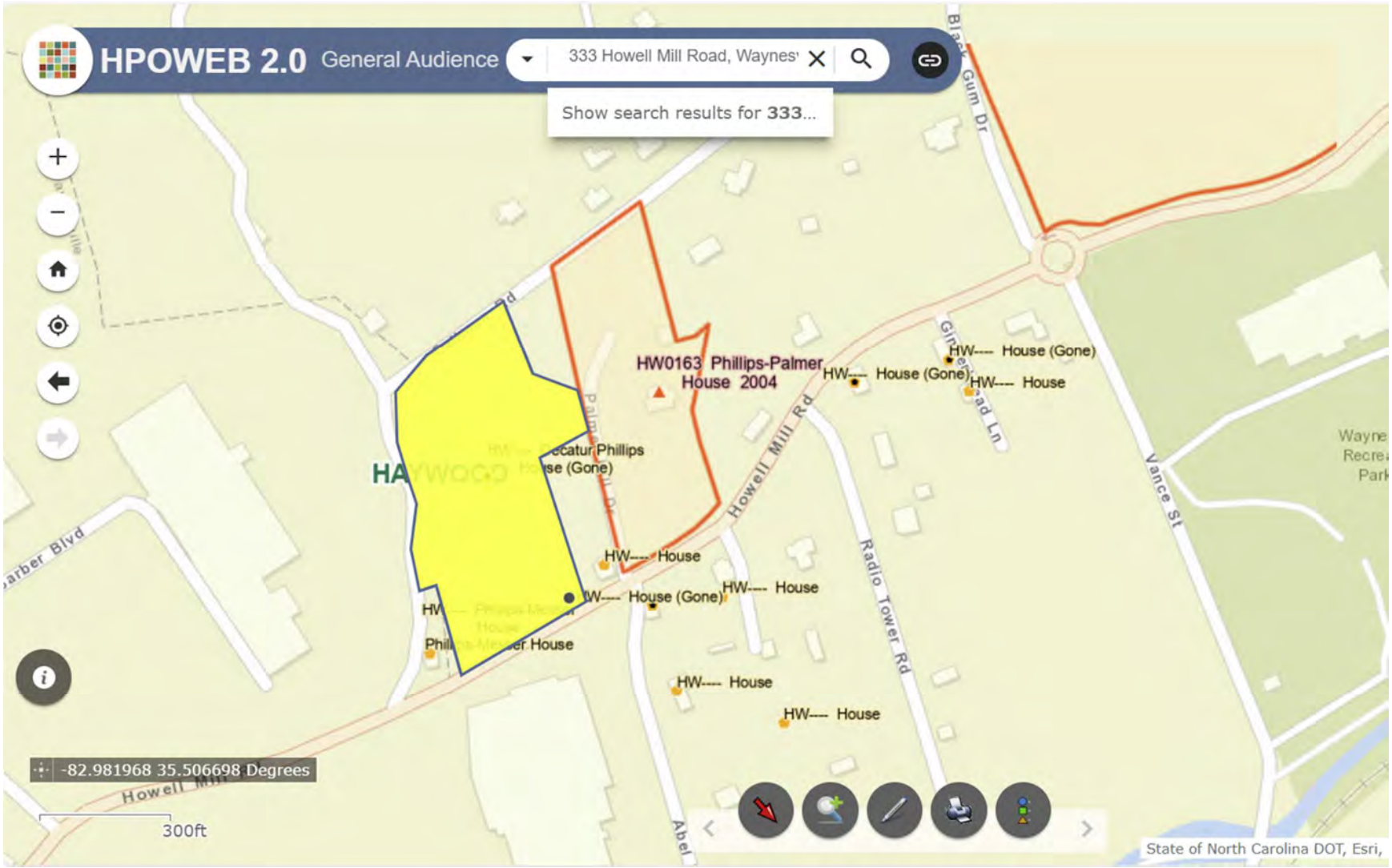
1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

# Balsam Edge – NC HPOWEB Map

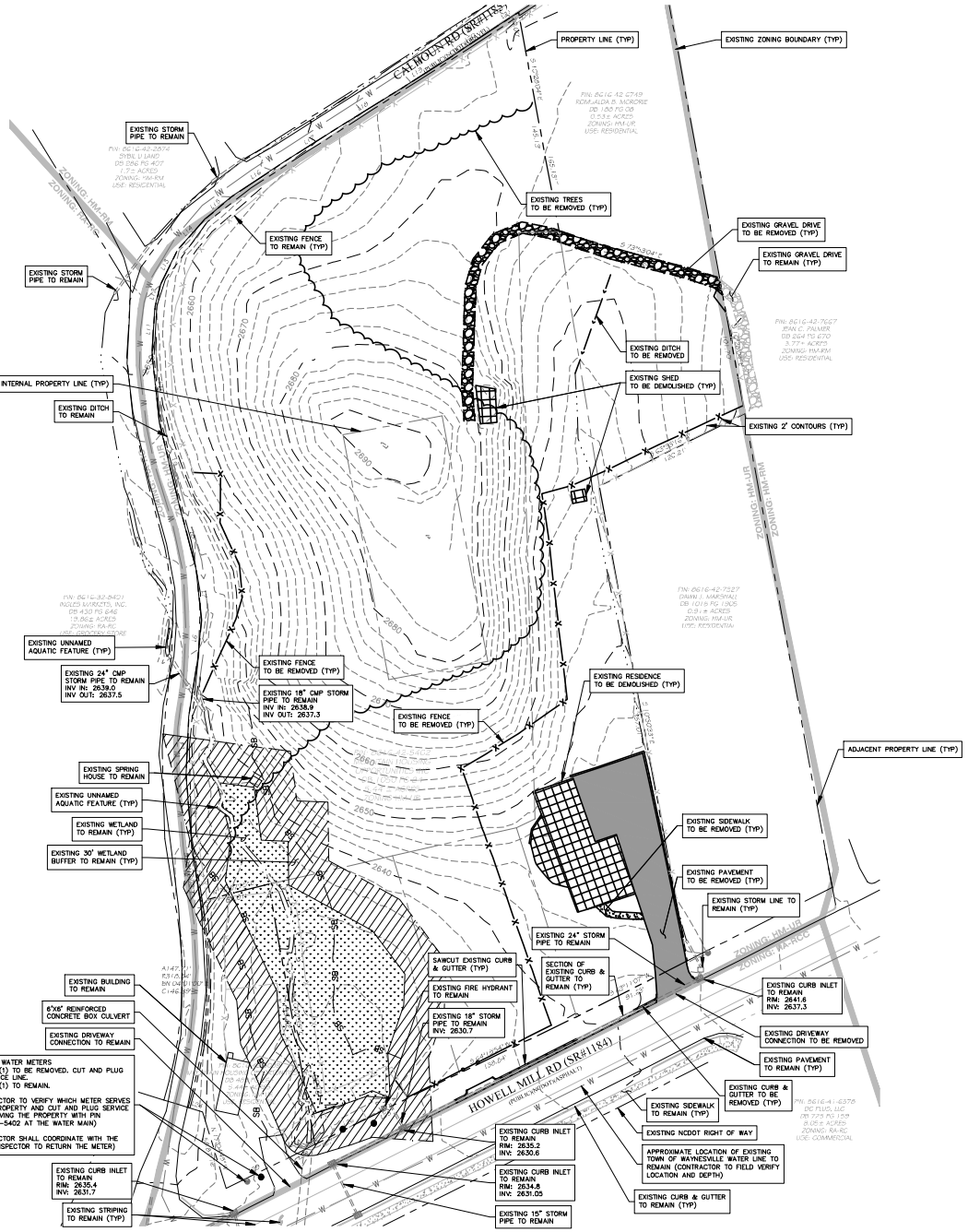


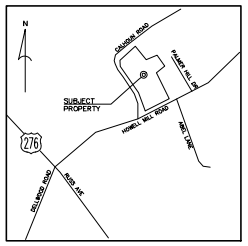
NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTION@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN - 1.5 SPACES PER UNIT
MAX - 1 SPACE PER 20 SPACES
UNITS - 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-771-4755 OR INSPECTION@CDCGO.COM

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
828.252.5388

BOONE OFFICE
1594 HWY 105 EXTENSION
SUITE 100-PMB 1077
BOONE, NC 28607
828.719.4477


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

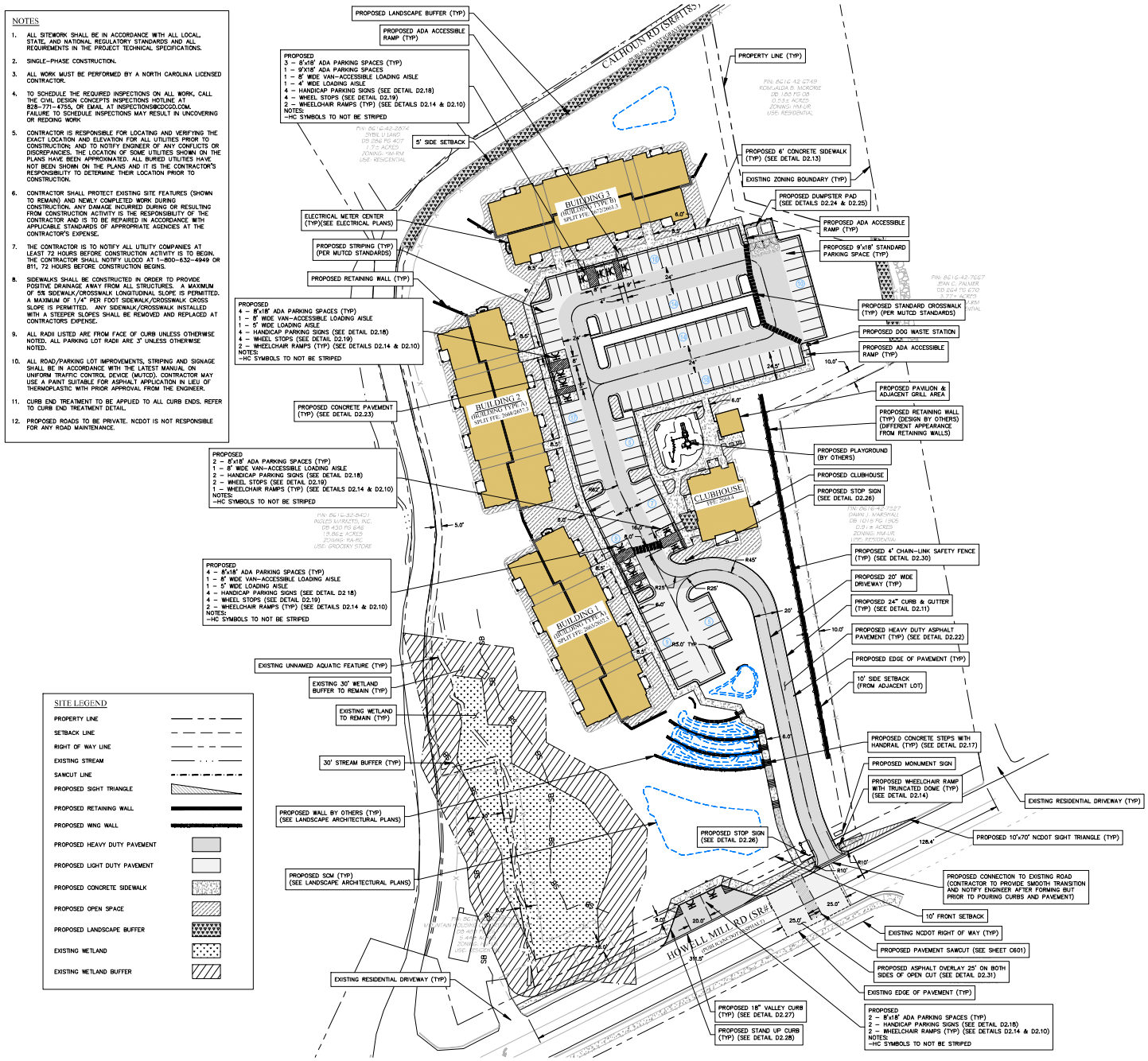
FOR REVIEW ONLY

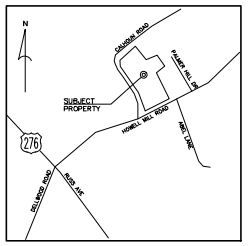
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101

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| CONTACT: | WARREN SUGG, P.E. (828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO 333 WEST TRADE STREET, SUITE 300 CHARLOTTE, NC 28202 |
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ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
(828) 252-5388
NC FIRM LICENSE #: C-2439
SURVEYING OFFICE
104 MAST STORE MARKET
MOUNTAINAIR, NC 28761
(828) 252-5388
NC FIRM LICENSE #: C-4294

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

# Section 106 ATTACHMENT 3:

# Subject Property Photographs

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 16, 2024

Chief Michell Hicks
Eastern Band of Cherokee Indians,
P.O. Box 1927
Cherokee, NC 28719

RE: Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Chief Hicks:

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**Mailing Address:**
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

**Phone: (984) 833-5350**
www.ncdps.gov
www.rebuild.nc.gov

*An Equal Opportunity Employer*

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 2** for your review.

Proposed Project Description: Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. The proposed project site plans are included in **Attachment 2**.

NCORR completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review, there are publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. On the Subject Property, the Decatur Phillips House is reported gone in 2022 and was deemed ineligible in 2004. The adjacent 1-story cottage located at 11 Palmer Hill Drive and Phillips-Messer House were both deemed ineligible in 2004. The east adjacent HW0163 Phillips-Palmer House was determined eligible in 2004. The results are included in **Attachment 2**.

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in Attachment 3. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

The proposed project information has been sent to the NC SHPO and the Catawba Indian Nation, Cherokee Nation, and Muscogee Creek Nation in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Submission for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

cc: Mr. Russell Townsend, THPO, Eastern Band of Cherokee Indians, P.O. Box 455, Qualla Boundary Reservation, Cherokee, NC 28719

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 16, 2024

Mr. Russell Townsend, THPO
Eastern Band of Cherokee Indians
P.O. Box 455
Qualla Boundary Reservation
Cherokee, NC 28719

RE: Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Mr. Townsend:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office** (**Attachment 1**). In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed

project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 2** for your review.

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NCORR completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review, there are publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. On the Subject Property, the Decatur Phillips House is reported gone in 2022 and was deemed ineligible in 2004. The adjacent 1-story cottage located at 11 Palmer Hill Drive and Phillips-Messer House were both deemed ineligible in 2004. The east adjacent HW0163 Phillips-Palmer House was determined eligible in 2004. The results are included in **Attachment 2**.

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in Attachment 3. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the

east by residences and the Waynesville Recreation Center and Vance Street Park; to the south Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

The proposed project information has been sent to the NC SHPO and the Catawba Indian Nation, Cherokee Nation, and Muscogee Creek Nation in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Submission for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

cc: Chief Michell Hicks, Eastern Band of Cherokee Indians, P.O. Box 1927, Cherokee, NC 28719

# Section 106 ATTACHMENT 1:

# Previous Eastern Band of Cherokee Indians Submission for NCHFA Consultation

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PO Box 28066
Raleigh, NC
27611-8066

8701

Eastern Band of Cherokee Indians
Attn: Richard Sneed
88 Council House Loop Road
Cherokee, NC 28719

NORTH CAROLINA
HOUSING
FINANCE
AGENCY

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public agency

Scott Farmer
Executive Director

PO Box 28066
Raleigh, NC
27611-8066

3508 Bush Street
Raleigh, NC
27609-7509

TEL. 919-877-5700
FAX 919-877-5701
www.nchfa.com

May 17, 2023

Eastern Band of Cherokee Indians
Attn: Richard Sneed
88 Council House Loop Road
Cherokee, NC 28719

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear Richard Sneed:

The North Carolina Housing Finance Agency is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the North Carolina Housing Finance Agency has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The North Carolina Housing Finance Agency will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The proposed project is located on an approximate includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. The brick residence and shed on the site will be demolished prior to site redevelopment.
Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property. The proposed project consists of the construction of an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI.

If HUD elects to approve the proposed project, it will become an undertaking subject to review under section 106 of the National Historic Preservation Act, 54 USC 306108, and its implementing regulations, 36 CFR Part 800.

HUD defines the area of potential effect (APE), as an area that includes all project construction and exaction activity required to construct, modify, improve, or maintain any facilities; any right of way or easement areas necessary for the construction, operation and maintenance of the project; all areas used for exaction of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., weather it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The State Historic Preservation Office has reviewed the proposed project. A letter dated February 9, 2023 states they are aware of no historic resources which would be affected by the project, and offered no comment on the project as proposed.

This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? Enclosed is a map that shows the project area.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/. HUD's process for tribal consultation under Section 106 is described in a Notice available at https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58.

If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

# USPS Tracking®

FAQs >

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**Tracking Number:**

## 9171969009350299746280

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Your item has been delivered and is available at a PO Box at 8:43 am on May 22, 2023 in CHEROKEE, NC 28719.

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**Delivered, PO Box**

CHEROKEE, NC 28719
May 22, 2023, 8:43 am

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27611-8066

8701

Eastern Band of Cherokee Indians
Attn: Russell Townsend
Qualla Boundary
PO Box 455
Cherokee, NC 28719

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May 17, 2023

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Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

# Section 106 ATTACHMENT 2:

# Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

# Balsam Edge - NRHP Map

December 4, 2024

Balsam Edge

Haywood County Parcels

National Register of Historic Places

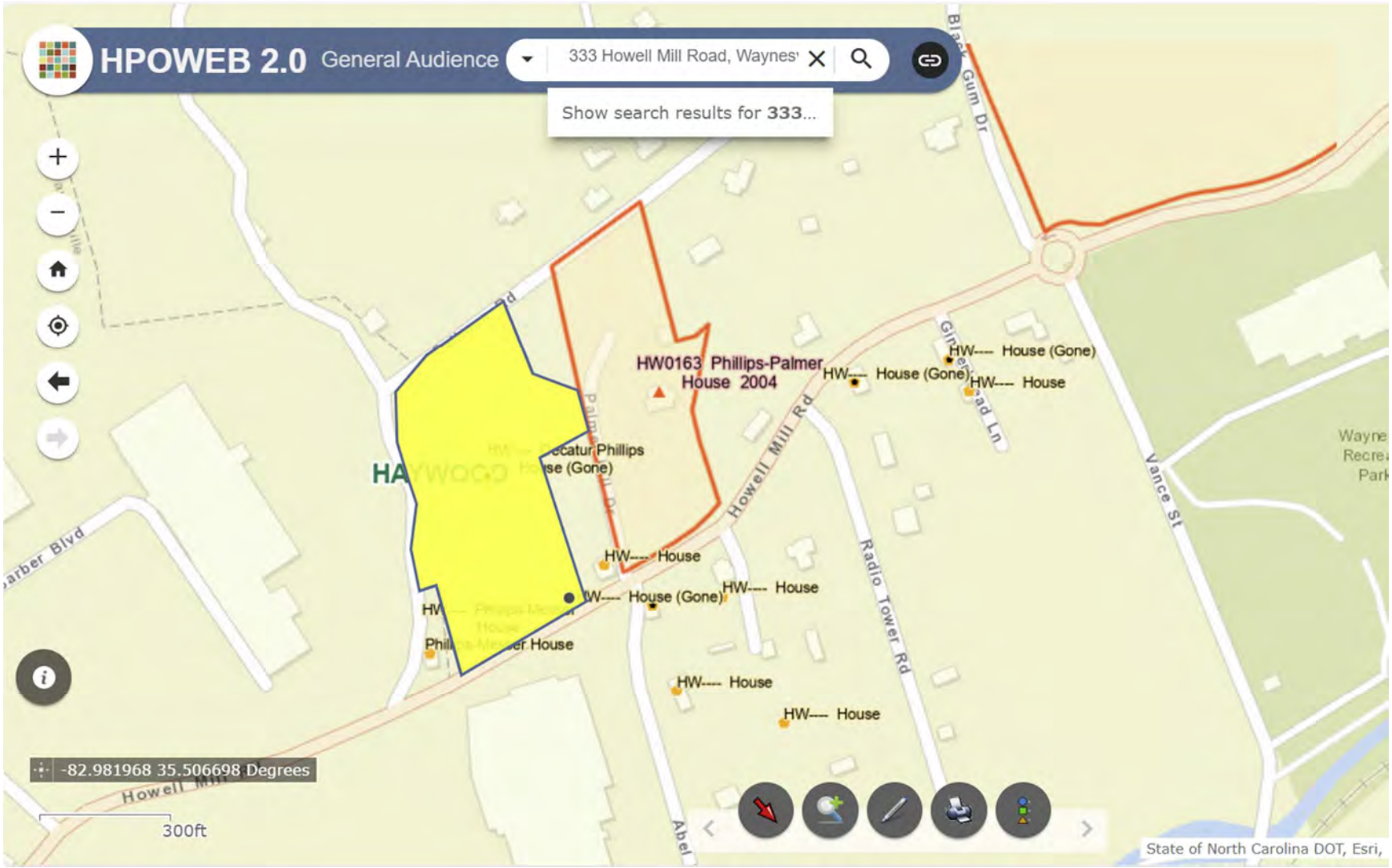
1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

# Balsam Edge – NC HPOWEB Map

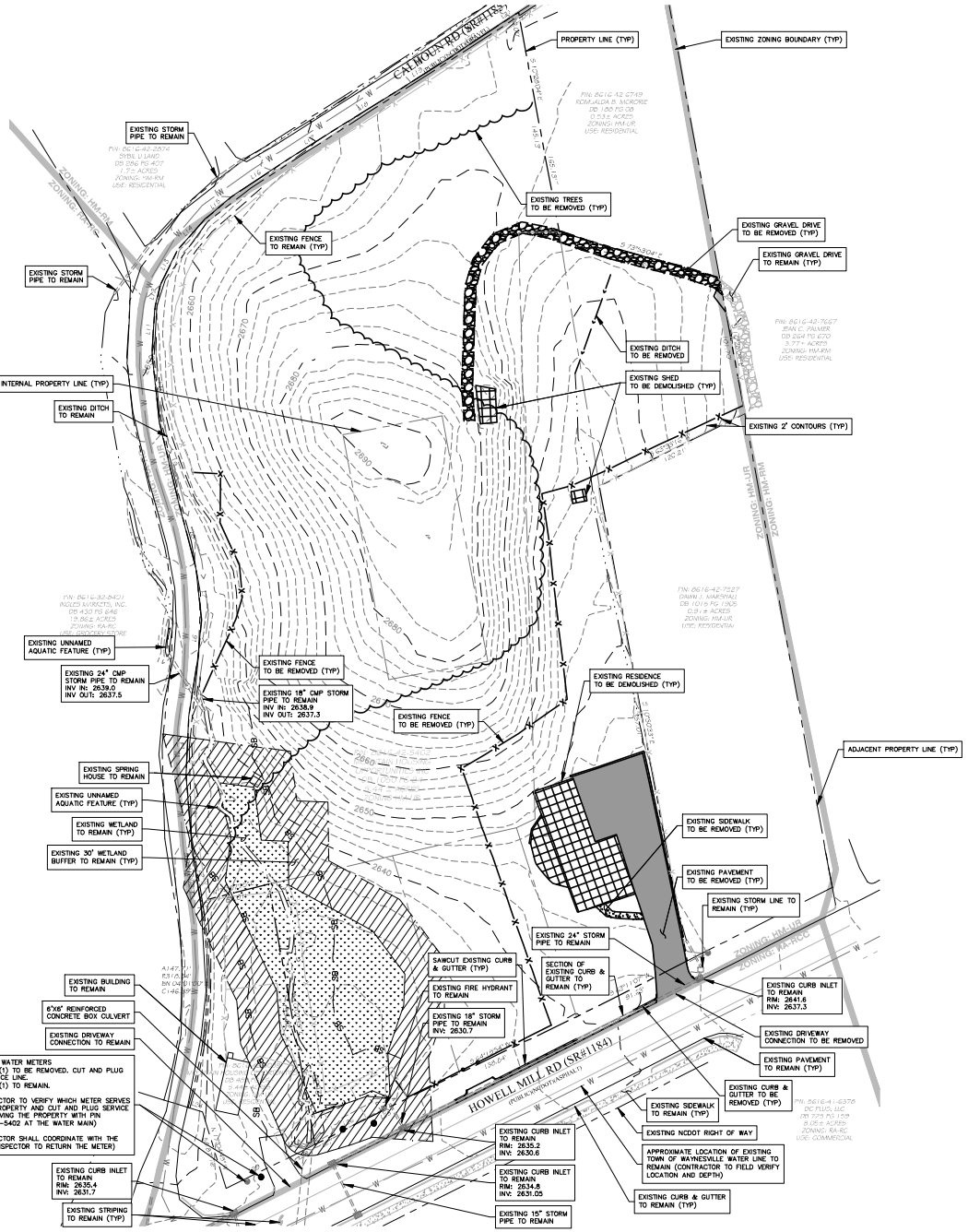


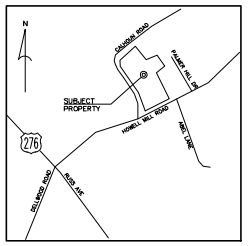
NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTION@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN - 1.5 SPACES PER UNIT
MAX - 1 SPACE PER 20 SPACES
UNITS - 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-771-4755 OR INSPECTION@CDCGO.COM

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.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Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
828.252.5388

BOONE OFFICE
1594 HWY 105 EXTENSION
SUITE 100-PMB 1077
BOONE, NC 28607
828.719.4477


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

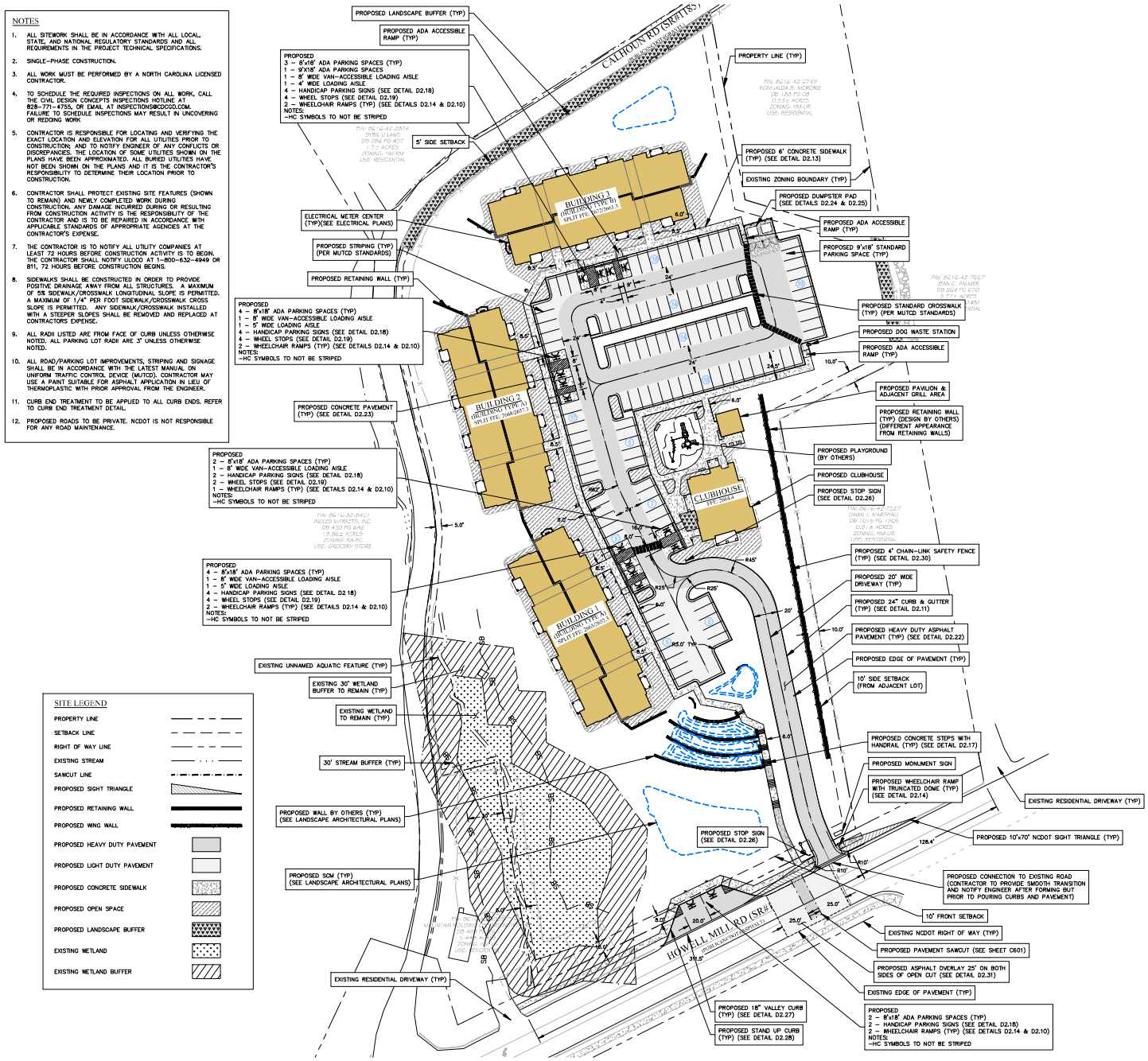
FOR REVIEW ONLY

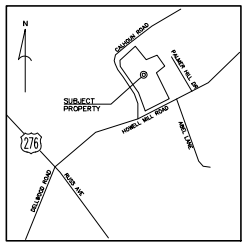
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101




VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC 64 CLINGMAN AVENUE, SUITE 101 ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE (864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A. 168 PATTON AVENUE ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E. (828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO 333 WEST TRADE STREET, SUITE 300 CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A. (704) 333-7862 |

PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

| | |
|---|---|
| VEHICULAR: | |
| REQUIRED SPACES: | MIN – 1.5 SPACES PER UNIT MAX – 1 SPACE PER 20 SPACES UNITS – 84 |
| SPACES PROVIDED: | 128 |
| HANDICAPPED SPACES: | |
| SPACES REQUIRED: 5 | SPACES PROVIDED: 16 |

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
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| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

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| | IMPERVIOUS | PERVIOUS |
|---|---|---|
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| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

811 Know what's below, Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
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1 inch = 40 ft.

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CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
(828) 252-5388
NC FIRM LICENSE #: C-2439
SURVEYING OFFICE
104 MAST STORE MARKET
MOUNTAINAIR, NC 28761
(828) 252-5388
NC FIRM LICENSE #: C-4294

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

# Section 106 ATTACHMENT 3:

# Subject Property Photographs

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Pryor Gibson, Interim Director

December 16, 2024

Chief David Hill
Muscogee Creek Nation
P.O. Box 580
Okmulgee, OK 74447

RE: Section 106 Review - HUD CDBG-DR Program
Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

Dear Chief Hill:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. **NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023 which was previously reviewed by your Office** (**Attachment 1**). In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

**Mailing Address:**
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

**Phone: (984) 833-5350**
www.ncdps.gov
www.rebuild.nc.gov

*An Equal Opportunity Employer*

The State of North Carolina was adversely impacted by Tropical Storm Fred from August 16, 2021 to August 18, 2021. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Tropical Storm Fred. This proposed project will increase affordable housing inventory for families at or below 60% of the area median income (AMI) with 34 units reserved for families at or below 50% AMI. Therefore, funding for the proposed project will be provided in part by NCORR's Affordable Housing Development Fund Program for Tropical Storm Fred storm recovery activities in North Carolina.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of an approximate 5.31-acre lot located at 333 Howell Mill Road, Waynesville, Haywood County, NC 28786 and identified as Haywood County Parcel ID number (PIN) #8616-42-5414. The proposed project location maps are included in **Attachment 2** for your review.

Proposed Project Description: Balsam Edge (proposed project) is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. The proposed project site plans are included in **Attachment 2**.

NCORR completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review, there are publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. On the Subject Property, the Decatur Phillips House is reported gone in 2022 and was deemed ineligible in 2004. The adjacent 1-story cottage located at 11 Palmer Hill Drive and Phillips-Messer House were both deemed ineligible in 2004. The east adjacent HW0163 Phillips-Palmer House was determined eligible in 2004. The results are included in **Attachment 2**.

Currently, the Subject Property consists of grass-covered and wooded land with a vacant, single-family residence in the southeast and a dilapidated, modular movable shed in the east. Between 1905 and 1935, the Subject Property was developed with a residence in the central portion of the property. Around 1950, the current southeastern approximately 1,880-square foot residence with a paved driveway was constructed. By 1956, outbuildings were constructed in the central portion of the property. From 1956 to 2022, the Subject Property consisted of cleared and wooded land with the central residence and outbuildings and current southeastern residence. In March 2022, the central residence and outbuildings were razed. Since that time to the present, the Subject Property has remained grass-covered and wooded land with the southeastern residence. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in Attachment 3. The Subject Property is bounded to the west by a shopping mall with Ingle Foods, T-Mobile, Great Clips, and BenchMark Physical Therapy; to the east by residences and the Waynesville Recreation Center and Vance Street Park; to the south

Sonoco warehouse and Waynesville Plaza Shopping Mall; and adjacent residences in the southeast and southwest corners.

The proposed project information has been sent to the NC SHPO and the Catawba Indian Nation, Cherokee Nation, and Eastern Band of Cherokee Indians in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Submission for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

cc: Mr. Turner Hunt, THPO, Muscogee Creek Nation, P.O. Box 580, Okmulgee, OK 74447

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
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Pryor Gibson, Interim Director

December 16, 2024

Mr. Turner Hunt, THPO
Muscogee Creek Nation
P.O. Box 580
Okmulgee, OK 74447

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Balsam Edge
333 Howell Mill Road
Waynesville, NC 28786

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NCORR - Environmental
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Durham, NC 27709

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Sincerely,

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

**Enclosures:**
**Attachment 1:** Previous Submission for NCHFA Consultation
**Attachment 2:** Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans
**Attachment 3:** Subject Property Photographs

cc: Chief David Hill, Muscogee Creek Nation, P.O. Box 580, Okmulgee, OK 74447

# Section 106 ATTACHMENT 1:

# Previous Muscogee (Creek) Nation Submission for NCHFA Consultation

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Muscogee (Creek) Nation
Attn: Turner Hunt
PO Box 580
Okmulgee, OK 74447

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Scott Farmer
Executive Director

PO Box 28066
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3508 Bush Street
Raleigh, NC
27609-7509

TEL. 919-877-5700
FAX 919-877-5701
www.nchfa.com

May 17, 2023

Muscogee (Creek) Nation
Attn: Turner Hunt
PO Box 580
Okmulgee, OK 74447

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear Turner Hunt:

The North Carolina Housing Finance Agency is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the North Carolina Housing Finance Agency has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The North Carolina Housing Finance Agency will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The proposed project is located on an approximate includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. The brick residence and shed on the site will be demolished prior to site redevelopment.
Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property. The proposed project consists of the construction of an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI.

If HUD elects to approve the proposed project, it will become an undertaking subject to review under section 106 of the National Historic Preservation Act, 54 USC 306108, and its implementing regulations, 36 CFR Part 800.

HUD defines the area of potential effect (APE), as an area that includes all project construction and exaction activity required to construct, modify, improve, or maintain any facilities; any right of way or easement areas necessary for the construction, operation and maintenance of the project; all areas used for exaction of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., weather it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The State Historic Preservation Office has reviewed the proposed project. A letter dated February 9, 2023 states they are aware of no historic resources which would be affected by the project, and offered no comment on the project as proposed.

This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? Enclosed is a map that shows the project area.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/. HUD's process for tribal consultation under Section 106 is described in a Notice available at https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58.

If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

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8701

Muscogee (Creek) Nation
Attn: David Hill
1007 East Eufaula Street
Okmulgee, OK 74447

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AGENCY

A self-supporting
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Executive Director

PO Box 28066
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27611-8066

3508 Bush Street
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27609-7509

TEL. 919-877-5700
FAX 919-877-5701
www.nchfa.com

May 17, 2023

Muscogee (Creek) Nation
Attn: David Hill
1007 East Eufaula Street
Okmulgee, OK 74447

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear David Hill:

The North Carolina Housing Finance Agency is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the North Carolina Housing Finance Agency has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The North Carolina Housing Finance Agency will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The proposed project is located on an approximate includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. The brick residence and shed on the site will be demolished prior to site redevelopment.
Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property. The proposed project consists of the construction of an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI.

If HUD elects to approve the proposed project, it will become an undertaking subject to review under section 106 of the National Historic Preservation Act, 54 USC 306108, and its implementing regulations, 36 CFR Part 800.

HUD defines the area of potential effect (APE), as an area that includes all project construction and exaction activity required to construct, modify, improve, or maintain any facilities; any right of way or easement areas necessary for the construction, operation and maintenance of the project; all areas used for exaction of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., weather it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The State Historic Preservation Office has reviewed the proposed project. A letter dated February 9, 2023 states they are aware of no historic resources which would be affected by the project, and offered no comment on the project as proposed.

This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? Enclosed is a map that shows the project area.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/. HUD's process for tribal consultation under Section 106 is described in a Notice available at https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58.

If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

# Section 106 ATTACHMENT 2:

# Proposed Project Location, NRHP and NC HPOWEB Maps and Site Plans

# Balsam Edge - Aerial Map

December 4, 2024

Balsam Edge

Haywood County Parcels

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NC CGIA, Maxar, Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Town of Waynesville |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/7/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
October 31, 2024

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

# Balsam Edge - NRHP Map

December 4, 2024

Balsam Edge

Haywood County Parcels

National Register of Historic Places

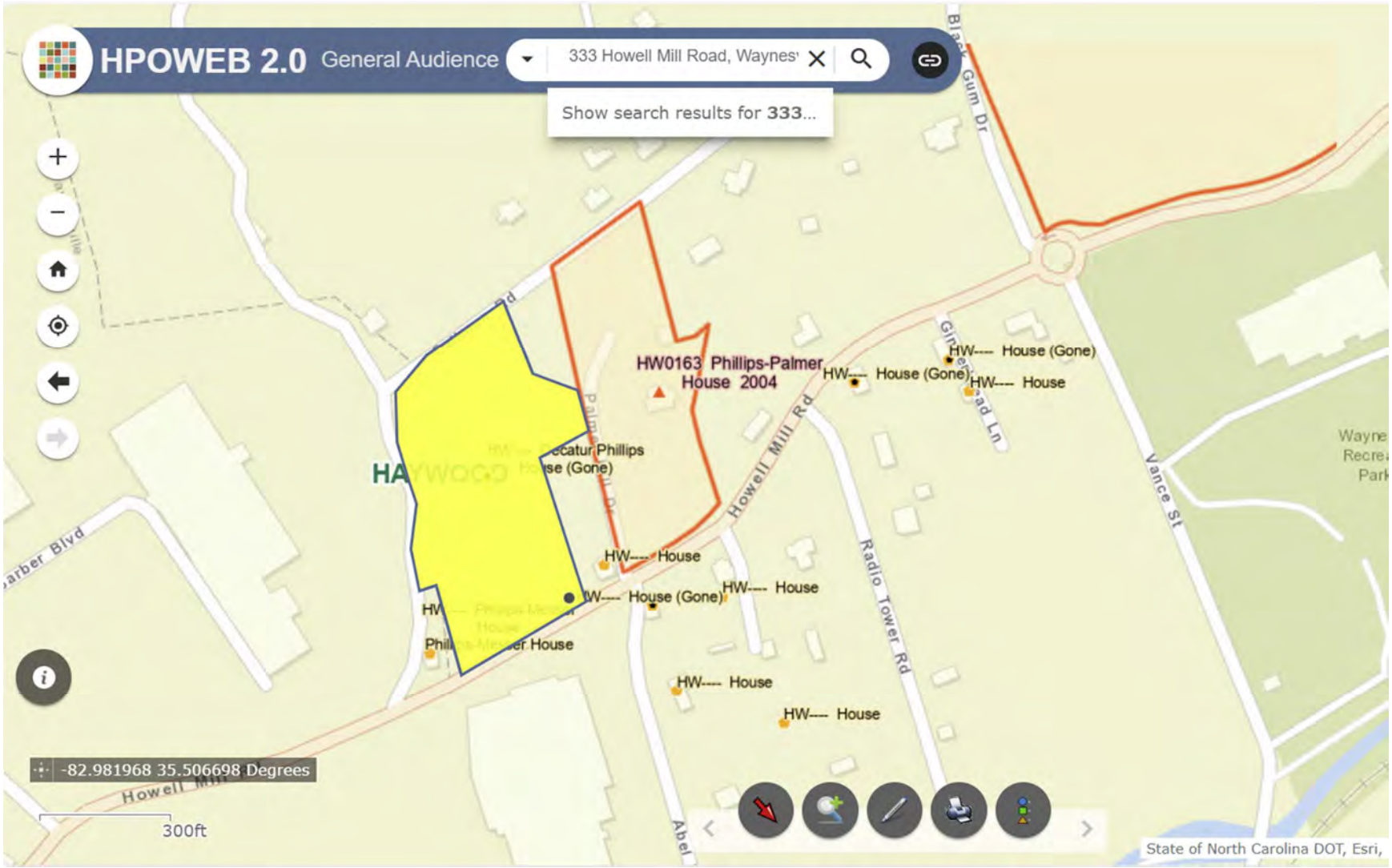
1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Esri Community Maps Contributors, State of North Carolina DOT, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph,

# Balsam Edge – NC HPOWEB Map

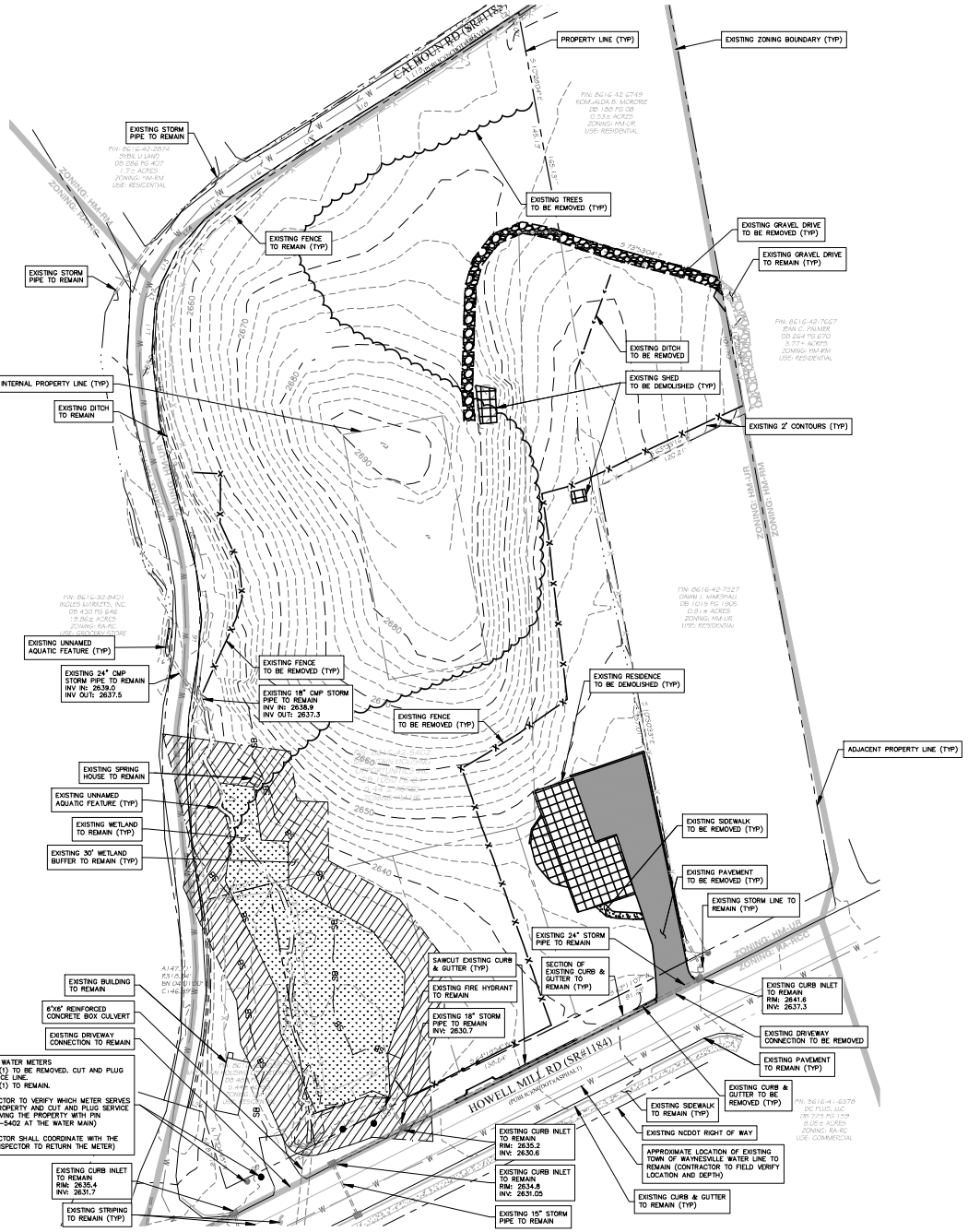


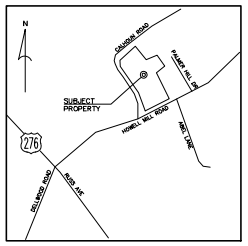
NOTES

1. ALL SITEWORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL REGULATORY STANDARDS AND ALL REQUIREMENTS IN THE PROJECT TECHNICAL SPECIFICATIONS.
2. CONTRACTOR TO VERIFY WITH ENGINEER THAT THE REQUIRED GRADING/LAND DISTURBANCE AND DRIVEWAY PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
3. ALL WORK MUST BE PERFORMED BY A NORTH CAROLINA LICENSED CONTRACTOR.
4. TO SCHEDULE THE REQUIRED INSPECTIONS ON ALL WORK, CALL THE CIVIL DESIGN CONCEPTS INSPECTIONS HOTLINE AT 828-771-4755, OR EMAIL AT INSPECTION@CDCGO.COM. FAILURE TO SCHEDULE INSPECTIONS MAY RESULT IN UNCOVERING OR REDOING WORK
5. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES PRIOR TO CONSTRUCTION; AND TO NOTIFY ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE LOCATION OF SOME UTILITIES SHOWN ON THE PLANS HAVE BEEN APPROXIMATED. ALL BURIED UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR LOCATION PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL PROTECT EXISTING SITE FEATURES CALLED OUT TO REMAIN DURING CONSTRUCTION. ANY DAMAGE INCURRED DURING OR RESULTING FROM CONSTRUCTION ACTIVITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES AT LEAST 72 HOURS BEFORE CONSTRUCTION ACTIVITY IS TO BEGIN. THE CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 OR 811, 72 HOURS BEFORE CONSTRUCTION BEGINS.
8. EROSION CONTROL IS FIELD PERFORMANCE BASED AND CONTRACTOR SHALL INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES NECESSARY TO ASSURE MAXIMUM PROTECTION OF THE SITE DURING DEMOLITION AND CLEARING.
9. CONTRACTOR TO COORDINATE TIMING OF DEMOLITION AND CONSTRUCTION WITH OWNER TO ENSURE EXISTING FACILITIES REMAIN ACCESSIBLE.
10. ALL DEBRIS, STRUCTURES AND UTILITIES TO BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE ARE NOT SHOWN ON THIS PLAN. ANY ADDITIONAL DEBRIS, STRUCTURES AND UTILITIES ENCOUNTERED DURING CONSTRUCTION, WHICH IN THE OPINION OF THE ENGINEER SHOULD BE DEMOLISHED AND REMOVED, SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTORS EXPENSE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS.

EXISTING CONDITIONS & DEMO LEGEND

- PROJECT PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- STORM PIPES/STRUCTURES TO BE REMOVED
- STORM PIPES/STRUCTURES TO REMAIN
- EXISTING FENCE
- EXISTING FENCE TO BE REMOVED
- CONCRETE TO BE REMOVED
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- EXISTING GRAVEL DRIVE
- EXISTING GRAVEL DRIVE TO BE REMOVED
- EXISTING WETLAND
- EXISTING WETLAND BUFFER




VICINITY MAP
(NOT TO SCALE)

DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-5402;; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 1050/24 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE = 84 UNITS |

PARKING CALCULATIONS:

VEHICULAR:
REQUIRED SPACES: MIN - 1.5 SPACES PER UNIT
MAX - 1 SPACE PER 20 SPACES
UNITS - 84
SPACES PROVIDED: 128

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 16

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

CIVIC SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

CDC INSPECTIONS HOTLINE:
828-771-4755 OR INSPECTION@CDCGO.COM

811 Know what's below. Call before you dig.

NORTH

GRAPHIC SCALE
40 0 20 40 80 120
( IN FEET )
1 inch = 40 ft.


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
828.252.5388

BOONE OFFICE
1594 HWY 105 EXTENSION
SUITE 100-PMB 1077
BOONE, NC 28607
828.719.4477


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

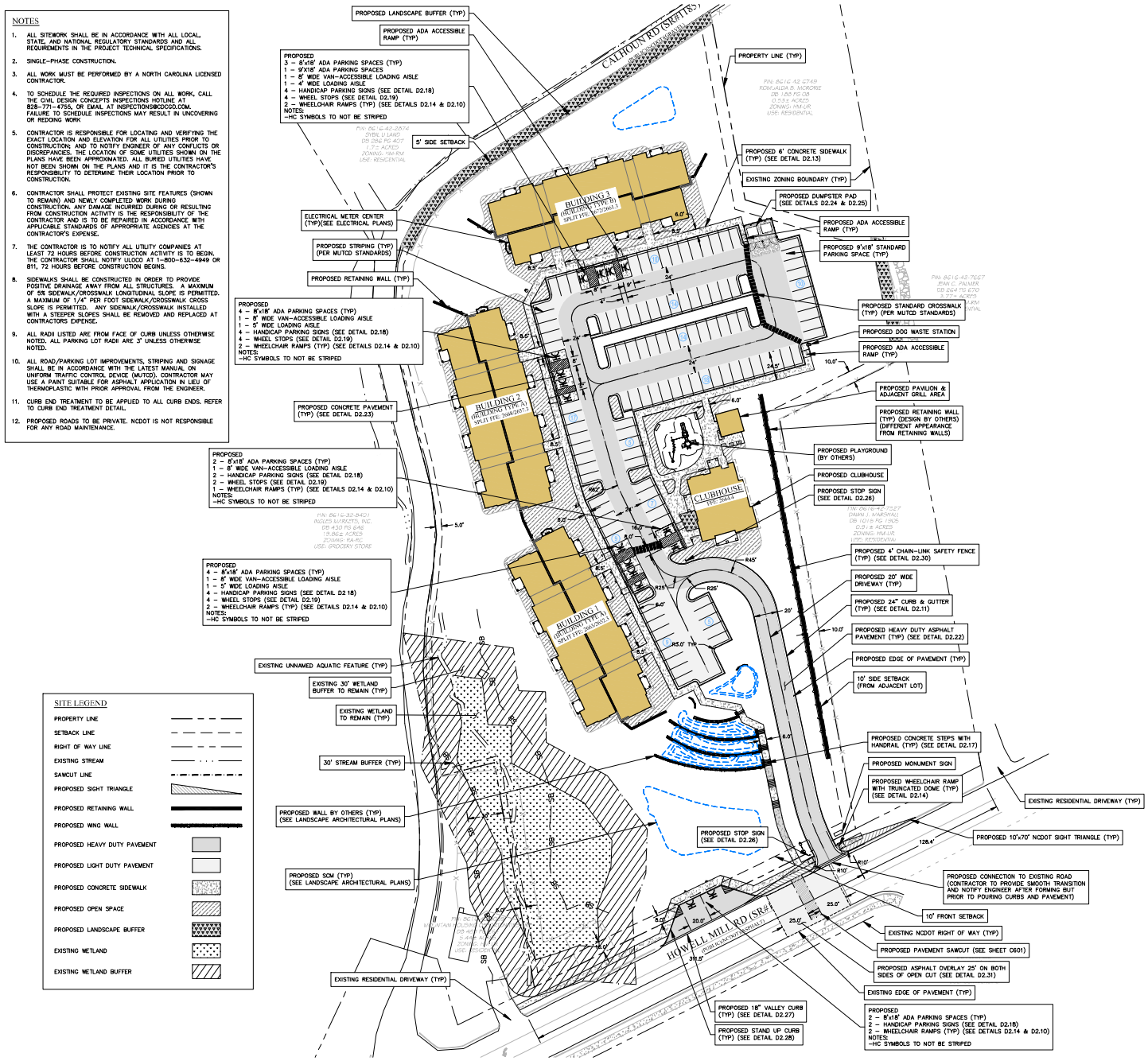
FOR REVIEW ONLY

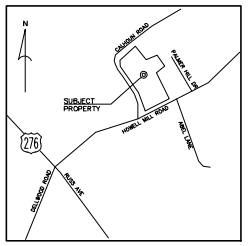
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101

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CDC Civil Design Concepts, PA
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
(828) 252-5388
NC FIRM LICENSE #: C-2439
SURVEYING OFFICE
104 MAST STORE MARKET
MOUNTAINAIR, NC 28761
(828) 252-5388
NC FIRM LICENSE #: C-4294

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030669 DAVID BROWN 12-6-24

Project No: 2017
Issue Date: 12/06/2024
Issued For: NCHFA SUBMITTAL

SITE PLAN

C201

# Section 106 ATTACHMENT 3:

# Subject Property Photographs

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

FedEx Express **Package US Airbill**

FedEx Tracking Number **8132 1470 1878**

Form ID No. 0200 — **Sender's Copy**

**1 From** *Please print and press hard.*

Date 12/16/24 Sender's FedEx Account Number 8950-9899-0

Sender's Name Andrea Gievers Phone (845) 682-1700

Company NCORR

Address 3237 182nd Ln NE Dept./Floor/Suite/Room

City East Bethel State MN ZIP 55092

**2 Your Internal Billing Reference** First 24 characters will appear on invoice. Balsam Edge

**3 To**

Recipient's Name Chief Brian Harris Phone ( )

Company Catawba Indian Nation

Address 996 Avenue of the Nations Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Rock Hill State SC ZIP 29730

☐ Hold Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

☐ Hold Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

**4 Express Package Service** * To most locations. — ***Packages up to 150 lbs.*** *For packages over 150 lbs., use the FedEx Express Freight US Airbill.*

**Next Business Day**

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

**2 or 3 Business Days**

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☒ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless Saturday Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☐ Other

**6 Special Handling and Delivery Signature Options** Fees may apply. See the FedEx Service Guide.

☐ Saturday Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery.

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only.

**Does this shipment contain dangerous goods?** One box must be checked.

☐ No ☐ Yes — As per attached Shipper's Declaration. ☐ Yes — Shipper's Declaration not required. ☐ Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Restrictions apply for dangerous goods — see the current FedEx Service Guide. ☐ Cargo Aircraft Only

**7 Payment** *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages Total Weight Total Declared Value†

____ ____ lbs. $ ____ .00

†Our liability is limited to US$100 unless you declare a higher value. See back for details. By using this airbill you agree to the service conditions on the back of this airbill and in the current FedEx Service Guide, including terms that limit our liability.

644

Rev. Date 3/15 • Part #167002 • ©2012–2015 FedEx • PRINTED IN U.S.A. RRDA 00/00

**Ship it. Track it. Pay for it. All online.** Go to fedex.com.

---

FedEx Express **Package US Airbill**

FedEx Tracking Number **8132 1470 1856**

Form ID No. 0200 — **Sender's Copy**

**1 From** *Please print and press hard.*

Date 12/16/24 Sender's FedEx Account Number 8950-9899-0

Sender's Name Andrea Gievers Phone (845) 682-1700

Company NCORR

Address 3237 182nd Ln NE Dept./Floor/Suite/Room

City East Bethel State MN ZIP 55092

**2 Your Internal Billing Reference** First 24 characters will appear on invoice. Balsam Edge

**3 To**

Recipient's Name Dr. Wenonah George Haire Phone ( )

Company Catawba Indian Nation, THPO

Address 1536 Tom Steven Rd Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Rock Hill State SC ZIP 29730

☐ Hold Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.

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Restrictions apply for dangerous goods — see the current FedEx Service Guide. ☐ Cargo Aircraft Only

**7 Payment** *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender — Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages Total Weight Total Declared Value†

____ ____ lbs. $ ____ .00

†Our liability is limited to US$100 unless you declare a higher value. See back for details. By using this airbill you agree to the service conditions on the back of this airbill and in the current FedEx Service Guide, including terms that limit our liability.

644

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## U.S. Postal Service
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*Domestic Mail Only*

For delivery information, visit our website at *www.usps.com®*.

Cherokee, NC 28719 Chief Hicks

| | |
|---|---|
| Certified Mail Fee | $4.85 |
| Extra Services & Fees (check box, add fee as appropriate) | |
| ☐ Return Receipt (hardcopy) | $0.00 |
| ☐ Return Receipt (electronic) | $0.00 |
| ☐ Certified Mail Restricted Delivery | $0.00 |
| ☐ Adult Signature Required | $0.00 |
| ☐ Adult Signature Restricted Delivery | $ |
| Postage | $2.59 |
| Total Postage and Fees | $7.44 |

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Sent To: Chief Michell Hicks, EBCI
Street and Apt. No., or PO Box No.: PO Box 1927
City, State, ZIP+4®: Cherokee, NC 28719

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0001 6590 2372

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Cherokee, NC 28719 Mr. Tawasend THPO

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|---|---|
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| ☐ Return Receipt (hardcopy) | $0.00 |
| ☐ Return Receipt (electronic) | $0.00 |
| ☐ Certified Mail Restricted Delivery | $0.00 |
| ☐ Adult Signature Required | $0.00 |
| ☐ Adult Signature Restricted Delivery | $ |
| Postage | $2.59 |
| Total Postage and Fees | $7.44 |

0276 07

DEC 16 2024 Postmark Here

12/16/2024 USPS

Sent To: Mr. Russell Tawasend, THPO, EBCI
Street and Apt. No., or PO Box No.: PO Box 455, Qualla Boundary Rec
City, State, ZIP+4®: Cherokee, NC 28719

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0001 6590 2350

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Okmulgee, OK 74447 Chief Hill

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|---|---|
| Certified Mail Fee | $4.85 |
| Extra Services & Fees (check box, add fee as appropriate) | |
| ☐ Return Receipt (hardcopy) | $0.00 |
| ☐ Return Receipt (electronic) | $0.00 |
| ☐ Certified Mail Restricted Delivery | $0.00 |
| ☐ Adult Signature Required | $0.00 |
| ☐ Adult Signature Restricted Delivery | $ |
| Postage | $2.59 |
| Total Postage and Fees | $7.44 |

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12/16/2024 USPS

Sent To: Chief David Hill, Muscogee Creek Nation
Street and Apt. No., or PO Box No.: PO Box 580
City, State, ZIP+4®: Okmulgee, OK 74447

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## U.S. Postal Service™
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Okmulgee, OK 74447 Turner Hunt THPO

| | |
|---|---|
| Certified Mail Fee | $4.85 |
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| ☐ Return Receipt (hardcopy) | $0.00 |
| ☐ Return Receipt (electronic) | $0.00 |
| ☐ Certified Mail Restricted Delivery | $0.00 |
| ☐ Adult Signature Required | $0.00 |
| ☐ Adult Signature Restricted Delivery | $ |
| Postage | $2.59 |
| Total Postage and Fees | $7.44 |

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DEC 16 2024 Postmark Here

12/16/2024 USPS

Sent To: Mr. Turner Hunt, THPO, Muscogee Creek Nat
Street and Apt. No., or PO Box No.: PO Box 580
City, State, ZIP+4®: Okmulgee, OK 74447

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Tahlequah, OK 74465 Ms. Toombs

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| ☐ Return Receipt (hardcopy) | $0.00 |
| ☐ Return Receipt (electronic) | $0.00 |
| ☐ Certified Mail Restricted Delivery | $0.00 |
| ☐ Adult Signature Required | $0.00 |
| ☐ Adult Signature Restricted Delivery | $ |
| Postage | $2.31 |
| Total Postage and Fees | $7.16 |

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Sent To: Ms. Elizabeth Toombs, Cherokee Nation
Street and Apt. No., or PO Box No.: PO Box 948
City, State, ZIP+4®: Tahlequah, OK 74465

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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| First-Class Mail® Large Envelope<br>Okmulgee, OK 74447<br>Weight: 0 lb 4.80 oz<br>Estimated Delivery Date<br>Thu 12/19/2024 | 1 | | $2.59 |
| Certified Mail®<br>Tracking #:<br>70212720000165902334 | | | $4.85 |
| Total | | | $7.44 |
| First-Class Mail® Large Envelope<br>Okmulgee, OK 74447<br>Weight: 0 lb 4.80 oz<br>Estimated Delivery Date<br>Thu 12/19/2024 | 1 | | $2.59 |
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| Total | | | $7.44 |
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| Certified Mail®<br>Tracking #:<br>70212720000165902372 | | | $4.85 |
| Total | | | $7.44 |
| First-Class Mail® Large Envelope<br>Cherokee, NC 28719<br>Weight: 0 lb 4.70 oz<br>Estimated Delivery Date<br>Fri 12/20/2024 | 1 | | $2.59 |
| Certified Mail®<br>Tracking #:<br>70212720000165902389 | | | $4.85 |
| Total | | | $7.44 |
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| Certified Mail®<br>Tracking #:<br>70212720000165902396 | | | $4.85 |
| Total | | | $7.16 |

# Appendix K

# Historic Preservation

# North Carolina Department of Natural and Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

May 24, 2023

MEMORANDUM

TO: Claudia Young
NC Housing Finance Agency
csyoung@nchfa.com

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer
RMB for Ramona M. Bartos

SUBJECT: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, ER 22-3051

Thank you for your email of May 17, 2023, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

# North Carolina Department of Natural and Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

February 9, 2023

Thomas S. Hawkins JR., PWS
ECS SOUTHEAST, LLP
1200 Woodruff Road, Suite H-12
Greenville, SC 29607

thawkins@ecslimited.com

Re: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, ER 22-3051

Dear Mr. Hawkins:

Thank you for your letter of December 11, 2022, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

DRAFT

**Catawba Indian Nation**
**Tribal Historic Preservation Office**
**1536 Tom Steven Road**
**Rock Hill, South Carolina 29730**

**Office 803-328-2427**
**Fax 803-328-5791**

June 26, 2023

Attention: Claudia Young
NC Housing Finance Agency
3508 Bush Street
Raleigh, NC 27611-8066

| Re. THPO # | TCNS # | Project Description |
|---|---|---|
| 2023-872-7 | | Proposed Balsam Edge – 291 Howell Mill Road, Waynesville, NC 28786 |

Dear Ms. Young,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

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**Chuck Hoskin Jr.**
*Principal Chief*
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**Bryan Warner**
*Deputy Principal Chief*
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June 23, 2023

Caludia Young
North Carolina Housing Finance Agency
P.O. Box 28066
Raleigh, NC 27611-8066

Re: Balsam Edge – 291 Howell Mill Rd

Ms. Caludia Young:

The Cherokee Nation (Nation) is in receipt of your correspondence about **Balsam Edge**, and appreciates the opportunity to provide comment upon this project. Please allow this letter to serve as the Nation's interest in acting as a consulting party to this proposed project.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office (Office) reviewed this project, cross referenced the project's legal description against our information, and found no instances where this project intersects or adjoins such resources. Thus, the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time.

However, the Nation requests that the North Carolina Housing Finance Agency (NCHFA) halt all project activities immediately and re-contact our Offices for further consultation if items of cultural significance are discovered during the course of this project. Additionally, the Nation requests that the NCHFA conduct appropriate inquiries with other pertinent Tribal and Historic Preservation Office regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer
Cherokee Nation Tribal Historic Preservation Office
elizabeth-toombs@cherokee.org
918.453.5389

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Eastern Band of Cherokee Indians
Attn: Richard Sneed
88 Council House Loop Road
Cherokee, NC 28719

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Executive Director

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3508 Bush Street
Raleigh, NC
27609-7509

TEL. 919-877-5700
FAX 919-877-5701
www.nchfa.com

May 17, 2023

Eastern Band of Cherokee Indians
Attn: Richard Sneed
88 Council House Loop Road
Cherokee, NC 28719

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear Richard Sneed:

The North Carolina Housing Finance Agency is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the North Carolina Housing Finance Agency has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The North Carolina Housing Finance Agency will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The proposed project is located on an approximate includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. The brick residence and shed on the site will be demolished prior to site redevelopment.
Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property. The proposed project consists of the construction of an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI.

If HUD elects to approve the proposed project, it will become an undertaking subject to review under section 106 of the National Historic Preservation Act, 54 USC 306108, and its implementing regulations, 36 CFR Part 800.

HUD defines the area of potential effect (APE), as an area that includes all project construction and exaction activity required to construct, modify, improve, or maintain any facilities; any right of way or easement areas necessary for the construction, operation and maintenance of the project; all areas used for exaction of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., weather it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The State Historic Preservation Office has reviewed the proposed project. A letter dated February 9, 2023 states they are aware of no historic resources which would be affected by the project, and offered no comment on the project as proposed.

This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? Enclosed is a map that shows the project area.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/. HUD's process for tribal consultation under Section 106 is described in a Notice available at https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58.

If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

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CHEROKEE, NC 28719
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Eastern Band of Cherokee Indians
Attn: Russell Townsend
Qualla Boundary
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Cherokee, NC 28719

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FAX 919-877-5701
www.nchfa.com

May 17, 2023

Eastern Band of Cherokee Indians
Attn: Russell Townsend
Qualla Boundary
PO Box 455
Cherokee, NC 28719

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear Russell Townsend:

The North Carolina Housing Finance Agency is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the North Carolina Housing Finance Agency has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The North Carolina Housing Finance Agency will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The proposed project is located on an approximate includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. The brick residence and shed on the site will be demolished prior to site redevelopment.
Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property. The proposed project consists of the construction of an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI.

If HUD elects to approve the proposed project, it will become an undertaking subject to review under section 106 of the National Historic Preservation Act, 54 USC 306108, and its implementing regulations, 36 CFR Part 800.

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effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

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This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

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If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

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Raleigh, NC
27609-7509

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FAX 919-877-5701
www.nchfa.com

May 17, 2023

Muscogee (Creek) Nation
Attn: Turner Hunt
PO Box 580
Okmulgee, OK 74447

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear Turner Hunt:

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HUD defines the area of potential effect (APE), as an area that includes all project construction and exaction activity required to construct, modify, improve, or maintain any facilities; any right of way or easement areas necessary for the construction, operation and maintenance of the project; all areas used for exaction of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., weather it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

The State Historic Preservation Office has reviewed the proposed project. A letter dated February 9, 2023 states they are aware of no historic resources which would be affected by the project, and offered no comment on the project as proposed.

This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? Enclosed is a map that shows the project area.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/. HUD's process for tribal consultation under Section 106 is described in a Notice available at https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58.

If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

Claudia Young
North Carolina Housing Finance Agency

# USPS Tracking®

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**FAQs**

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FIRST CLASS

NORTH CAROLINA
HOUSING
FINANCE
AGENCY

PO Box 28066
Raleigh, NC
27611-8066

8701

Muscogee (Creek) Nation
Attn: David Hill
1007 East Eufaula Street
Okmulgee, OK 74447

NORTH CAROLINA
HOUSING
FINANCE
AGENCY

A self-supporting
public agency

Scott Farmer
Executive Director

PO Box 28066
Raleigh, NC
27611-8066

3508 Bush Street
Raleigh, NC
27609-7509

TEL. 919-877-5700
FAX 919-877-5701
www.nchfa.com

May 17, 2023

Muscogee (Creek) Nation
Attn: David Hill
1007 East Eufaula Street
Okmulgee, OK 74447

Regarding: Tribal Historic Preservation Office Inquiry
Proposed Balsam Edge
291 Howell Mill Road
Waynesville, NC 28786

Dear David Hill:

The North Carolina Housing Finance Agency is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the North Carolina Housing Finance Agency has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The North Carolina Housing Finance Agency will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

The proposed project is located on an approximate includes an approximate 5.1-acre portion of an approximate 5.44-acre parent parcel identified on the Haywood County GIS website as Parcel Identification Number (PIN) 8616-42-5402. The subject property currently consists of wooded land, fields, a residential structure, and a shed. The brick residence and shed on the site will be demolished prior to site redevelopment.
Based on the United States Geological Survey (USGS) Topographic Map, an unnamed tributary to Richland Creek is depicted transecting the western portion of the property. The proposed project consists of the construction of an 84 unit, family oriented affordable apartment community in Waynesville, North Carolina consisting of one, two, and three bedroom units. All 84 apartments will be affordable to families at or below 60% of the area median income (AMI). 34 of the apartments will be affordable to families at or below 50% of AMI.

If HUD elects to approve the proposed project, it will become an undertaking subject to review under section 106 of the National Historic Preservation Act, 54 USC 306108, and its implementing regulations, 36 CFR Part 800.

HUD defines the area of potential effect (APE), as an area that includes all project construction and exaction activity required to construct, modify, improve, or maintain any facilities; any right of way or easement areas necessary for the construction, operation and maintenance of the project; all areas used for exaction of borrow material and habitat creation; all construction staging areas, access routes, utilities, spoil areas, and stockpiling areas. Impacts that come from the undertaking at the same time and place with no intervening causes, are considered "direct" regardless of its specific type (e.g., weather it is visual, physical, auditory, etc.). "Indirect" effects to historic properties are those caused by the undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

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This letter and the attached supporting documentation are being submitted for your review and consideration. For your reference, we have enclosed location maps, a site plan, photographs depicting conditions of the site and the above referenced SHPO letter.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? Enclosed is a map that shows the project area.

More information on the Section 106 review process is available at http://www.onecpd.info/environmental-review/historic-preservation/. HUD's process for tribal consultation under Section 106 is described in a Notice available at https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58.

If you do not wish to consult on this project, can you please inform us? If you do wish to consult, can you please include in your reply the name and contact information for the tribe's principal representative in the consultation? Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Claudia Young*

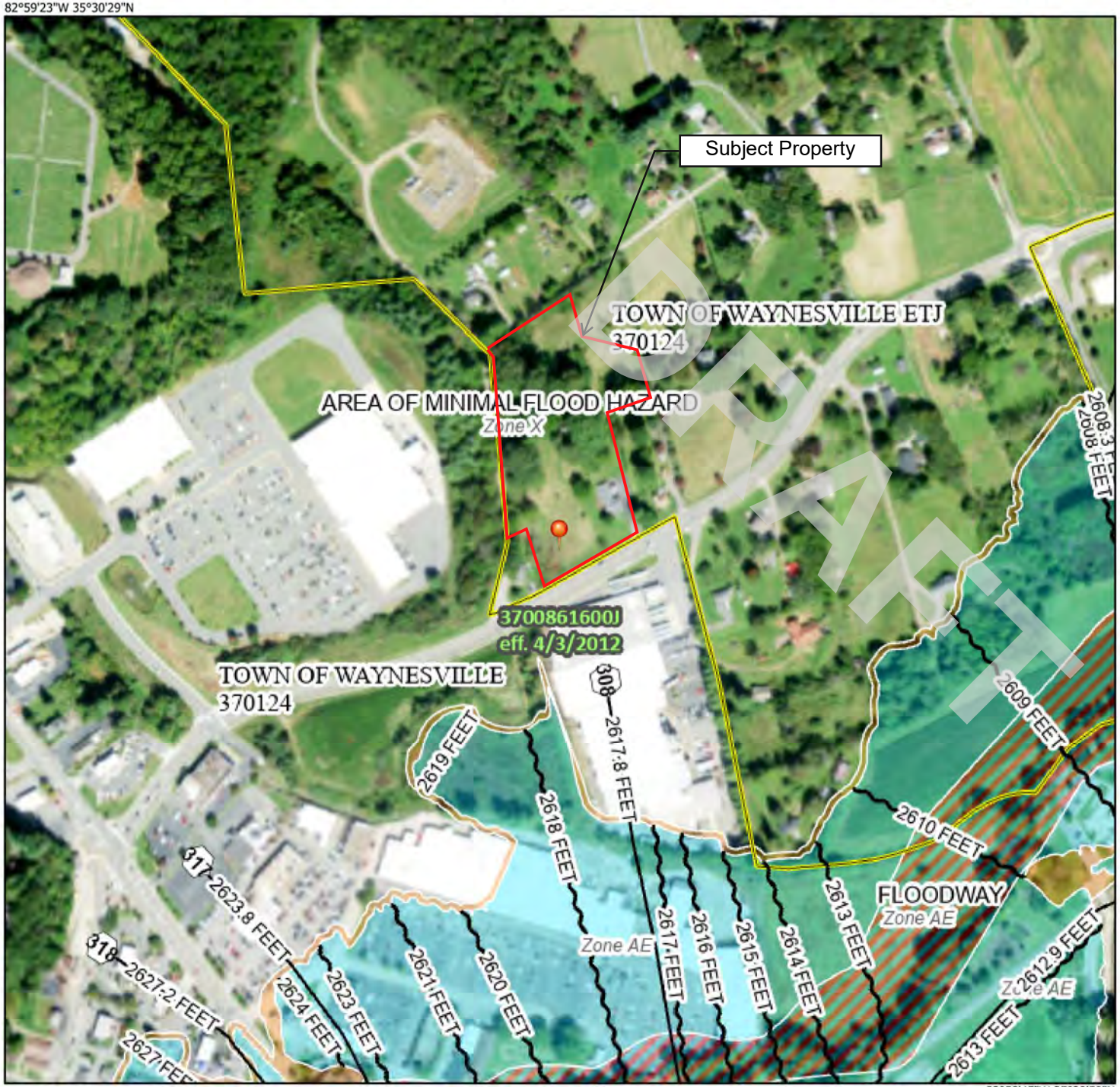
Claudia Young
North Carolina Housing Finance Agency

# THPO SUBMISSION DOCS

# National Flood Hazard Layer FIRMette

FEMA

82°59'23"W 35°30'29"N




82°58'45"W 35°29'59"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

*Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020*

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

**OTHER AREAS**
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

**GENERAL STRUCTURES**
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/8/2022 at 2:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

# BALSAM EDGE
## WAYNESVILLE, NC
## 2022 NCHFA LIHTC FINAL APPLICATION
NCHFA APPLICATION NO. APP22-0019

| SHEET NO. | DRAWING TITLE | DATE / ISSUE: 01.22.21 NCHFA LIHTC PRELIMINARY APPLICATION | 02.15.21 TOWN PLANNING REVIEW PACKAGE | 05.12.21 NCHFA LIHTC FINAL APPLICATION | 01.21.22 NCHFA LIHTC PRELIMINARY APPLICATION | 05.13.22 NCHFA LIHTC FINAL APPLICATION |
|---|---|---|---|---|---|---|
| **ARCHITECTURAL** | | | | | | |
| A0.0 | COVER SHEET & UNIT & AREA TABULATIONS | ◆ | ◆ | ◆ | ◆ | ◆ |
| C101 | EXISTING CONDITIONS & DEMOLITION PLAN | ◆ | ◆ | ◆ | ◆ | ◆ |
| C201 | SITE PLAN | ◆ | ◆ | ◆ | ◆ | ◆ |
| C301 | GRADING, EROSION CONTROL & STORM DRAIN. PLAN | | ◆ | ◆ | ◆ | ◆ |
| C601 | UTILITY PLAN | | ◆ | ◆ | ◆ | ◆ |
| L101 | LANDSCAPE COMPLIANCE PLAN | | ◆ | ◆ | ◆ | ◆ |
| A1.1 | UNIT PLANS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A1.2 | ACCESSIBLE UNIT PLANS | | | ◆ | ◆ | ◆ |
| A4.A1 | BUILDING TYPE A GROUND & FIRST FLOOR PLANS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.A2 | BUILDING TYPE A EXTERIOR ELEVATIONS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.A3 | BUILDING TYPE A EXTERIOR ELEVATIONS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.B1 | BUILDING TYPE B GROUND & FIRST FLOOR PLANS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.B2 | BUILDING TYPE B EXTERIOR ELEVATIONS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.B3 | BUILDING TYPE B EXTERIOR ELEVATIONS | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.C1 | COMMUNITY BUILDING FLOOR PLAN | ◆ | ◆ | ◆ | ◆ | ◆ |
| A4.C2 | COMMUNITY EXTERIOR ELEVATIONS | ◆ | ◆ | ◆ | ◆ | ◆ |

**UNIT & BUILDING AREA TABULATION**

| | | AREA (SQUARE FEET) | | | BUILDING 1 (BLDG TYPE A) | | | | | BUILDING 2 (BLDG TYPE A) | | | | | BUILDING 3 (BLDG TYPE B) | | | | | | | TOTAL LEASABLE AREA (SQUARE FEET) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT TYPE | DESCRIPTION | GROSS* | HEATED** | HEATED (QAP)*** | GROUND FLOOR | FIRST FLOOR | SECOND FLOOR | THIRD FLOOR | TOTAL | GROUND FLOOR | FIRST FLOOR | SECOND FLOOR | THIRD FLOOR | TOTAL | GROUND FLOOR | FIRST FLOOR | SECOND FLOOR | THIRD FLOOR | TOTAL | PROJECT TOTAL | % TOTAL | TOTAL GROSS* | TOTAL HEATED** | TOTAL HEATED (QAP)*** |
| **A1-1** | 1 BED /1 BATH | 805 | 744 | 706 | 2 | 1 | 2 | 2 | 7 | 2 | 1 | 2 | 2 | 7 | 0 | 0 | 2 | 2 | 4 | 18 | 21.43% | 14490 | 13392 | 12708 |
| **A1-1HC** | 1 BED / 1 BATH TYPE A | 805 | 744 | 706 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 4 | 4.76% | 3220 | 2976 | 2824 |
| **A UNIT TOTALS** | **1 BED /1 BATH** | | | | 2 | 2 | 2 | 2 | 8 | 2 | 2 | 2 | 2 | 8 | 0 | 2 | 2 | 2 | 6 | 22 | 26.19% | 17710 | 16368 | 15532 |
| **B1-1** | 2 BED / 2 BATH | 1092 | 1029 | 987 | 2 | 2 | 4 | 4 | 12 | 2 | 2 | 4 | 4 | 12 | 2 | 2 | 4 | 4 | 12 | 36 | 42.86% | 39312 | 37044 | 35532 |
| **B1-1HC** | 2 BED / 2 BATH TYPE A | 1092 | 1029 | 987 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 6 | 7.14% | 6552 | 6174 | 5922 |
| **B UNIT TOTALS** | **2 BED / 2 BATH** | | | | 2 | 4 | 4 | 4 | 14 | 2 | 4 | 4 | 4 | 14 | 2 | 4 | 4 | 4 | 14 | 42 | 50.00% | 45864 | 43218 | 41454 |
| **C1-1** | 3 BED / 2 BATH | 1322 | 1260 | 1214 | 0 | 1 | 2 | 2 | 5 | 0 | 1 | 2 | 2 | 5 | 2 | 2 | 2 | 2 | 8 | 18 | 21.43% | 23796 | 22680 | 21852 |
| **C1-1HC** | 3 BED / 2 BATH TYPE A | 1322 | 1260 | 1214 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2.38% | 2644 | 2520 | 2428 |
| **C UNIT TOTALS** | **3 BED / 2 BATH** | | | | 0 | 2 | 2 | 2 | 6 | 0 | 2 | 2 | 2 | 6 | 2 | 2 | 2 | 2 | 8 | 20 | 23.81% | 26440 | 25200 | 24280 |
| **BUILDING & PROJECT TOTALS** | | | | | **4** | **8** | **8** | **8** | **28** | **4** | **8** | **8** | **8** | **28** | **4** | **8** | **8** | **8** | **28** | **84** | **100.00%** | **90014** | **84786** | **81266** |

| | DESCRIPTION | AREA TYPE | BUILDING 1 (BLDG TYPE A) | | | | | BUILDING 2 (BLDG TYPE A) | | | | | BUILDING 3 (BLDG TYPE B) | | | | | COMMUNITY BUILDING | PROJECT TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TOTAL BUILDING AREAS (SQUARE FEET)** | **LEASABLE BUILDING AREAS** | GROSS* | 3794 | 8622 | 8622 | 8622 | **29660** | 3794 | 8622 | 8622 | 8622 | **29660** | 4828 | 8622 | 8622 | 8622 | **30694** | 0 | **90014** |
| | | HEATED** | 3546 | 8124 | 8124 | 8124 | **27918** | 3546 | 8124 | 8124 | 8124 | **27918** | 4578 | 8124 | 8124 | 8124 | **28950** | 0 | **84786** |
| | | HEATED (QAP)*** | 3386 | 7788 | 7788 | 7788 | **26750** | 3386 | 7788 | 7788 | 7788 | **26750** | 4402 | 7788 | 7788 | 7788 | **27766** | 0 | **81266** |
| | **TOTAL BUILDING AREAS** | GROSS* | 4364 | 9729 | 9451 | 9451 | **32995** | 4364 | 9729 | 9451 | 9451 | **32995** | 5486 | 9729 | 9451 | 9451 | **34117** | 2996 | **100107** |
| | | NET** | 3900 | 8309 | 8309 | 8309 | **28827** | 3900 | 8309 | 8309 | 8309 | **28827** | 4932 | 8309 | 8309 | 8309 | **29859** | 2104 | **87513** |

***GROSS** - square footage under roof cov er measured from outside face of stud or slab area. .

****HEATED** - leasable enclosed square footage measured from outside face of stud. **NET** is similar but for whole building

*****HEATED (QAP)** - leasable enclosed unit square footage measured from inside face of stud

## DEVELOPMENT TEAM

Developer / Owner — MOUNTAIN HOUSING OPPORTUNITIES
64 Clingman Avenue, Suite 101
Asheville, NC 28801
(828) 254.4030
(828) 254.0120 (fax)
Contact: Adeline Wolfe

## DESIGN TEAM

Architect — HOUSING STUDIO
333 West Trade Street,
Suite 300
Charlotte, NC 28202
(704) 333.7862
(704) 237.3862 (fax)
Contact: Chad Askew, AIA

Civil Engineer — CIVIL DESIGN CONCEPTS
168 Patton Avenue
Asheville, NC 28801
(828) 252.5388
Contact: Warren Sugg, PE

Landscape Architect — TO BE DETERMINED

Structural Engineer (Building) — TO BE DETERMINED

PME Engineer — TO BE DETERMINED

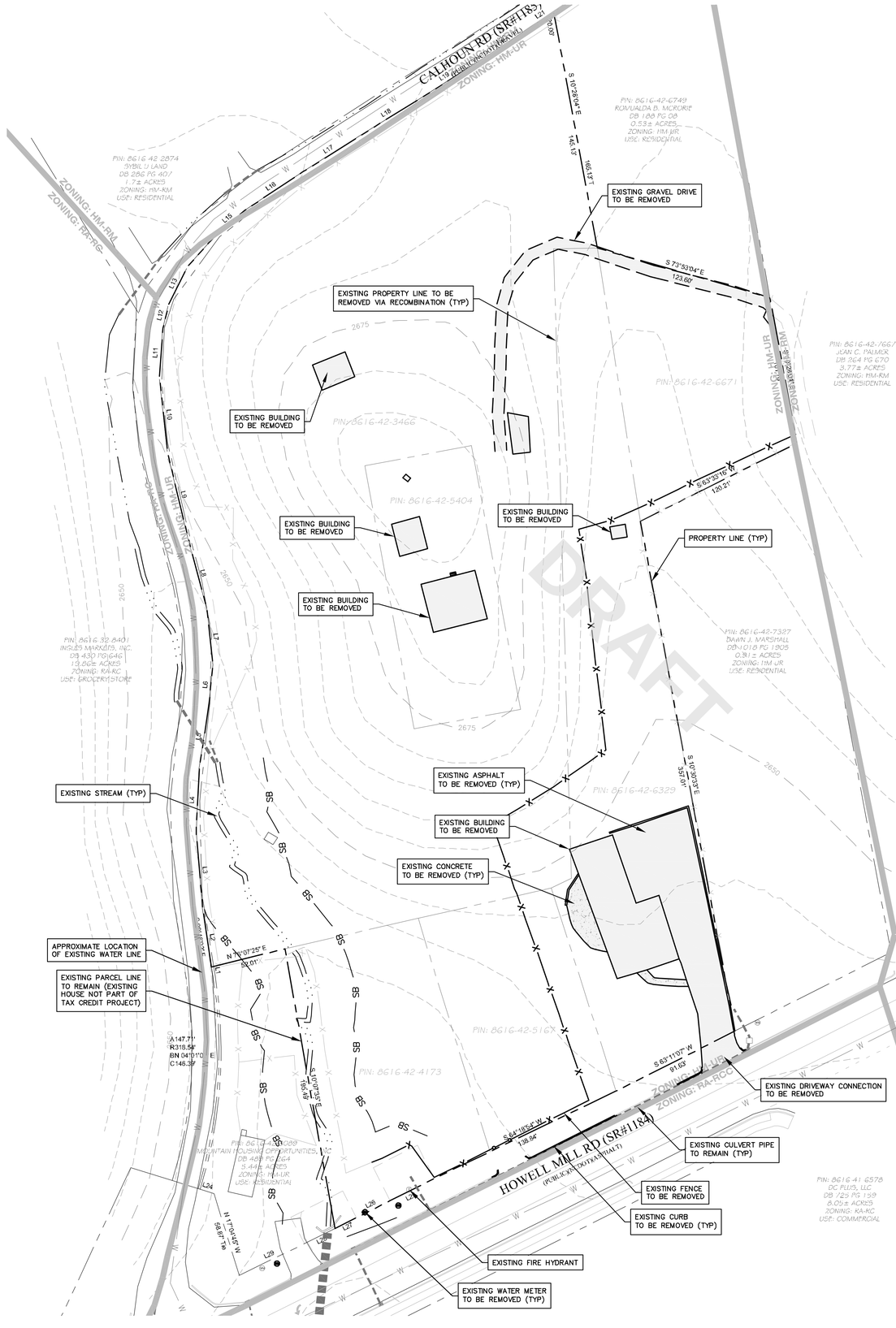
General Contractor — WEAVER COOKE
8401 Key Boulevard
Greensboro, NC
(336) 378.7900
Contact: Carl Slagle

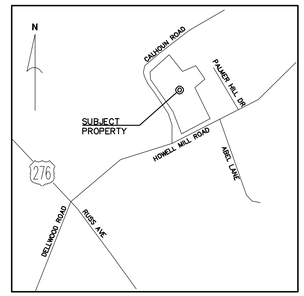
**ISSUE DATES**

| | |
|---|---|
| 2021 NCHFA LIHTC PRELIMINARY APPLICATION PACKAGE | 01.22.2021 |
| TOWN PLANNING REVIEW PACKAGE | 02.15.2021 |
| 2021 NCHFA LIHTC FINAL APPLICATION PACKAGE | 05.12.2021 |
| 2022 NCHFA LIHTC PRELIMINARY APPLICATION PACKAGE | 01.21.2022 |
| 2022 NCHFA LIHTC FINAL APPLICATION PACKAGE | 05.13.2022 |

**PRELIMINARY NOT FOR CONSTRUCTION**


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380
www.housingstudio.com




VICINITY MAP

(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
| PIN: | 8616-42-3466; 8616-42-5404;<br>8616-42-6329; 8616-42-6671;<br>8616-42-5167; 8616-42-4173; |
| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 486/478;150/370;489/264;133/179;<br>486/481;486/472;486/475 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
| ALLOWED PER ZONING: | 16.0 UNITS/ACRE = 84 UNITS |
| PROPOSED: | 16.0 UNITS/ACRE |

PARKING CALCULATIONS:

VEHICULAR:

| | |
|---|---|
| REQUIRED SPACES: | MIN – 1.5 SPACES PER UNIT<br>MAX – 1 SPACE PER 20 SPACES<br>UNITS – 84 |
| SPACES PROVIDED: | 126 |

HANDICAPPED SPACES:
SPACES REQUIRED: 5 SPACES PROVIDED: 14

BUILDING DATA:

| BUILDING | DESCRIPTION | HEIGHT | GFA |
|---|---|---|---|
| 1 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 2 | 3 STORY WOOD | 31'-4 7/8" | 32,995 SF |
| 3 | 3 STORY WOOD | 31'-4 7/8" | 34,117 SF |
| CLUBHOUSE | 1 STORY WOOD | 12'-0" | 2,996 SF |

IMPERVIOUS CALCULATIONS:

| | IMPERVIOUS | PERVIOUS |
|---|---|---|
| PRE-DEVELOPMENT | 0.35 ACRES (07%) | 4.94 ACRES (93%) |
| POST-DEVELOPMENT | 1.97 ACRES (37%) | 3.34 ACRES (63%) |

OPEN SPACE CALCULATIONS:

REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

811 Know what's **below.** **Call** before you dig.

NORTH

C101 EXISTING CONDITIONS & DEMOLITION PLAN
1"=40'

HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, P.A.
ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 252-5388
FAX (828) 252-5300
NCBELS LICENSE #: C-0134
WAYNESVILLE OFFICE
52 WALNUT STREET - SUITE 9
WAYNESVILLE, NC 28786
PHONE (828) 452-4472
FAX (828) 452-5405
www.civildesignconcepts.com

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

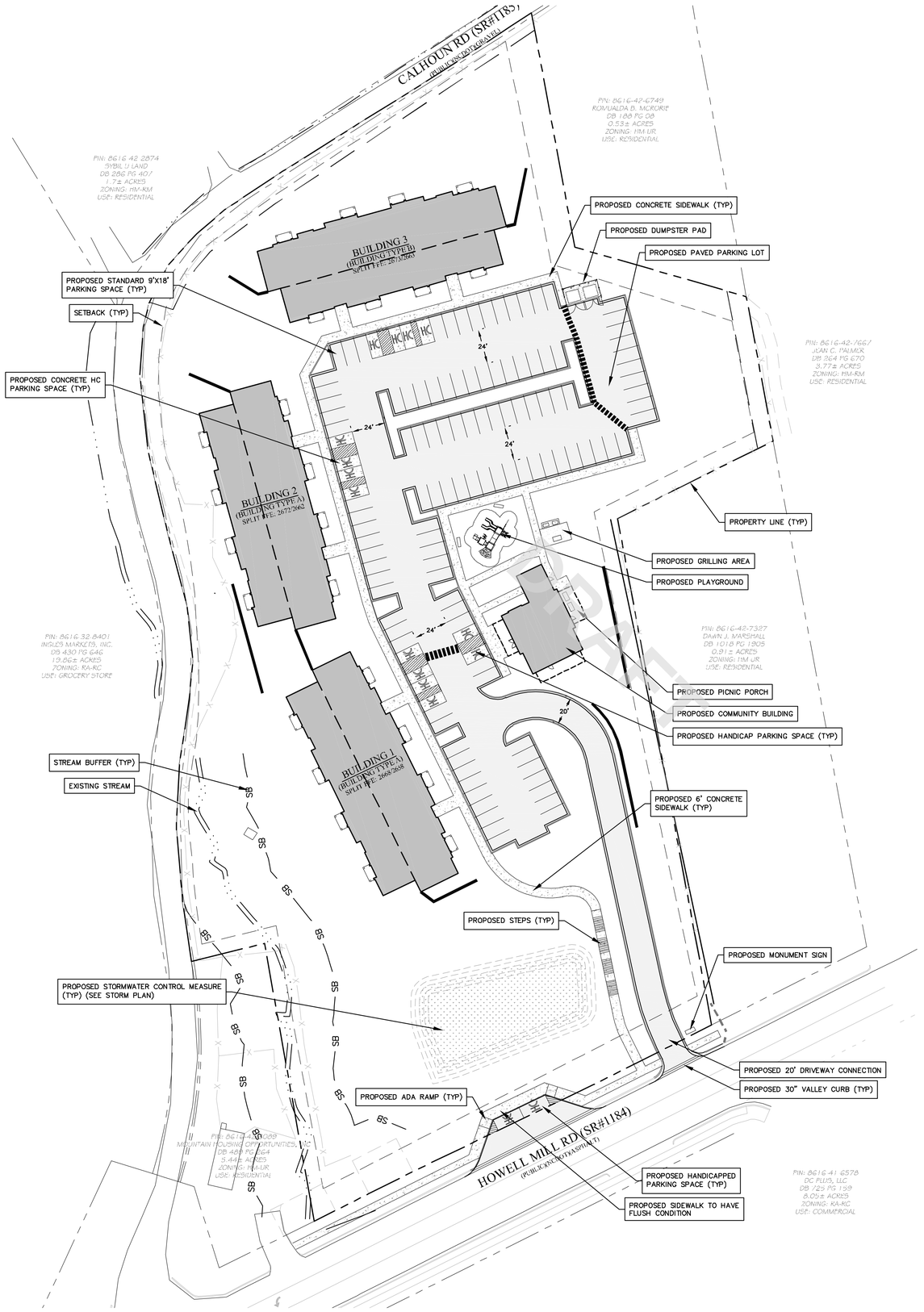
**FOR REVIEW ONLY**

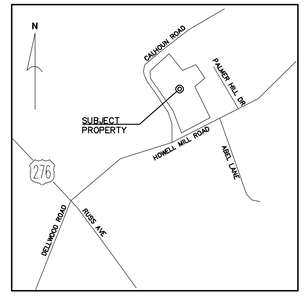
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036161 WARREN M. SUGG
PRELIMINARY NOT RELEASED FOR CONSTRUCTION

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

EXISTING CONDITIONS & DEMOLITION PLAN

C101




VICINITY MAP

(NOT TO SCALE)

## DEVELOPMENT DATA

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| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
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| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

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| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 486/478;150/370;489/264;133/179;<br>486/481;486/472;486/475 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
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| DISTURBED AREA: | 5 AC |

DENSITY SUMMARY:

| | |
|---|---|
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VEHICULAR:

| | |
|---|---|
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REQUIRED: 11,522 SF (5%) PROVIDED: 11,522 SF

*CDC INSPECTIONS HOTLINE:*
*828-771-4755 OR INSPECTION@CDCGO.COM*

811 Know what's **below.** **Call** before you dig.

NORTH

C201 SITE PLAN
1"=40'


HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, PA

ASHEVILLE OFFICE
168 PATTON AVENUE
ASHEVILLE, NC 28801
PHONE (828) 252-5388
FAX (828) 252-6300

WAYNESVILLE OFFICE
52 MALLARD STREET – SUITE 9
WAYNESVILLE, NC 28786
PHONE (828) 452-4412
FAX (828) 452-6400

NCBELS LICENSE #: C-0134

www.civildesignconcepts.com


MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO
Mountain Housing Opportunities

**FOR REVIEW ONLY**

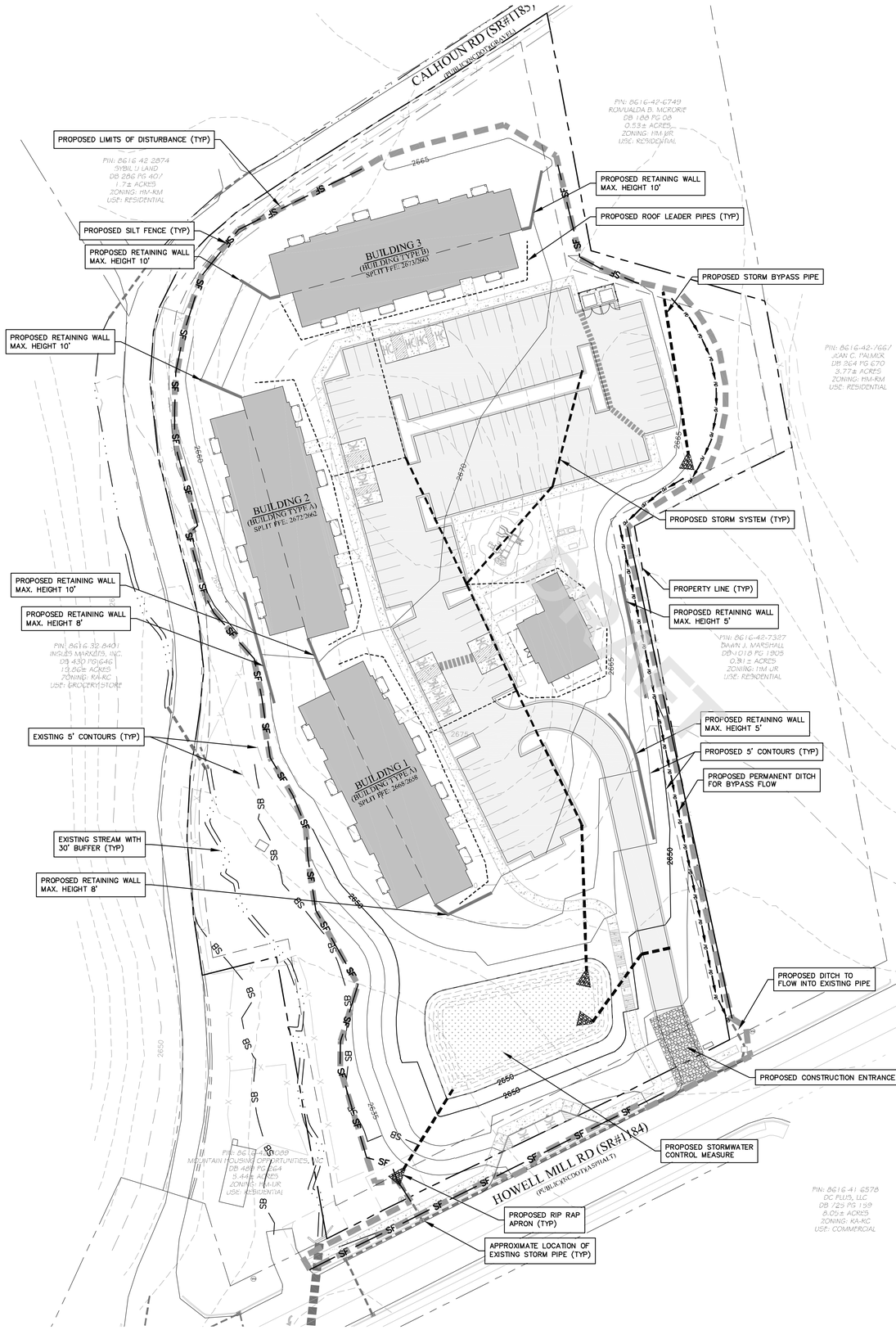
PRELIMINARY
NOT RELEASED
FOR
CONSTRUCTION

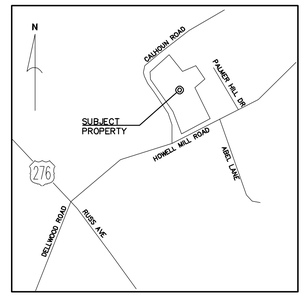
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2581 LAUREN M. STOUT

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

SITE PLAN

C201




VICINITY MAP

(NOT TO SCALE)

## DEVELOPMENT DATA

| | |
|---|---|
| OWNER/DEVELOPER: | MOUNTAIN HOUSING OPPORTUNITIES, INC<br>64 CLINGMAN AVENUE, SUITE 101<br>ASHEVILLE, NC 28801 |
| CONTACT: | ADELINE WOLFE<br>(864) 680-6587 |
| CIVIL ENGINEER: | CIVIL DESIGN CONCEPTS, P.A.<br>168 PATTON AVENUE<br>ASHEVILLE, NC 28801 |
| CONTACT: | WARREN SUGG, P.E.<br>(828) 252-5388 |
| ARCHITECT: | HOUSING STUDIO<br>333 WEST TRADE STREET, SUITE 300<br>CHARLOTTE, NC 28202 |
| CONTACT: | CHAD ASKEW, A.I.A.<br>(704) 333-7862 |

## PROJECT DATA

| | |
|---|---|
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| ADDRESS: | 291 HOWELL MILL ROAD |
| DEED BOOK/PAGE: | 486/478;150/370;489/264;133/179;<br>486/481;486/472;486/475 |
| SITE ACREAGE: | 5.31 ACRES |
| ZONING: | HOWELL MILL URBAN RESIDENTIAL |
| SETBACKS: | |
| FRONT: | 10' |
| SIDES: | 10' |
| REAR: | 6' |
| CORNER: | 5' |
| DISTURBED AREA: | 5 AC |

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811 Know what's **below.** **Call** before you dig.

NORTH

C301 GR, EC, & SD PLAN
1"=40'

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CDC Civil Design Concepts, PA

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WAYNESVILLE OFFICE
52 WALNUT STREET - SUITE 9
WAYNESVILLE, NC 28786
PHONE (828) 452-4472
FAX (828) 452-5405

NCBELS LICENSE #: C-0134
www.civildesignconcepts.com

MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

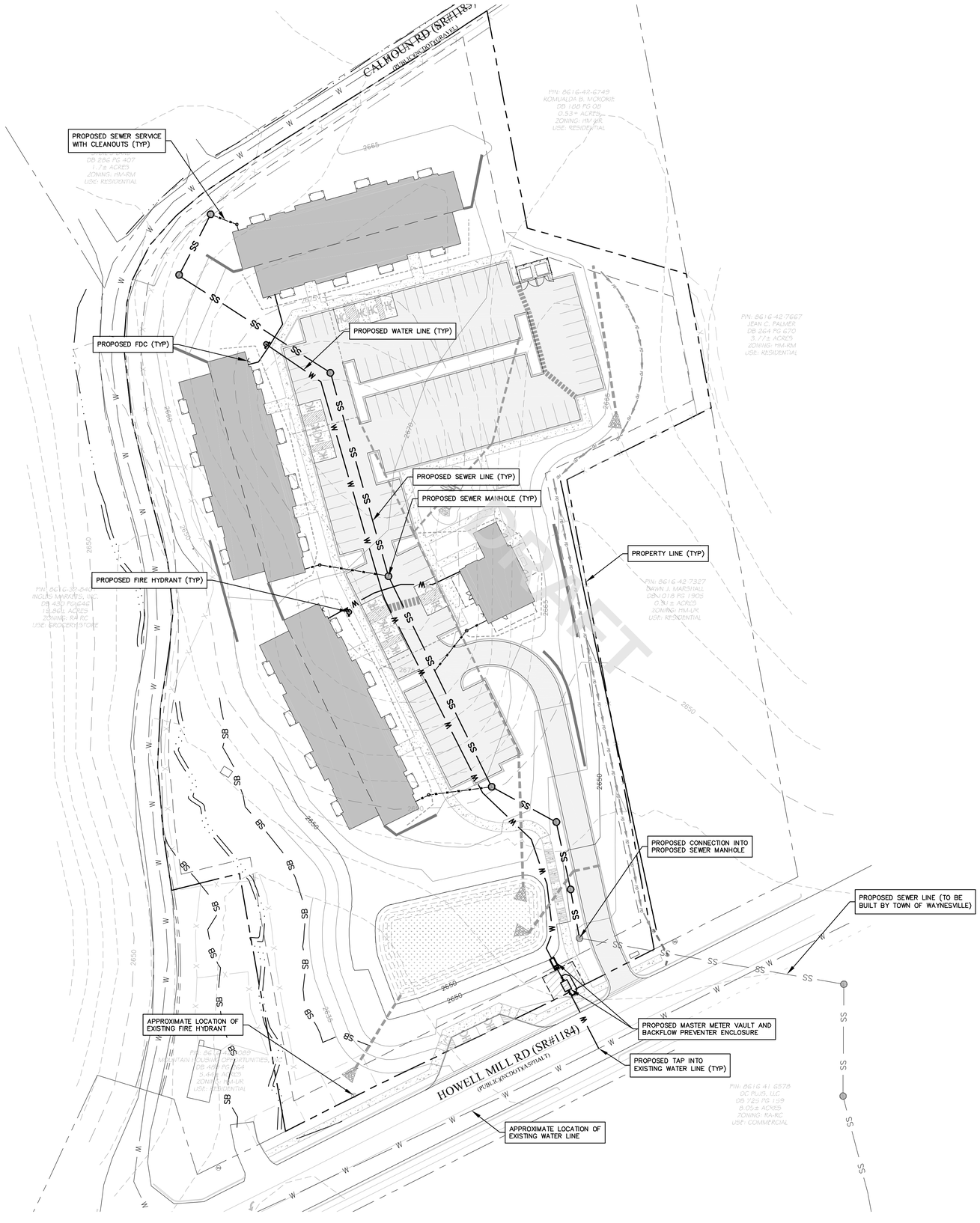
FOR REVIEW ONLY

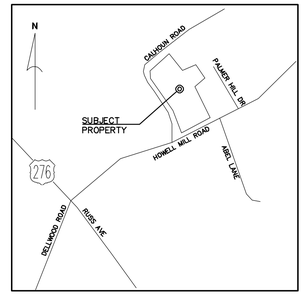
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 2017 LAUREN M. SUGG
PRELIMINARY NOT RELEASED FOR CONSTRUCTION

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

GRADING, EROSION CONTROL & STORM DRAINAGE PLAN

C301

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811 Know what's **below.** **Call** before you dig.

NORTH

C601 UTILITY PLAN
1"=40'

HOUSING STUDIO
333 West Trade Street, Suite 300
Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, P.A.
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MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

**FOR REVIEW ONLY**

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036161 WARREN M. SUGG

**PRELIMINARY NOT RELEASED FOR CONSTRUCTION**

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

UTILITY PLAN

C601

## PLANTING SUMMARY:

PARKING LOT LANDSCAPE REQUIREMENT:
- 1 CANOPY TREE EVERY 40 LF OF PARKING: 21 TREES
- 1 CANOPY TREE PER 12 PARKING SPACES: 36 TREES

TOTAL CANOPY TREES REQUIRED: 57 TREES

STREET TREE LANDSCAPE REQUIREMENT:
1 TREE PER 40 LF

HOWELL MILL ROAD 381 LF

TREES REQUIRED: 10 TREES
TREES PROVIDED: 10 TREES

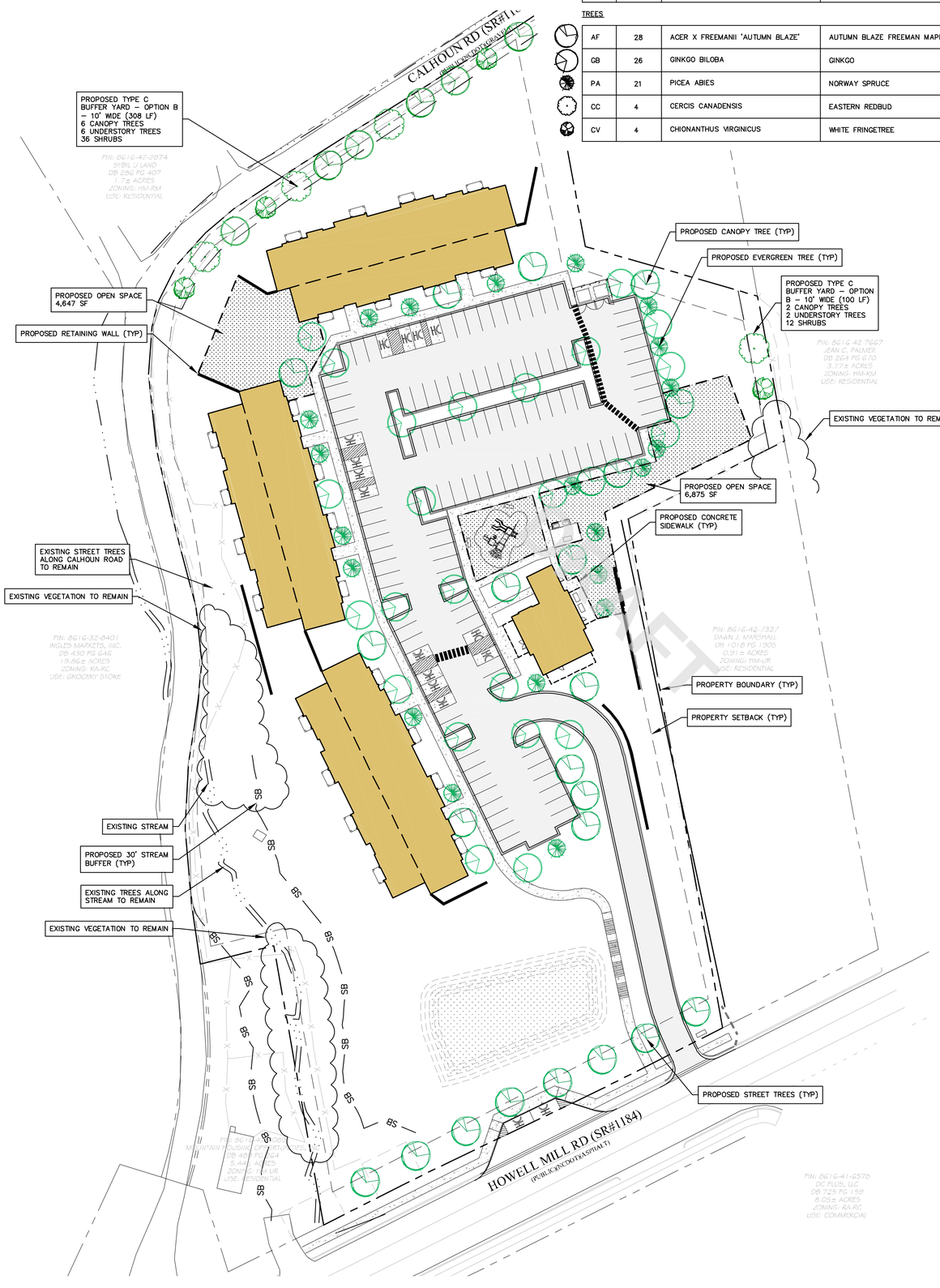
BUFFER YARD LANDSCAPING:
2 CANOPY TREES, 2 UNDERSTORY TREES, & 12 SHRUBS PER 100 LF

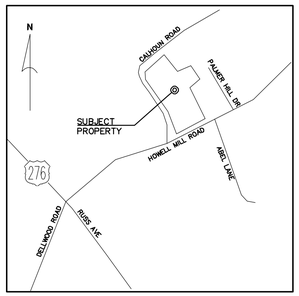
BUFFER YARD REQUIRED: 8 CANOPY TREES, 8 UNDERSTORY TREES, 48 SHRUBS

BUFFER YARD PROVIDED: 8 CANOPY TREES, 8 UNDERSTORY TREES, 48 SHRUBS

## PROPOSED PLANT SCHEDULE *

| KEY | QUANTITY | BOTANICAL NAME | COMMON NAME | SIZE | REMARKS | CLASSIFICATION |
|---|---|---|---|---|---|---|
| TREES | | | | | | |
| AF | 28 | ACER X FREEMANII 'AUTUMN BLAZE' | AUTUMN BLAZE FREEMAN MAPLE | 2" CAL./8' HT. | B&B | CANOPY TREE |
| GB | 26 | GINKGO BILOBA | GINKGO | 2" CAL./8' HT. | B&B | CANOPY TREE |
| PA | 21 | PICEA ABIES | NORWAY SPRUCE | 2" CAL./8' HT. | B&B | EVERGREEN TREE |
| CC | 4 | CERCIS CANADENSIS | EASTERN REDBUD | 2" CAL./8' HT. | B&B | UNDERSTORY TREE |
| CV | 4 | CHIONANTHUS VIRGINICUS | WHITE FRINGETREE | 2" CAL./8' HT. | B&B | UNDERSTORY TREE |

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NORTH

L101 LANDSCAPE COMPLIANCE PLAN
1"=40'


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Charlotte, NC 28202
T: 704.333.7862 F: 704.343.9380

CDC Civil Design Concepts, P.A.
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MHO - BALSAM EDGE
WAYNESVILLE, NORTH CAROLINA
NCHFA APPLICATION NO. APP21-0148

MHO Mountain Housing Opportunities

FOR REVIEW ONLY

NORTH CAROLINA PRELIMINARY NOT RELEASED FOR CONSTRUCTION LICENSED LANDSCAPE ARCHITECT LAUREN M. SUGG

Project No: 2017
Issue Date: 05/13/2022
Issued For: NCHFA FINAL

LANDSCAPE COMPLIANCE PLAN

L101

# Appendix II: Photographic Log

DRAFT

1 - View of the vacant, single-family residential structure located on the southeast portion of the subject property.

2 - View of the vacant, single-family residence located on the southeast portion of the subject property.

DRAFT

3 - View of an apparent fill port and vent pipe, indicative of a UST, located on the exterior of the single-family residence on the subject property.

4 - View of the fields and shed on the southeast portion of the subject property.

DRAFT

5 - Typical view of the wooded land on the subject property.

6 - Typical view of the fields located on the subject property.

DRAFT

7 - Typical view of the fields located on the subject property.

8 - View of a culvert along the western boundary of the subject property.

9 - View of the slope on the northwestern portion of the subject property.

10 - View of a stone retaining wall within the vicinity of a former residence on the northern-central portion of the subject property.

DRAFT

11 - View of a stream and potential wetland areas along the western boundary of the subject property.

12 - View of a stone and mortar structure adjacent to the stream on the western portion of the subject property.

DRAFT

13 - View of a brick structure observed on the western portion of the subject property.

14 - View of an exposed rock outcrop on the western slope of the subject property.

DRAFT

15 - View of the northern adjoining property (residential).

16 - View of the eastern adjoining property (residential).

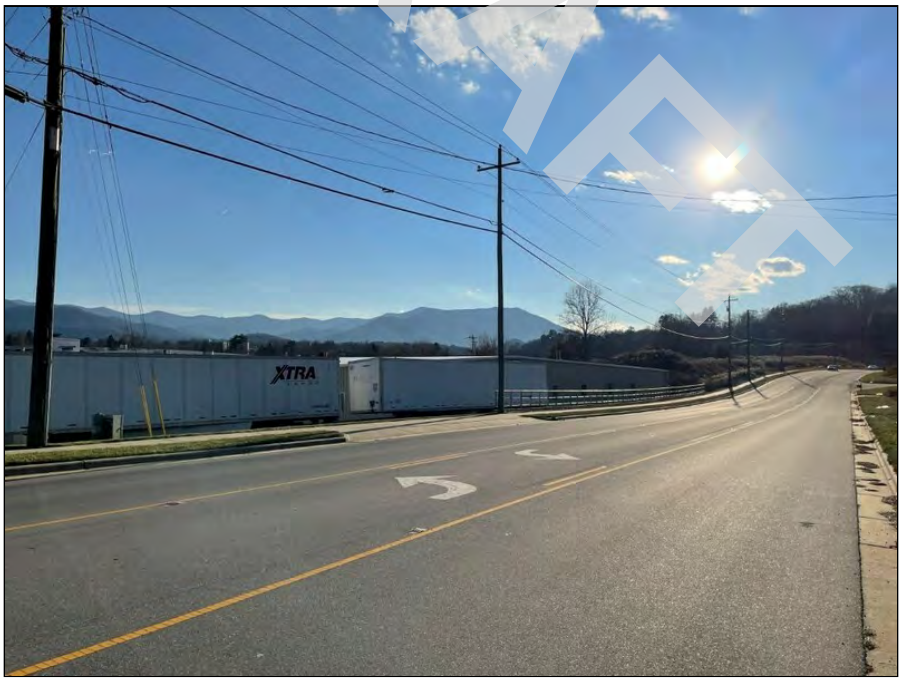
DRAFT

17 - View of the eastern adjoining property (residential) and an approximate 275-gallon heating oil AST.

18 - View along Howell Mill Road and the southern boundary of the subject property.

DRAFT

19 - View along Howell Mill Road and the southern boundary of the subject property.




20 - View of the southern adjoining property - Sunoco Plastics.

DRAFT

21 - View of the southwestern adjoining property (vacant residential).

22 - View of the western adjoining property (wooded).

DRAFT

# North Carolina Department of Natural and Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

February 9, 2023

Thomas S. Hawkins JR., PWS
ECS SOUTHEAST, LLP
1200 Woodruff Road, Suite H-12
Greenville, SC 29607

thawkins@ecslimited.com

Re: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, ER 22-3051

Dear Mr. Hawkins:

Thank you for your letter of December 11, 2022, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

DRAFT

# ATTACHMENT 13:

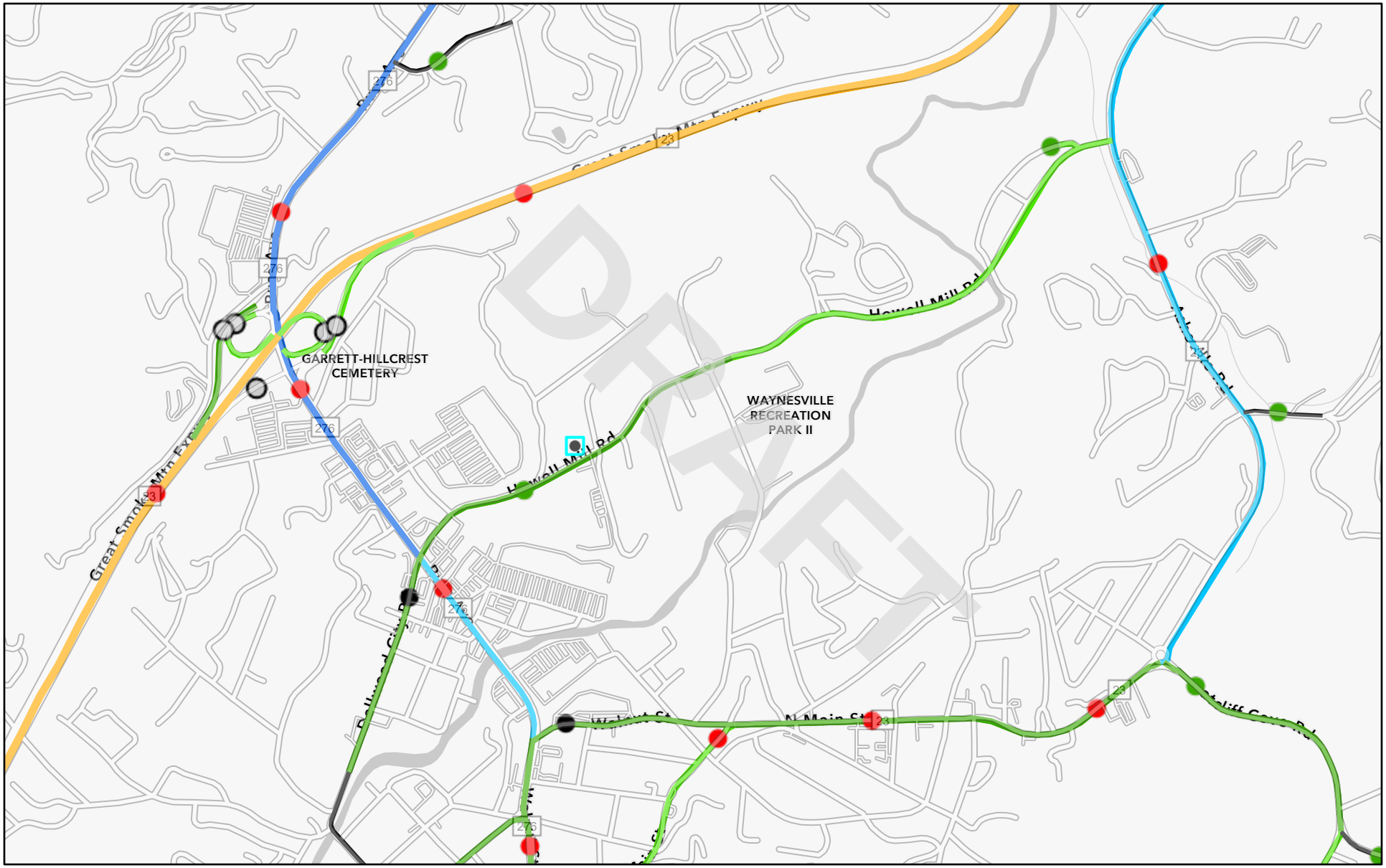
# Noise Abatement and Control

# Appendix L

# Noise Abatement and Control

271 Howell Mill Ro...
Map: Dark Satellite
Year: 2016
DRAFT
Andrew Jackson Hwy
Clyde
Carolina Bly
Lake Junaluska
Tuscola Park
Ivy Hills
Dellwood
Dellwood Rd
Fairway Hills
Valley
Soco Rd
Great Smoky Mountains Expy
Waynesville
Pigeon Rd
Bethel
Hazelwood
Hyatt Creek
Old Balsam Rd
Saunook
Retreat
Clark

# NCDOT AADT Map




2/13/2023, 2:06:28 PM

NCDOT_AADT_Traffic_Segmentation - NCDOT_AADT_Stations

- US Routes
- Secondary Routes
- Non-System Routes
- Ramps

NCDOT_AADT_Traffic_Segmentation - NCDOT_AADT_Traffic_Segments_Secondary_Non-System

- 500 - 1,999
- 2,000 - 4,999
- 5,000 - 9,999

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS,

Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | NCDOT Traffic Survey Group staff collected, analyzed, processed and reported this

# Balsam Edge

Intersection Map

## Thomas S Hawkins, PWS

**From:** Dixon, Keith G <kgdixon@ncdot.gov>
**Sent:** Tuesday, November 22, 2022 8:49 AM
**To:** Thomas S Hawkins Jr., PWS; TrafficForecast
**Cc:** Zach Windham
**Subject:** RE: [External] Traffic Forecast Request - Balsam Edge, Waynesville, Haywood County, NC

Morning Thomas,

We only accept requests for NCDOT projects. I can try to assist with available data, but no detailed additional work is allowed.

Here's a forecast from 2016 that may be suitable for your needs:
https://connect.ncdot.gov/projects/planning/Traffic%20Forecasts/U-5839%20Haywood%20TF/U-5839%20Haywood%202016%20TF.pdf

You could derive the growth rate on Howell Mill Rd from this study.

**Keith G. Dixon**
State Traffic Forecast Engineer
Transportation Planning Division
North Carolina Department of Transportation

919 707 0984 office
919 593 5270 mobile
kgdixon@ncdot.gov

1 South Wilmington St
1554 Mail Service Center
Raleigh, NC 27699-1554

*Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.*

DRAFT

---

**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Friday, November 11, 2022 1:23 PM
**To:** TrafficForecast <trafficforecast@ncdot.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [External] Traffic Forecast Request - Balsam Edge, Waynesville, Haywood County, NC

**CAUTION:** External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Good afternoon,

Please see the attached request for traffic forecasts for a proposed multi-family HUD project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina. Per HUD's requirements for Environmental Assessments, we are requesting forecasts with a minimum of 10-year projections for the project. I've included three of the nearest intersections within the attached word document. I've also attached a KMZ of the project site boundary and a PDF map depicting the project site and three intersections.

If you require any additional information to process this request, please reach out to me at thawkins@ecslimited.com or 864-350-2414.

Thank you,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

**ECS SOUTHEAST, LLP**
www.ecslimited.com
**THE NEW ASTM PHASE I STANDARD IS HERE** - Contact us to find out more.

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DRAFT

MOTT MACDONALD

**September 20, 2016**

MEMORANDUM TO: Steve Williams
NCDOT Division 14

FROM: Kimberly Levine
Mott MacDonald

SUBJECT: **Traffic Forecast for STIP Project U-5839 (WBS: 50111.1.FS1)**
Haywood County
US 276 (Russ Avenue) Corridor Upgrade

DRAFT

Please find attached the 2016/2040 Traffic Forecast for the above mentioned project. Project STIP number is defined as U-5839. This project lies within the French Broad River MPO.

The following people were consulted during the development of this forecast:

- Elizabeth Teague, AICP, CTP – Planning Development Services Director, Town of Waynesville
- Mark Shumpert, PE – County Engineer, Haywood County
- Kris Boyd – Planning Department Director, Haywood County
- Ed Green, PE – Division 14 Engineer
- Lyuba Zuyeva, AICP – French Broad River MPO
- Pamela Cook, PE – TPB, NCDOT
- Vickie Eastland – Land of Sky RPO

This forecast was reviewed and approved by TPB on September 19, 2016.

The following scenarios are provided:
- 2016 Base Year No Build
- 2040 Future Year Build

**Certain assumptions were made in the development of the forecast:**

**Fiscal Constraint**
This project is located within the boundaries of an MPO; therefore the travel demand model and traffic forecasts are fiscally constrained to match the assumptions of the French Broad River MPO.

The following major projects are located near U-5839 and are included in the STIP:

- STIP: U-4412
  Upgrade 2 lanes and construct a railroad grade separation for SR 1184 (Howell Mill Road) from US 276 (Russ Avenue) to US 23 Business in Waynesville.

MOTT MACDONALD

- STIP: U-5888
  Construct intersection improvements at US 23 Business (North Main Street) and Walnut Street.

**Development Activity**: Based on the site visit, there are no developments currently underway in the forecast area

**Methodology:**
The Base Year (2016) No Build forecast was developed primarily based on the traffic data collected for this forecast, as well as historic traffic counts and trends. The Future Year No Build forecast was developed by applying growth rates developed from trend data, information from the travel demand model, and assessment of development potential. The build scenarios were developed based on information from the travel demand model and an assessment of trip diversion potential.

**Interpolation:**
To determine any intermediate years, straight-line interpolation may be used. AADT volumes may be extrapolated for up to two years immediately following 2040. If it is determined that any of these assumptions have become inconsistent with the project and surrounding area activity, please request updated projections at this location.

For future reference, this forecast will be saved in Project Store in the LongRangePlanning\Traffic Forecasts\U5839 folder.

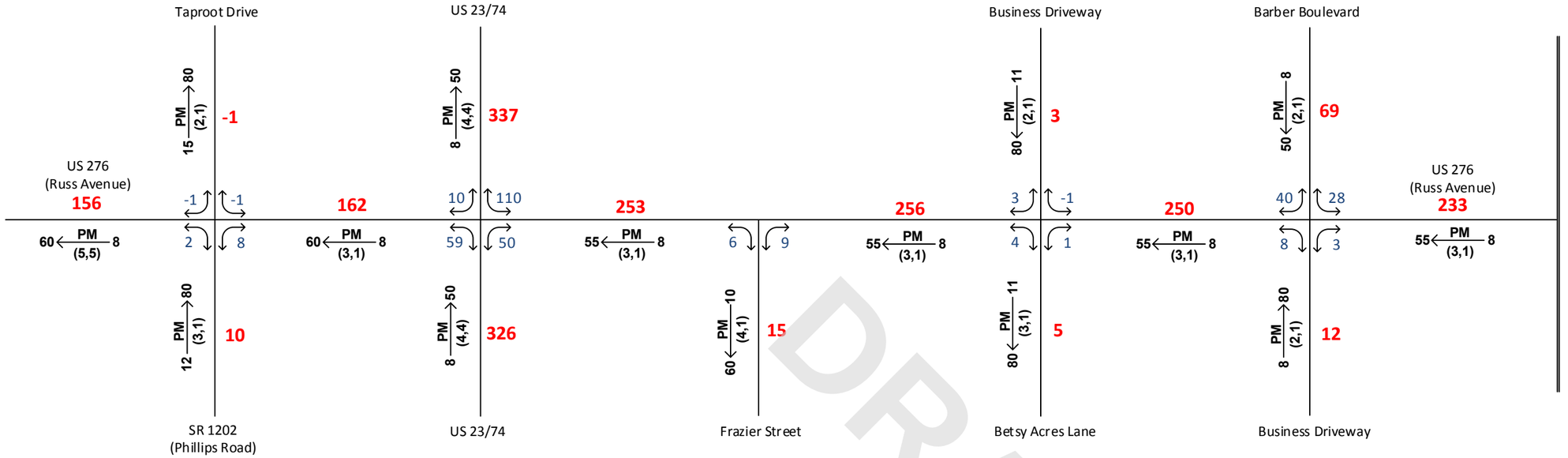
Note: The forecast diagrams are attached.

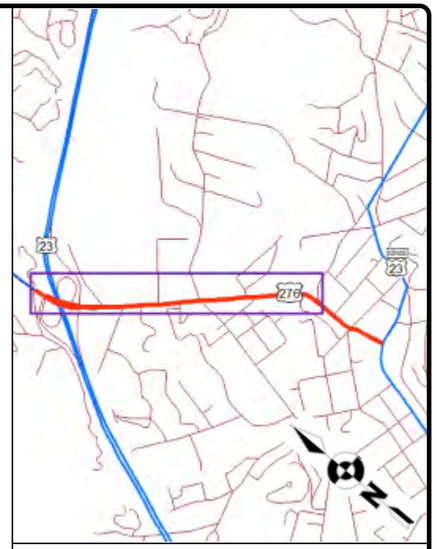
If you have any questions, please do not hesitate to call Kimberly Levine with Mott MacDonald at (919) 552-2253, or e-mail at kimberly.levine@mottmac.com.

cc : FILE (Haywood, TIP Project U-5839)
(*via e-mail as PDF attachments*):

Michael Orr, AICP, Western Planning Unit
Glen Mumford, PE, Roadway Design Unit
Brian Wert, PE, Transportation Planning Branch
Jim Dunlop, PE, Congestion Management Section
Clark Morrison, PhD, PE, Pavement Management Unit

DRAFT




# 2016

AVERAGE ANNUAL
DAILY TRAFFIC

## BASE YEAR – NO BUILD

**SHEET 1 OF 2**

## L E G E N D

K PM (d, t) D

| | |
|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s |
| 1- | Less than 50 VPD |
| X | Movement Prohibited |
| ------- | Roadway |
| K | Design Hour Factor (%) |
| PM | PM Peak Period |
| D | Peak Hour Directional Split |
| → | Indicates Direction of D |
| (d,t) | Duals, TT-STs (%) |

| | |
|---|---|
| **TIP:** U-5839 | **WBS:** 50111.1.FS1 |
| **COUNTY:** Haywood | **DIVISION:** 14 |

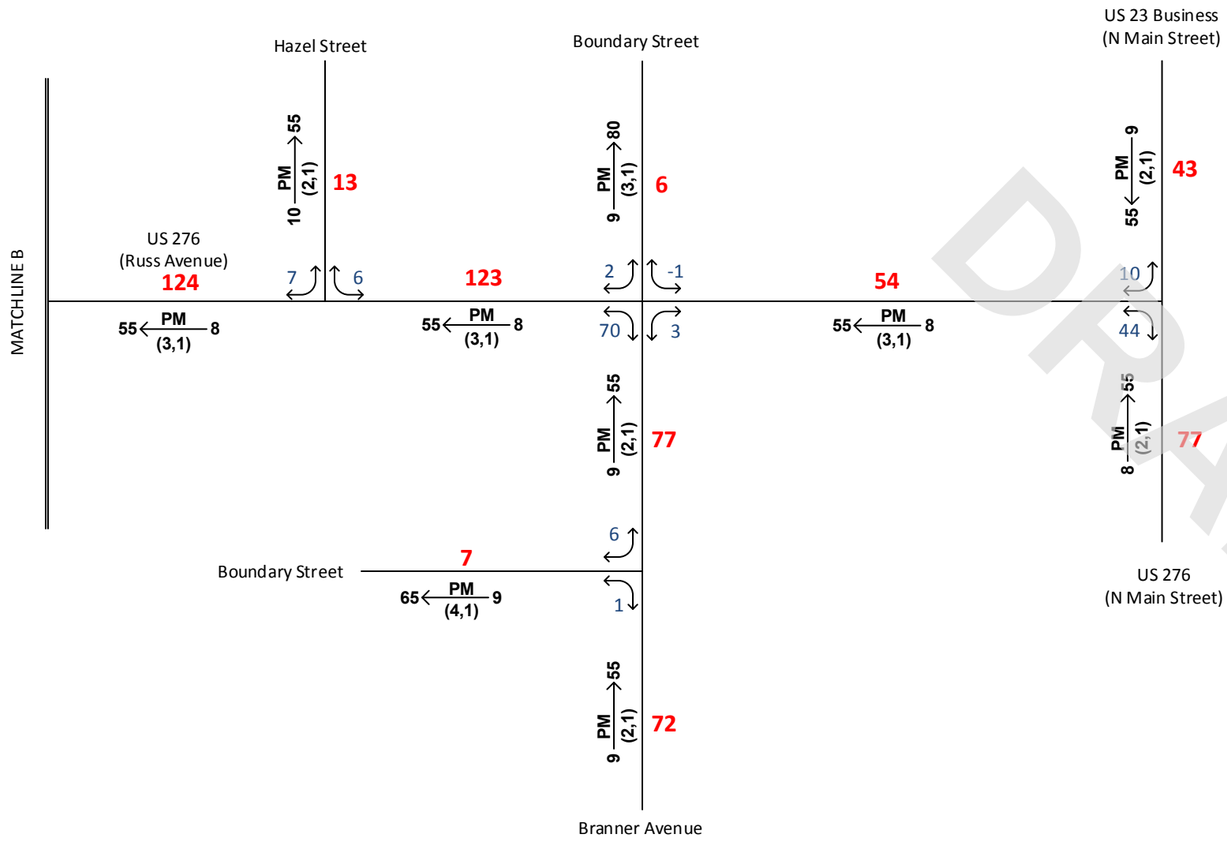
**DATE:** September 2016

**PREPARED BY:** Kimberly Levine

**LOCATION:** US 276 (Russ Avenue) from existing SR 1202 (Phillips Road) to US 23 Business (N Main Street) in Waynesville

**PROJECT:** US 276 (Russ Avenue) Widening

DRAFT

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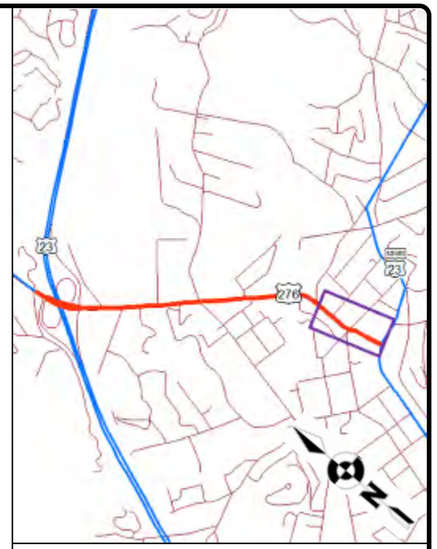



# 2016

AVERAGE ANNUAL
DAILY TRAFFIC

## BASE YEAR – NO BUILD

SHEET 2 OF 2

## L E G E N D

K PM → D
( d, t )

| | |
|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s |
| 1- | Less than 50 VPD |
| X | Movement Prohibited |
| ------- | Roadway |
| K | Design Hour Factor (%) |
| PM | PM Peak Period |
| D | Peak Hour Directional Split |
| → | Indicates Direction of D |
| (d,t) | Duals, TT-STs (%) |

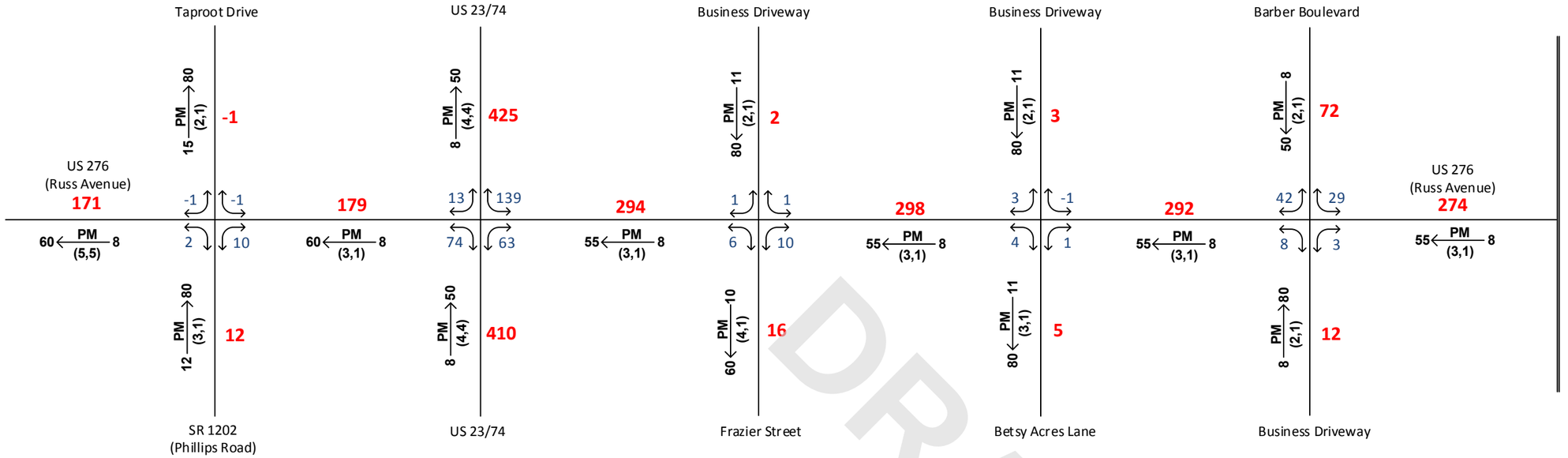
| | |
|---|---|
| **TIP:** U-5839 | **WBS:** 50111.1.FS1 |
| **COUNTY:** Haywood | **DIVISION:** 14 |

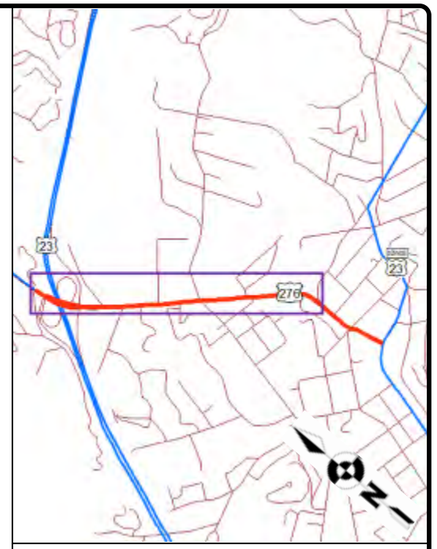
**DATE:** September 2016

**PREPARED BY:** Kimberly Levine

**LOCATION:** US 276 (Russ Avenue) from existing SR 1202 (Phillips Road) to US 23 Business (N Main Street) in Waynesville

**PROJECT:** US 276 (Russ Avenue) Widening




# 2040

AVERAGE ANNUAL
DAILY TRAFFIC

## FUTURE YEAR – BUILD

## SHEET 1 OF 2

## L E G E N D

K PM (d, t) D

| | |
|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s |
| 1- | Less than 50 VPD |
| X | Movement Prohibited |
| ------ | Roadway |
| K | Design Hour Factor (%) |
| PM | PM Peak Period |
| D | Peak Hour Directional Split |
| → | Indicates Direction of D |
| (d,t) | Duals, TT-STs (%) |

| | |
|---|---|
| **TIP:** U-5839 | **WBS:** 50111.1.FS1 |
| **COUNTY:** Haywood | **DIVISION:** 14 |

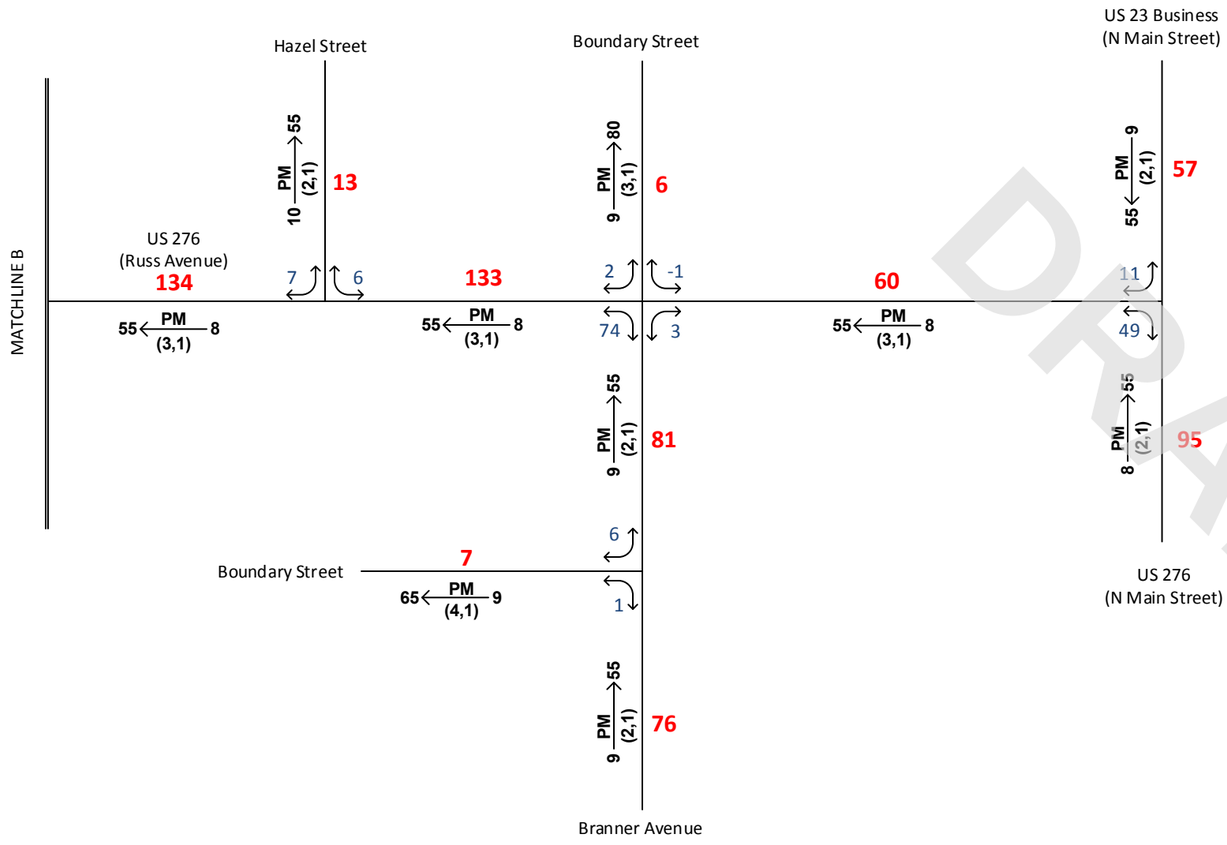
**DATE:** September 2016

**PREPARED BY:** Kimberly Levine

**LOCATION:** US 276 (Russ Avenue) from existing SR 1202 (Phillips Road) to US 23 Business (N Main Street) in Waynesville

**PROJECT:** US 276 (Russ Avenue) Widening

DRAFT

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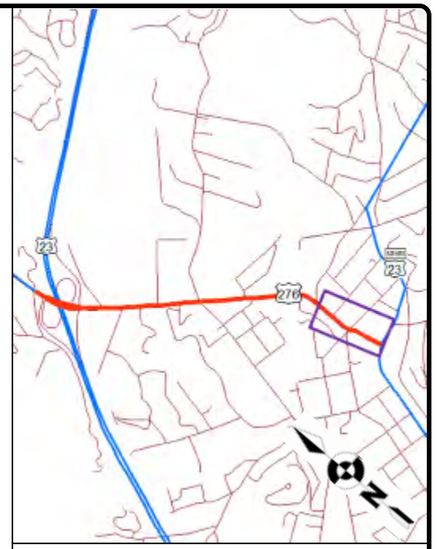



# 2040

AVERAGE ANNUAL
DAILY TRAFFIC

## FUTURE YEAR – BUILD

SHEET 2 OF 2

## L E G E N D

K PM → D
( d, t )

| | |
|---|---|
| ### | No. of Vehicles Per Day (VPD) in 100s |
| 1- | Less than 50 VPD |
| X | Movement Prohibited |
| ------- | Roadway |
| K | Design Hour Factor (%) |
| PM | PM Peak Period |
| D | Peak Hour Directional Split |
| → | Indicates Direction of D |
| (d,t) | Duals, TT-STs (%) |

| | |
|---|---|
| **TIP:** U-5839 | **WBS:** 50111.1.FS1 |
| **COUNTY:** Haywood | **DIVISION:** 14 |

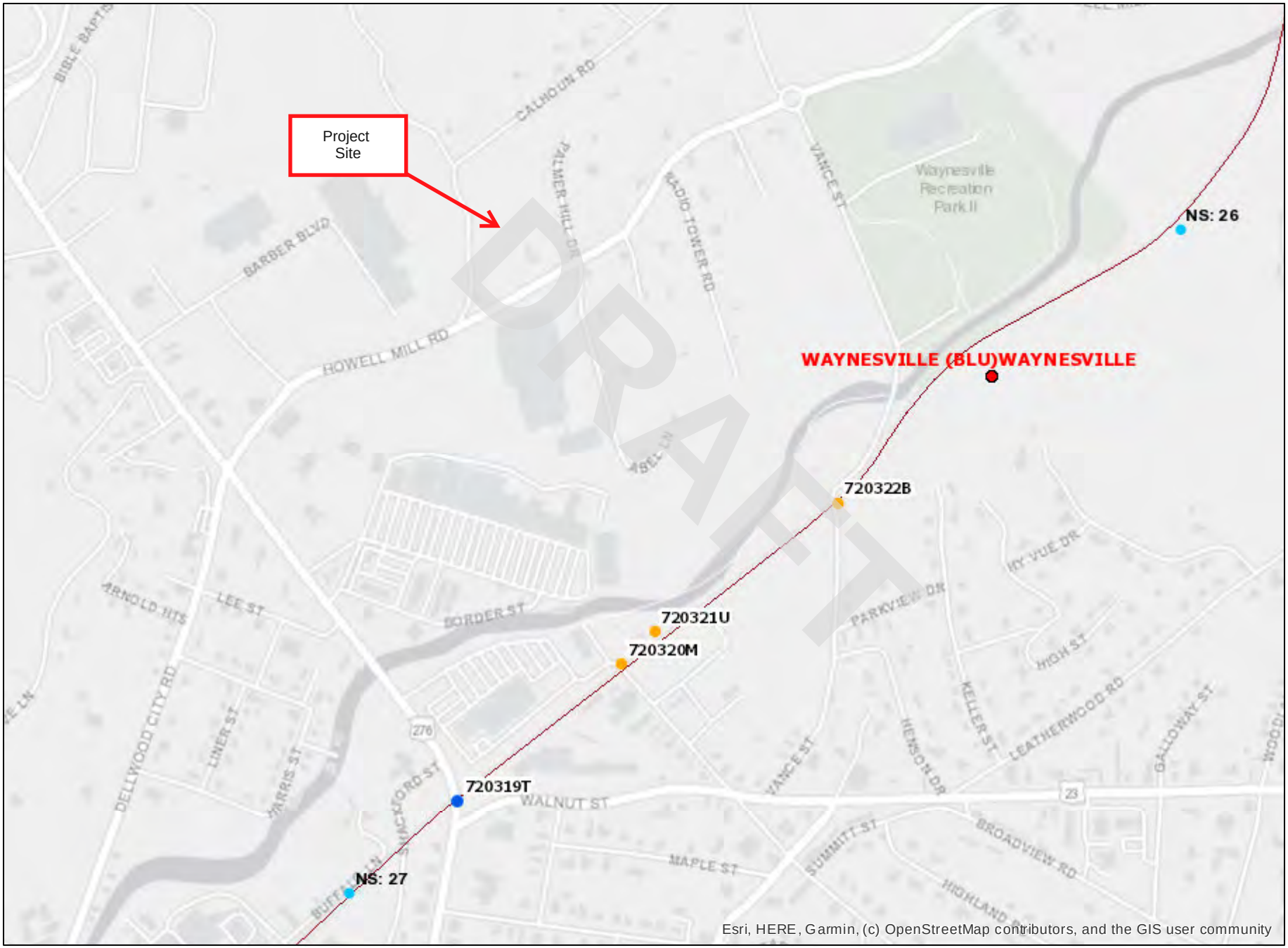
**DATE:** September 2016

**PREPARED BY:** Kimberly Levine

**LOCATION:** US 276 (Russ Avenue) from existing SR 1202 (Phillips Road) to US 23 Business (N Main Street) in Waynesville

**PROJECT:** US 276 (Russ Avenue) Widening

# Railroad Crossings - Balsam Edge



## Thomas S Hawkins, PWS

**From:** Bowman, Kristie L. <Kristie.Bowman@nscorp.com>
**Sent:** Monday, November 14, 2022 8:23 AM
**To:** Thomas S Hawkins Jr., PWS
**Cc:** Zach Windham; ATL NOC Coordinators
**Subject:** [EXTERNAL] FW: Request for Traffic Information - Balsam Edge, Waynesville, NC
**Attachments:** Railroad Crossing Map - Balsam Edge.pdf

---

**From:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Sent:** Friday, November 11, 2022 1:55 PM
**To:** ATL NOC Coordinators <ATLNOCSID@nscorp.com>
**Cc:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** [EXTERNAL] Request for Traffic Information - Balsam Edge, Waynesville, NC

DRAFT

Good afternoon,

We're assisting with a proposed multi-family HUD project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina. As part of the HUD assessment, we'd like to request information on the average operations and 10-year projections for the length of track (NS: 26-27) that transects the following crossings:

720322B- diesel, 3 locomotives, 150 cars, 5 trains per day (2 day, 2 night, and 1 switcher), welded track
720321U- diesel, 3 locomotives, 150 cars, 6 trains per day (4 day and 2 night), welded track
720320M- diesel, 3 locomotives, 150 cars, 5 trains per day (2 day, 2 night, and 1 switcher), welded track
720319T- diesel, 3 locomotives, 150 cars, 5 trains per day (2 day, 2 night, and 1 switcher), welded track

I've included additional questions below that will assist us with our assessment.

- Diesel or electric trains? Quantity of each?
- Average number of rail cars per train or engine?
- What percentage or number of the trains operate at night?
- Are the tracks bolted or welded for the length in question?

I've included a PDF map of the railroad crossings depicted within proximity to the project. Please let me know if any additional information is required, and thank you in advance for your assistance.

Sincerely,

**THOMAS S HAWKINS JR., PWS** | Environmental Project Manager
**T** 864.987.1610 | **D** 864.987.1815 | **C** 864.350.2414
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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Instagram | LinkedIn | Facebook | Twitter

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

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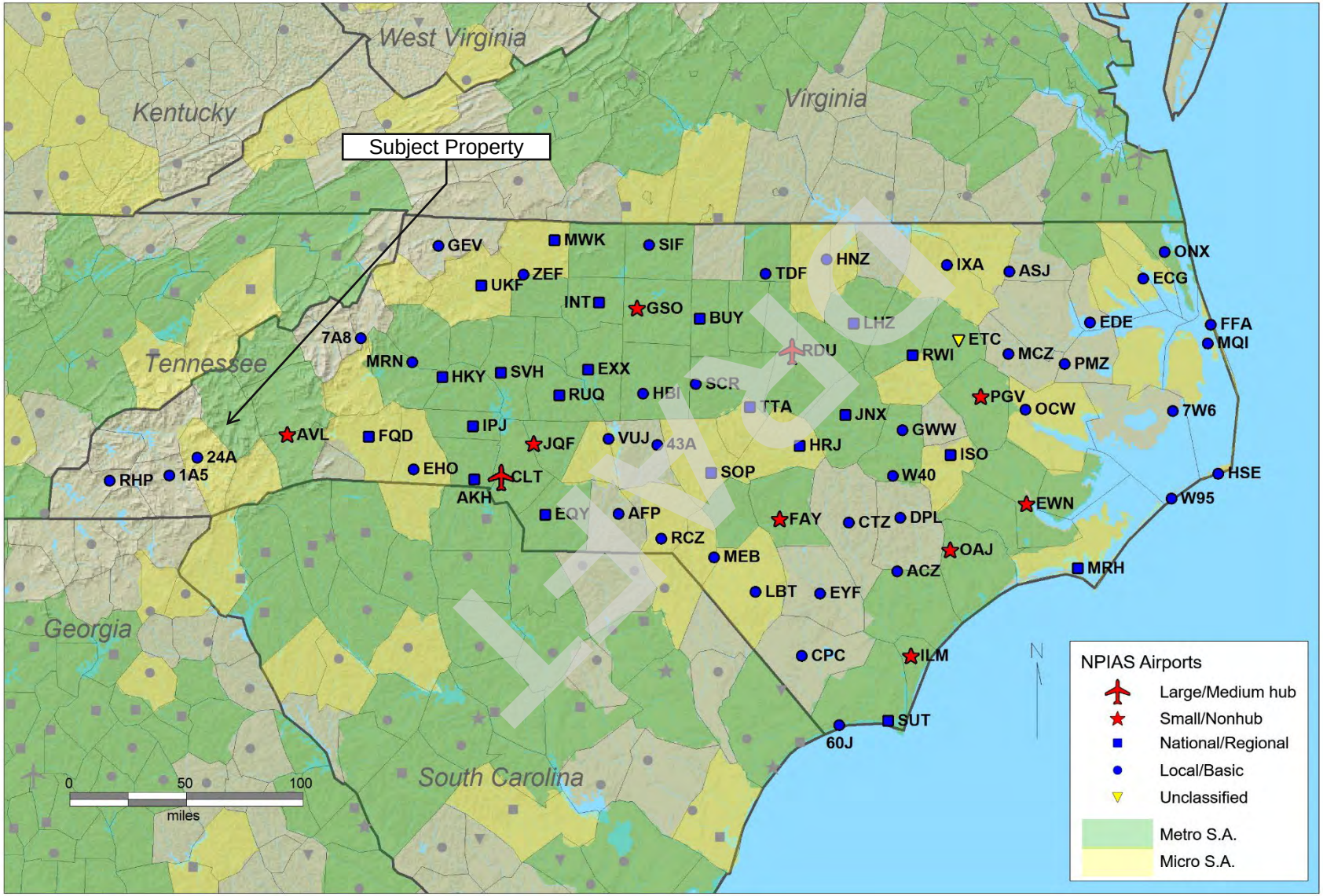
# North Carolina



# DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

# Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DRAFT

# DNL Calculator

| | |
|---|---|
| **Site ID** | Balsam Edge Apartments |
| **Record Date** | 02/13/2023 |
| **User's Name** | Thomas Hawkins |

| | |
|---|---|
| **Road # 1 Name:** | **Howell Mill Road** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 200 | 200 | 200 |
| Distance to Stop Sign | | | |
| Average Speed | 35 | 35 | 35 |
| Average Daily Trips (ADT) | 4600 | 200 | 200 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 51 | 48 | 58 |
| Calculate Road #1 DNL | 59 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Norfolk Southern** |

**Rail # 1**

| | | |
|---|---|---|
| **Train Type** | **Electric** ☐ | **Diesel** ☑ |

DRAFT

| | | |
|---|---|---|
| Effective Distance | | 1800 |
| Average Train Speed | | 30 |
| Engines per Train | | 3 |
| Railway cars per Train | | 150 |
| Average Train Operations (ATO) | | 6 |
| Night Fraction of ATO | | 30 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☐ No: ☑ |
| **Train DNL** | 0 | 56 |
| Calculate Rail #1 DNL | 56 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ○Yes ◉No |

| | |
|---|---|
| Combined DNL for all Road and Rail sources | **61** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate | Reset

DRAFT

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
    - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
    - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
    - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
    - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
    - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

# Tools and Guidance

**Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)**

**Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)**

DRAFT

# DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

# Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DRAFT

# DNL Calculator

| | |
|---|---|
| **Site ID** | Balsam Edge Apartments |
| **Record Date** | 12/23/2022 |
| **User's Name** | Thomas Hawkins |

| | |
|---|---|
| **Road # 1 Name:** | **Howell Mill Road (Projected - 2040)** |

**Road #1**

| **Vehicle Type** | **Cars** ☑ | **Medium Trucks** ☑ | **Heavy Trucks** ☑ |
|---|---|---|---|
| Effective Distance | 200 | 200 | 200 |
| Distance to Stop Sign | | | |
| Average Speed | 35 | 35 | 35 |
| Average Daily Trips (ADT) | 4600 | 200 | 200 |
| Night Fraction of ADT | 15 | 15 | 15 |
| Road Gradient (%) | | | 2 |
| Vehicle DNL | 51 | 48 | 58 |
| Calculate Road #1 DNL | 59 | Reset | |

| | |
|---|---|
| **Railroad #1 Track Identifier:** | **Norfolk Southern** |

**Rail # 1**

| | | |
|---|---|---|
| **Train Type** | **Electric** ☐ | **Diesel** ☑ |

DRAFT

| | | |
|---|---|---|
| Effective Distance | | 1800 |
| Average Train Speed | | 30 |
| Engines per Train | | 3 |
| Railway cars per Train | | 150 |
| Average Train Operations (ATO) | | 6 |
| Night Fraction of ATO | | 30 |
| Railway whistles or horns? | Yes: ☐ No: ☐ | Yes: ☑ No: ☐ |
| Bolted Tracks? | Yes: ☐ No: ☐ | Yes: ☐ No: ☑ |
| **Train DNL** | 0 | 56 |
| Calculate Rail #1 DNL | 56 | Reset |

Add Road Source | Add Rail Source

| | |
|---|---|
| Airport Noise Level | |
| Loud Impulse Sounds? | ○ **Yes** ◉ **No** |

| | |
|---|---|
| Combined DNL for all Road and Rail sources | **61** |
| Combined DNL including Airport | **N/A** |
| Site DNL with Loud Impulse Sound | |

Calculate | Reset

DRAFT

# Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
    - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
    - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
    - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
    - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
    - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

# Tools and Guidance

**Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)**

**Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)**

DRAFT

# ATTACHMENT 14:

## Sole Source Aquifers

EPA Sole Source Aquifer Map

# U.S. EPA Sole Source Aquifer Map

4/17/2023, 4:12:52 PM

1:9,244,649

Sole_Source_Aquifers

0 65 130 260 mi

0 105 210 420 km

Esri, HERE, Garmin, NGA, USGS, NPS

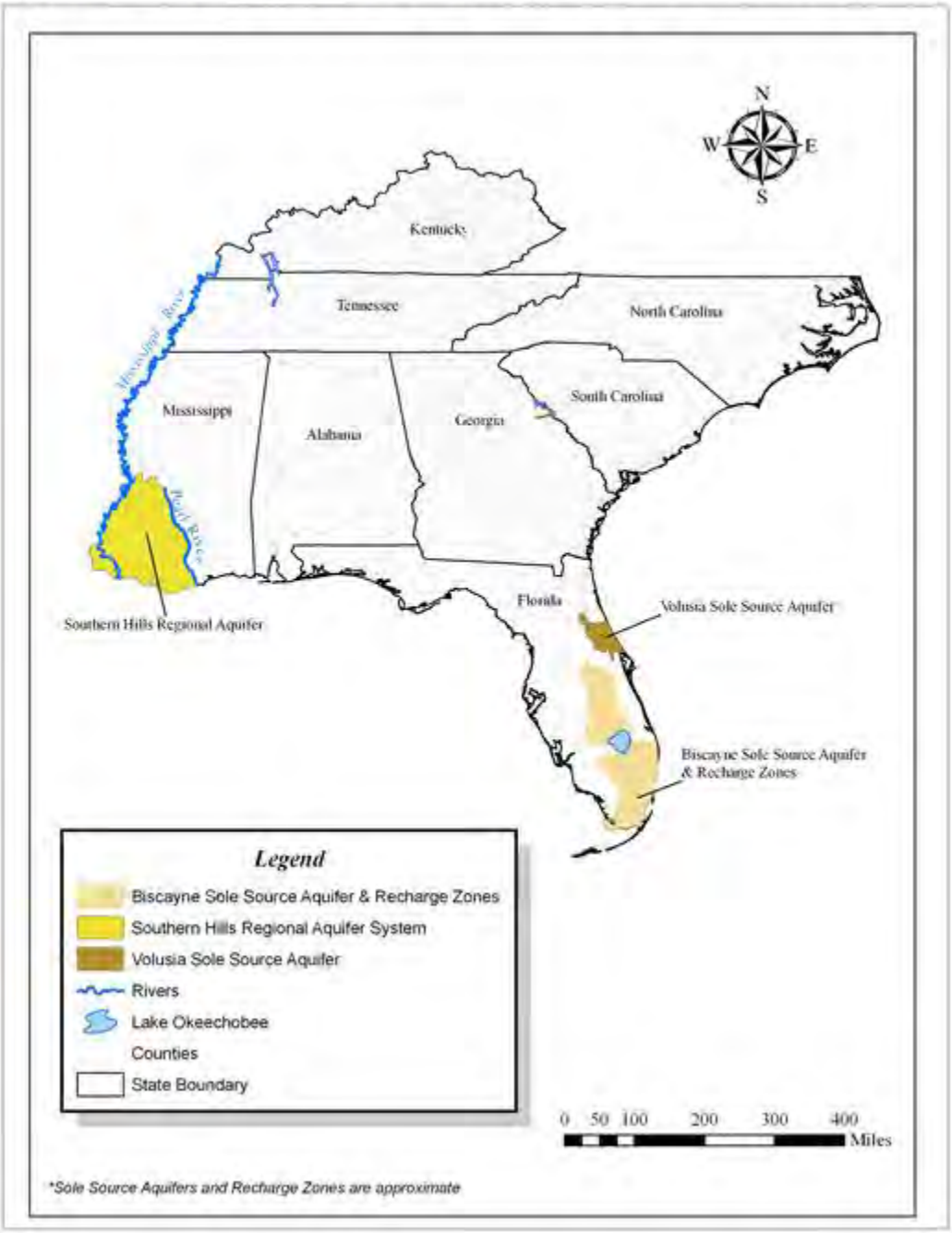
U.S. Environmental Protection Agency

# Appendix M

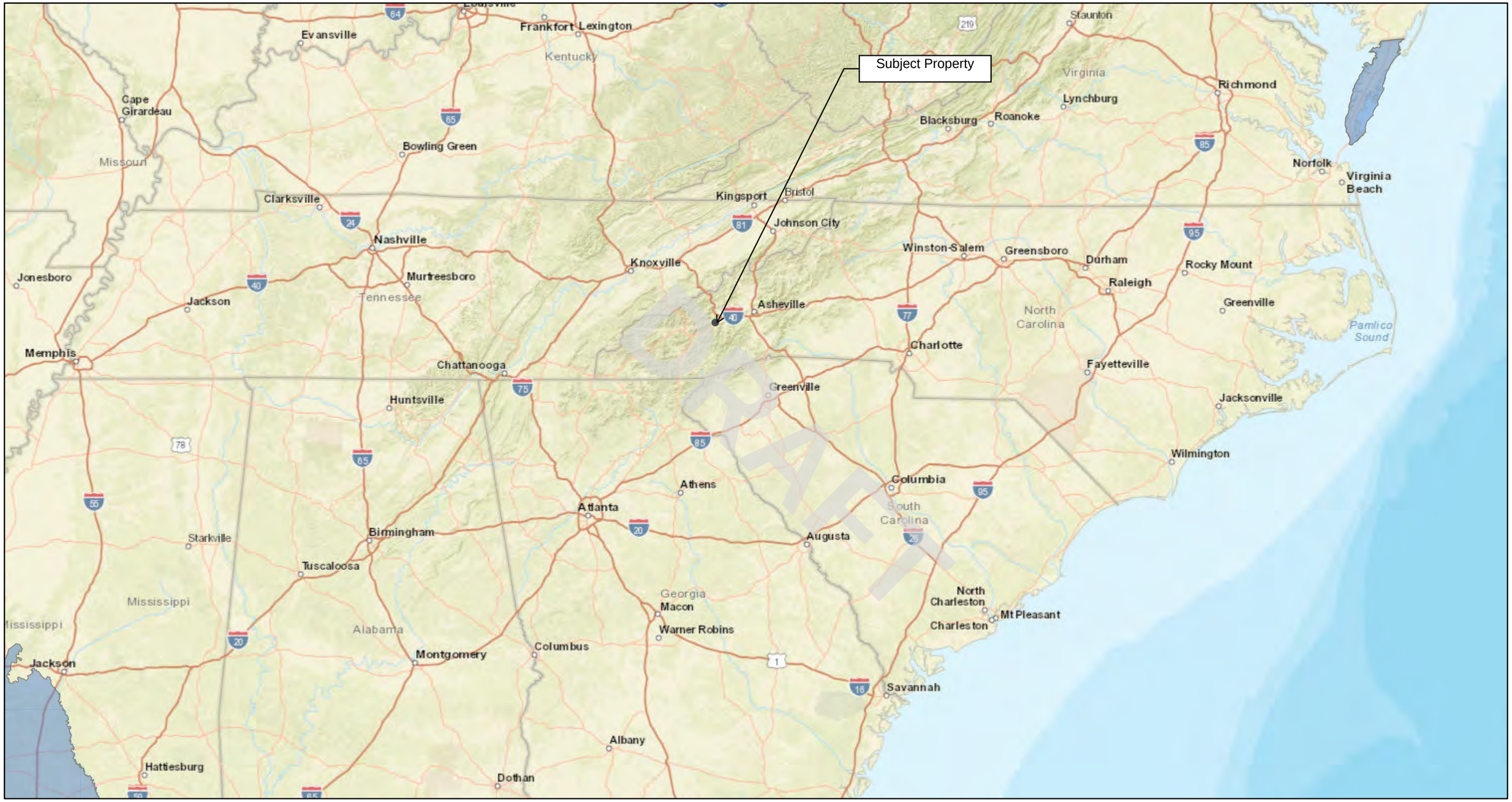
# Sole Source Aquifers

Source: https://archive.epa.gov/pesticides/region4/water/groundwater/web/html/r4ssa.html

## Approximate Boundaries of Region 4 Sole Source Aquifers



# ArcGIS Web AppBuilder




11/8/2022, 2:57:17 PM

Sole_Source_Aquifers

1:4,622,324

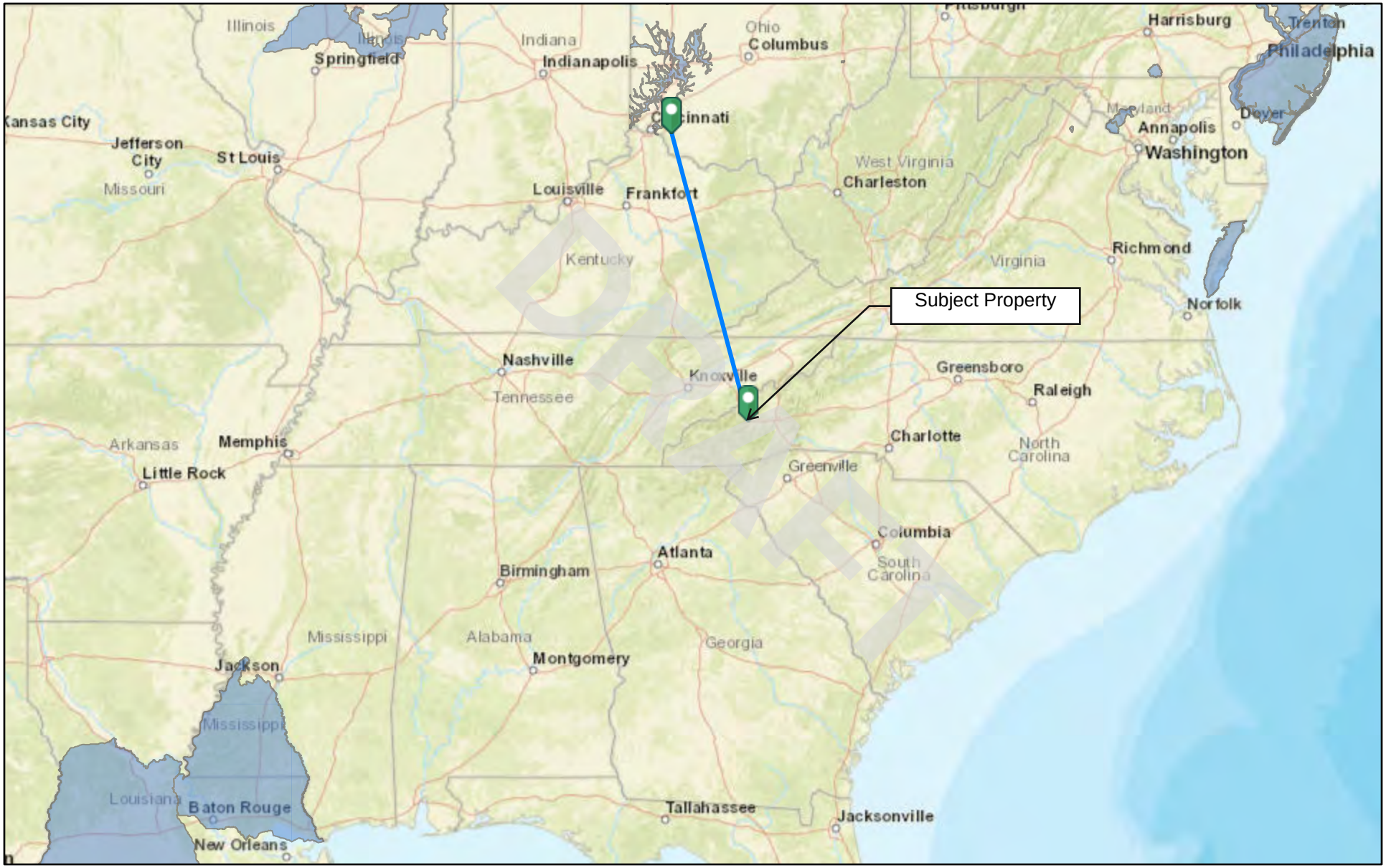
0 45 90 180 mi

0 75 150 300 km

Esri, HERE, Garmin, NGA, USGS, NPS

U.S. Environmental Protection Agency

# Sole Source Aquifer Map - Balsam Edge




11/9/2022, 4:22:33 PM

Sole_Source_Aquifers

1:9,244,649

0 65 130 260 mi

0 100 200 400 km

Esri, HERE, Garmin, NGA, USGS, NPS

U.S. Environmental Protection Agency

# ATTACHMENT 15:

# Wetlands Protection

# Appendix N

# Wetlands Protection

# Appendix B

**Memorandum of Understanding**

This Agreement is entered into as of September 11, 2023 by and between the North Carolina Housing Finance Agency, a public agency and instrumentality of the State of North Carolina (the "Agency") and Balsam Edge, LLC a North Carolina limited liability company (the "Developer").

WHEREAS, the Agency administers the Rental Production Program (the "Program") to make loans to developers to construct or rehabilitate affordable apartments in North Carolina; and

WHEREAS, the Program is funded, in part, with federal funds (the "HOME Funds") under the HOME Investment Partnership Act (Title/Section II of the Cranston-Gonzalez National Affordable Housing Act of 1990, as amended) (the "Act"); and

WHEREAS, the Act requires the Agency to complete the environmental review process under 24 CFR Part 58 prior to committing any HOME funds to a project; and

WHEREAS, the Agency proposes to loan HOME Funds to the Developer under the Program for the construction of an 84-unit affordable housing apartment complex to be known as Balsam Edge located at approximately 291 Howell Mill Road, Waynesville, NC 28786 (the "Project"); and

WHEREAS, in its environmental review for the Project the Agency identified mitigation measures required to be taken by the Developer as a condition for making a loan to the Developer; and

WHEREAS, the Agency and the Developer desire to enter into this Agreement for the purposes of establishing the mitigation measures under which the Project must be developed.

NOW, THEREFORE, in consideration of the mutual covenants and promises and obligations contained herein, and as a condition of the Agency making a Program loan to the Developer, the parties agree as follows:

I. **Mitigation Measures.**

The Developer agrees to construct the Project and otherwise implement the mitigation measures listed below to reduce, avoid, or eliminate adverse environmental impacts. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The Developer is fully responsible for implementing and monitoring mitigation measures.

A. A riparian wetland is located on the southwest central portion the Site (see "Wetland Area" in attached Exhibit A).The Developer agrees that no ground disturbance (either temporary or permanent) other than activities permitted in 24 CFR 55.12(c)(7)(i) will occur in the wetland and no portion of the project will be constructed in the wetland. If HUD provides a waiver of 24 CFR §58.22 (a) or such other approval or action that HUD deems appropriate to allow the Developer to receive HOME funds to construct the Project, the Developer agrees to record a restrictive covenant (in substantially the form attached hereto as Exhibit B) on the Wetland Area prior the closing of any financing.

B. Due to the identified presence of limited soil and groundwater impacts, the Developer agrees to report the release incident identified in the Limited UST Closure Assessment Report dated August 30, 2023, and associated assessment data to the North Carolina Department of Environmental Quality (NCDEQ) UST Section. A complete State approved remediation plan will be required prior to receipt of the necessary Agency signatures to complete the environmental review and publishing or posting a combined NOI-RROF/FONSI. Removal of the UST and the abatement of grossly impacted soil and a Notice of Residual Petroleum (NRP) to address the groundwater contamination on the Site will likely be requested by the NCDEQ.

II. **Documentation; Repayment.**

The Developer must demonstrate and document to the Agency that it has complied with all of the mitigation measures listed above. In the event that any mitigation measure is not completed to the Agency's satisfaction, the Agency may rescind its obligation to loan any HOME funds to the Developer or the Developer may be required to repay to the Agency any HOME funds loaned to the Developer under the Program for the Project.

## III. Monitoring and Reporting.

The Developer agrees to provide detailed written reports to the Agency, at the Agency's request, to sufficiently document the work undertaken under this Agreement. The Agency shall have the ability to conduct unannounced site visits to monitor and review the construction process including these mitigation measures.

## IV. Miscellaneous.

A. This Agreement shall bind all successors and assigns of the Developer.

B. This Agreement shall be governed by and construed under North Carolina law. Any and all disputes between the parties that cannot be settled by mutual agreement shall be resolved solely and exclusively in the North Carolina State Courts.

C. Any modifications to this Agreement shall be in writing and signed by both parties.

D. This Agreement may be executed in one or more counterparts and shall become effective on the date first written above.

E. Any provision herein contained which by its nature and effect is required to be observed, kept or performed after the execution of this Agreement shall survive said execution and remain binding upon and for the benefit of the parties until fully observed, kept, or performed.

**Now, therefore, the parties have caused this Agreement to be duly approved and duly executed.**

North Carolina Housing Finance Agency

By: _____

Scott Farmer, Executive Director

Date: 9/25/23

Balsam Edge LLC

By: _____

Date: 9/21/2023

# Memorandum of Understanding

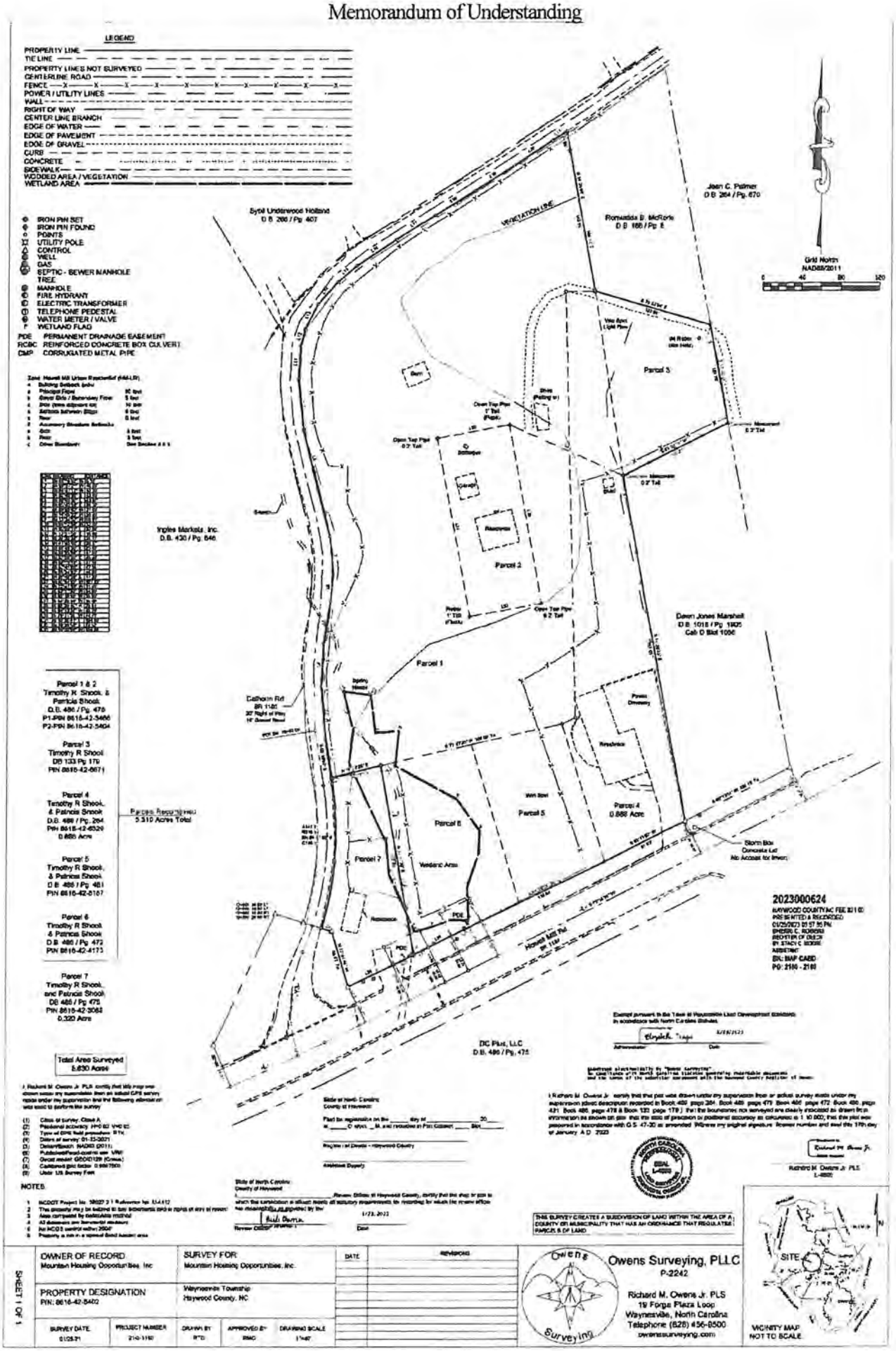


**EXHIBIT B**

**to**

**Memorandum of Understanding**

Prepared by and return to:

_____

_____

_____

_____

STATE OF NORTH CAROLINA

_____ COUNTY

**CONSERVATION DECLARATION**

This Conservation Declaration ("Conservation Declaration") is made on this 21st day of September, 2023, by Balsam Edge, LLC, a North Carolina LLC ("Declarant").

**RECITALS & CONSERVATION PURPOSES**

A. Declarant is the sole owner in fee simple of the certain real property as more particularly described on **Exhibit A** attached hereto and by this reference incorporated herein, upon which is located certain real property described as "Wetland Area" (the "Property") as shown on **Exhibit B** attached hereto; and

B. The purpose of this Conservation Declaration is to maintain wetland resources and other natural values of the Property, and prevent the use or development of the Property for any purpose or in any manner that would conflict with the maintenance of the Property in its natural condition. The preservation of the Property in its natural condition is required by Section 288 of the Cranston-Gonzales National Affordable Housing Act and (i) the North Carolina

Housing Finance Agency (acting as the responsible entity in accordance with Section 288 of the Cranston-Gonzales National Affordable Housing Act) to facilitate compliance with Executive Order 11990 (Protection of Wetlands) as implemented at 24 CFR Part 55, particularly 55.12(c)(6), and this Conservation Declaration may therefore be enforced by the United States of America.

NOW, THEREFORE the Declarant hereby unconditionally and irrevocable declares that the Property shall be held and subject to the following restrictions, covenants and conditions as set out herein, to run with the Property and be binding on all parties that have or shall have any right, title, or interest in said Property.

**ARTICLE I. PROHIBITED AND RESTRICTED ACTIVITIES**

Any activity on, or use of, the Property inconsistent with the purposes of this Conservation Declaration is prohibited. The Property shall be maintained in its natural scenic and open condition and restricted from any development or use that would impair or interfere with the conservation purposes of this Conservation Declaration set forth above.

Without limiting the generality of the foregoing, the following activities and uses are expressly prohibited or restricted.

A. Disturbance of Natural Features. Any change disturbance, alteration or impairment of the natural features of the Property or any introduction of non-native plants and/or animal species is prohibited.
B. Construction. There shall be no constructing or placing of any building, mobile home, asphalt or concrete pavement, billboard or other advertising display, antenna, utility pole, tower, conduit, line, pier, landing, dock or any other temporary or permanent structure or facility on or above the Property.
C. Industrial, Commercial and Residential Use. Industrial, residential and/or commercial activities, including any right or passage for such purposes are prohibited on the Property
D. Agricultural, Grazing and Horticultural Use. Agricultural, grazing, animal husbandry and horticultural use of the Property are prohibited.
E. Vegetation. There shall be no removal, burning, destruction, harming, cutting or mowing of trees, shrubs, or vegetation on the Property, except that which is necessary to prevent injury to life or damage to property, or maintain the natural features of Property.
F. Roads and Trails. There shall be no construction of roads, trails or walkways on the Property.
G. Signage. No signs shall be permitted on or over the Property, except the posting of no trespassing signs, signs identifying the conservation values of the Property, signs giving directions or proscribing rules and regulations for the use of the Property and/or signs identifying the Declarant as owner of the property.

H. Dumping or Storage. Dumping or storage of soil, trash, ashes, garbage, waste, abandoned vehicles, appliances, machinery or hazardous substances, or toxic or hazardous waste, or any placement of underground or aboveground storage tanks or other material on the Property is prohibited.

I. Excavation, Dredging or Mineral Use. There shall be no grading filling, excavation, dredging, mining or drilling; no removal of topsoil, sand gravel, rock, peat, minerals or other materials, and no change in the topography of the land in any manner on the Property, except to restore natural topography or drainage patterns.

J. Water Quality and Drainage Pattern. There shall be no diking, draining, dredging, channeling, filling, leveling, pumping, impounding or related activities, or altering or tampering with water control structures or devices or disruption or alteration of existing drainage patterns on the Property. In addition, diverting or causing or permitting the diversion of surface or underground water into, within or out of the easement area by any means, removal of wetlands or floodplains, polluting or discharging into waters, springs, seeps or wetlands, or use of pesticide or biocides is prohibited on the Property.

K. Development Rights. No development rights that have been encumbered or extinguished by this Conservation Declaration shall be transferred pursuant to a transferable development rights scheme or cluster development arrangement or otherwise.

L. Vehicles. The operation of mechanized vehicles including, but not limited to, motorcycles, dirt bikes, all-terrain vehicles, cars and trucks prohibited on the Property.

M. Other Prohibitions. Any other use of, or activity on, the Property which is or may become inconsistent with the purposes of Executive Order 11990, the preservation of the Property substantially in its natural condition, or the protection of its environmental systems, is prohibited.

## ARTICLE II. ENFORCEMENT & REMEDIES

A. This Conservation Declaration is intended to ensure continued compliance with Executive Order 11990 (Protection of Wetlands) as implemented at 24 CFR Part 55, particularly 55.12(c)(6); therefore, this Conservation Declaration may be enforced by the United States of America and the North Carolina Housing Finance Agency. This covenant is to run with the land and shall be binding on all parties and all persons claiming under the Declarant.

B. The North Carolina Housing Finance Agency, their employees and agents and their successors and assigns, have the right, with reasonable notice, to enter the Property at reasonable times for the purpose of inspecting the Property to determine whether the Declarant, Declarant's representatives or assigns are complying with the terms, conditions and restrictions of this Conservation Declaration.

C. Nothing contained in this Conservation Declaration shall be construed to entitle the North Carolina Housing Finance Agency to bring any action against Declarant for any injury or change in the Property caused by third parties, resulting from causes beyond the Declarant's control, including, without limitation, fire, flood, storm, and earth movement or from any prudent action taken in good faith by the Declarant under emergency conditions to prevent, abate, or mitigate significant injury to life, damage to Property or harm to the Property resulting from such causes.

## ARTICLE III. PUBLIC ACCESS

A. This Conservation Declaration does not convey to the public the right to enter the Property for any purposes whatsoever.

## ARTICLE IV. DOCUMENTATION AND TITLE

A. Conservation Purpose. Declarant, for itself, its successors and assigns, agrees that the Property shall be held exclusively for conservation purposes.

B. Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Conservation Declaration and supersedes all prior discussions, negotiations, understandings or agreements relating to the Conservation Declaration. If any provision is found to be invalid, the remainder of the provisions of this Conservation Declaration, and the application of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

C. Recording. Declarant shall record this instrument and any amendment hereto in timely fashion in the official records of Haywood County, North Carolina, and may re-record it at any times as may be required to preserve its rights.

D. Environmental Condition of the Property. The Declarant warrants and represents that to the best of its knowledge after appropriate inquiry and investigation: (a) the Property described herein is and at all times hereafter will continue to be in full compliance with all federal, state and local environmental laws and regulations, and (b) as of the date hereof there are no hazardous materials, substances, wastes or environmentally regulated substances (including, without limitation, any materials containing asbestos) located on, in or under the Property or used in connection therewith, and that there is no environmental condition existing on the Property that may prohibit or impede use of the Property for the purposes set forth in the recitals.

**SEPARATE SIGNATURE PAGE FOLLOWS**

**SEPARATE SIGNATURE PAGE FOR**

**CONSERVATION DECLARATION**

**IN WITNESS WHEREOF,** Declarant has hereunto set its hand and seal effective the day and year first above written.

By: Geoffrey Barton

---

STATE OF NORTH CAROLINA )
)
COUNTY OF Buncombe )

I, James D Dennis, a Notary Public of the County and State aforesaid, certify that Geoffry Barton as President of MHE, Inc., the Managing Member of Balsam Edge LLC, personally appeared before me this day and acknowledged the voluntary execution of the foregoing instrument in said capacity.

WITNESS my hand and notarial seal or stamp, this the 21st day of September ~~201~~ 2023

Notary Public

My Commission Expires: 12/8/2024

*[Notarial Seal/Stamp]*

JAMES D DENNIS
Notary Public
North Carolina
Buncombe County

**EXHIBIT A**
**LEGAL DESCRIPTION**

Beginning at a point in the northern boundary of Howell Mill Road (SR 1184), said point being the southwest corner of the property of Dawn Jones Marshall, now or formerly, as shown on the plat recorded in Map Cabinet D at Page 1056, Haywood County Registry; and from the Beginning Point thus established, with the northern boundary of Howell Mill Road (SR 1184) the following five (5) courses and distances: (1) South 63°11'07 West 91.63 feet to an iron pin found, (2) South 64°18'54" West 138.84 feet to a point, (3) South 63°17'32" West 34.00' to a point, (4) South 63°16'50" West 26.00' to a point, (5) South 63°20'40" West 16.49' to an iron pin set; thence leaving the northern boundary of Howell Mill Road (SR 1184) North 10° 07' 35" West 195.49 feet; thence South 76°07'25" West 52.01 feet to a point in the eastern boundary of Calhoun Road (SR 1185); thence with the eastern and southern boundaries of Calhoun Road (SR 1185) the following twenty-two (20) courses and distances: (1) North 08°37'21" West 40.26' to a point, (2) North 04°47'17" West 53.39' to a point, (3) North 02°43'23" East 43.56' to a point, (4) North 08°40'32" East 43.67' to a point, (5) North 05°43'16" East 28.32' to a point, (6) North 06°00'42" West 37.96' to a point, (7) North 14°45'23" West 50.48' to a point, (8) North 13°34'32" West 60.81' to a point, (9) North 06°12'58" West 52.50' to a point, (10) North 03°59'10" East 33.93' to a point, (11) North 13°51'58" East 16.90' to a point, (12) North 26°33'35" East 28.77' to a point, (13) North 41°45'40" East 30.17' to a point, (14) North 49°48'30" East 25.66' to a point, (15) North 56°23'04" East 47.68' to a point, (16) North 57°38'45" East 46.44' to a point, (17) North 58°13'16" East 47.15' to a point, (18) North 57°41'04" East 47.55' to a point, (19) North 56°34'03" East 46.28', and (20) North 56°48'56" East 17.20' to a point; thence leaving the boundary of Calhoun Road (SR 1185) and with the western boundary of the property of Romualda B. McRorie, now or formerly, by Deed recoded in Book 188 at Page 8, Haywood County Registry, South 10°28'04" East, passing an iron pin set at 20.00 feet, 165.13 feet to an iron pin set; thence with the southern line of the Romualda B. McRorie property South 73°53'04" East 123.60 feet to an iron pin set in the western boundary of the First Tract of the property of Jean C. Palmer, now or formerly, by Deed recorded in Book 264 at Page 670, Haywood County Registry; thence with the western boundary of the Jean C. Palmer property South 10°28'04" East 101.70 feet to a concrete monument in the northeast corner of the property of Dawn Jones Marshall, now or formerly, as shown on the plat recorded in Map Cabinet D at Page 1056, Haywood County Registry; thence with the northern boundary of the Dawn Jones Marshall property South 63°33'16" West 120.21 feet to a concrete monument; thence with the western boundary of the Dawn Jones Marshall property South 10°30'33" East 357.01 feet to the Beginning Point.

Being all of Parcels 1-6, containing 5.310 acres, more or less, shown on the Survey for Mountain Housing Opportunities, Inc. dated January 25, 2021, by Richard M. Owens Jr., PLS of Owens Surveying, PLLC, Project No. 21-2-1190.

LEGEND

PROPERTY LINE
TIE LINE
PROPERTY LINES NOT SURVEYED
CENTERLINE ROAD
FENCE
POWER / UTILITY LINES
WALL
RIGHT OF WAY
CENTER LINE BRANCH
EDGE OF WATER
EDGE OF PAVEMENT
EDGE OF GRAVEL
CURB
CONCRETE
SIDEWALK
WOODED AREA / VEGETATION
WETLAND AREA

IRON PIN SET
IRON PIN FOUND
POINTS
UTILITY POLE
CONTROL
WELL
GAS
SEPTIC - SEWER MANHOLE
TREE
MANHOLE
FIRE HYDRANT
ELECTRIC TRANSFORMER
TELEPHONE PEDESTAL
WATER METER / VALVE
WETLAND FLAG

PDE PERMANENT DRAINAGE EASEMENT
RCBC REINFORCED CONCRETE BOX CULVERT
CMP CORRUGATED METAL PIPE

Zone: Howell Mill Urban Residential (HM-UR)

| | | |
|---|---|---|
| 4. | Building Setback (min) | |
| a. | Principal Front | 10 feet |
| b. | Street Side / Secondary Front | 5 feet |
| c. | Side (from adjacent lot) | 10 feet |
| d. | Setback between Bldgs | 6 feet |
| e. | Rear | 6 feet |
| 5. | Accessory Structure Setbacks | |
| a. | Side | 5 feet |
| b. | Rear | 5 feet |
| c. | Other Standards | See Section 4.6.3 |

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N 09°16'02" W | 6.58' |
| L2 | N 08°37'21" W | 40.26' |
| L3 | N 04°47'17" W | 53.39' |
| L4 | N 02°43'23" E | 43.56' |
| L5 | N 08°40'32" E | 43.67' |
| L6 | N 05°43'16" E | 28.32' |
| L7 | N 06°00'42" W | 37.96' |
| L8 | N 14°45'23" W | 50.48' |
| L9 | N 13°34'32" W | 60.81' |
| L10 | N 06°12'58" W | 52.50' |
| L11 | N 03°59'10" E | 33.93' |
| L12 | N 13°51'58" E | 16.90' |
| L13 | N 26°33'35" E | 28.77' |
| L14 | N 41°45'40" E | 30.17' |
| L15 | N 49°48'30" E | 25.66' |
| L16 | N 56°23'04" E | 47.68' |
| L17 | N 57°38'45" E | 46.44' |
| L18 | N 58°13'16" E | 47.15' |
| L19 | N 57°41'04" E | 47.55' |
| L20 | N 56°34'03" E | 46.28' |
| L21 | N 56°48'56" E | 17.20' |
| L22 | N 65°54'23" W | 127.22' |
| L24 | N 72°41'58" W | 11.46' |
| L25 | S 63°17'32" W | 34.00' |
| L26 | S 63°16'50" W | 26.00' |
| L27 | S 63°20'40" W | 16.49' |
| L28 | S 63°20'40" W | 23.51' |
| L29 | S 64°10'36" W | 49.79' |
| L30 | S 79°11'38" W | 74.71' |
| L31 | S 10°35'41" E | 184.06' |
| L32 | N 79°38'56" E | 74.52' |
| L33 | N 10°32'04" W | 184.65' |

Sybil Underwood Holland
D.B. 286 / Pg. 407

Jean C. Palmer
D.B. 264 / Pg. 670

Romualda B. McRorie
D.B. 188 / Pg. 8

Ingles Markets, Inc.
D.B. 430 / Pg. 646

DC Plus, LLC
D.B. 486 / Pg. 475

Dawn Jones Marshall
D.B. 1018 / Pg. 1905
Cab D Slot 1056

VEGETATION LINE
S 10°28'04" E 165.13' T 145.13'
S 73°53'04" E 123.60'
#4 Rebar (Not Held)
Wet Spot
Light Flow
Barn
Shed (Falling in)
Open Top Pipe 1' Tall (Flush)
Open Top Pipe 0.2' Tall
Barbeque
Garage
Residence
Rebar 1' Tall (Flush)
Shed
Concrete Monument 0.2' Tall
S 63°33'16" W 120.21'
S 10°28'04" E 101.70'
S 10°30'33" E 357.01'
Parcel 1
Parcel 2
Parcel 3
Parcel 4 0.888 Acre
Parcel 5
Parcel 6
Parcel 7
Wetland Area
Paved Driveway
Spring House
Branch
Calhoun Rd.
SR 1185
20' Right of Way
16' Gravel Road
POT Sta: 10+00.00
S 09°16'02" E 52.01'
S 77°07'25" W 188.00' Tie
N 76°07'25" E 52.01'
A147.71'
R318.54'
BN 04°01'00" E
C146.39'
S 10°07'35" E 195.49'
S 63°13'51" W 120.13' Tie
S 63°11'07" W 91.63'
S 64°19'54" W 138.84'
S 63°15'31" W
N 17°04'45" W 58.87' Tie
Storm Box
Concrete Lid
No Access for Invert
12+000 40.00' LT
12+000 10.00' LT
12+000 10.00' RT
12+000 20.00' RT
PDE
Howell Mill Rd.
SR 1184
Paved Driveway
Residence
Wet Spot
Parcel 5
Parcel 4
0.888 Acre

Grid No/rth
NAD88/2011
0 40 80 120

Parcel 1 & 2
Timothy R. Shook, &
Patricia Shook
D.B. 486 / Pg. 475
P1-PIN 8616-42-3466
P2-PIN 8616-42-5404

Parcel 3
Timothy R Shook
DB 133 Pg 179
PIN 8616-42-6671

Parcel 4
Timothy R Shook,
& Patricia Shook
D.B. 489 / Pg. 264
PIN 8616-42-6329
0.888 Acre

Parcel 5
Timothy R Shook,
& Patricia Shook
D.B. 486 / Pg. 481
PIN 8616-42-5167

Parcel 6
Timothy R Shook,
& Patricia Shook
D.B. 486 / Pg. 472
PIN 8616-42-4173

Parcel 7
Timothy R Shook,
and Patricia Shook
DB 486 / Pg 475
PIN 8616-42-3089
0.320 Acre

Parcels Recombined
5.310 Acres Total

Total Area Surveyed
5.630 Acres

I, Richard M. Owens Jr. PLS, certify that this map was drawn under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

(1) Class of survey: Class A
(2) Positional accuracy: H=0.03' V=0.05'
(3) Type of GPS field procedure: RTK
(4) Dates of survey: 01-25-2021
(5) Datum/Epoch: NAD83 (2011)
(6) Published/Fixed-control use: VRS
(7) Geoid model: GEOID12B (Conus)
(8) Combined grid factor: 0.9997609
(9) Units: US Survey Feet

NOTES:

1. NCDOT Project No. 35022.2.1 Reference No. U-4412
2. This property may be subject to any easements and/or rights of way of record.
3. Area computed by coordinate method.
4. All distances are horizontal measure.
5. No NCGS control within 2000'
6. Property is not in a special flood hazard area

State of North Carolina
County of Haywood

Filed for registration on the _____ day of _____ 20____
at _____O' clock __M, and recorded in Plat Cabinet _____ Slot_____.

_____
Register of Deeds - Haywood County

_____
Assistant Deputy

State of North Carolina
County of Haywood
I,_____,Review Officer of Haywood County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording for which the review officer has responsibility as provided by law.

DocuSigned by: Heidi Warren 1/23/2023
Review Officer Date

**2023000624**
HAYWOOD COUNTY NC FEE $21.00
PRESENTED & RECORDED
01/25/2023 03:57:35 PM
**SHERRI C. ROGERS**
REGISTER OF DEEDS
BY: STACY C. MOORE
ASSISTANT
**BK: MAP CABD**
**PG: 2169 - 2169**

Exempt pursuant to the Town of Waynesville Land Development Standards in accordance with North Carolina Statutes:

DocuSigned by: Elizabeth Teague 1/23/2023
Administrator Date

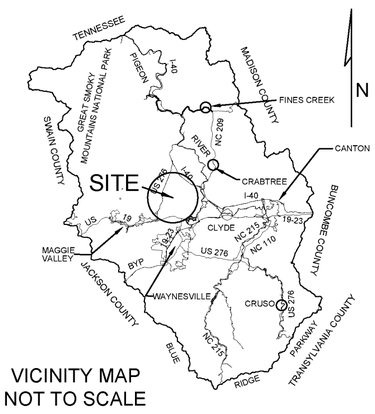
Submitted electronically by "Owens Surveying"
in compliance with North Carolina statutes governing recordable documents
and the terms of the submitter agreement with the Haywood County Register of Deeds.

I,Richard M. Owens Jr., certify that this plat was drawn under my supervision from an actual survey made under my supervision (deed description recorded in Book 489, page 264, Book 486, page 475, Book 486, page 472, Book 486, page 481, Book 486, page 478 & Book 133, page 179,); that the boundaries not surveyed are clearly indicated as drawn from information as shown on plat; that the ratio of precision or positional accuracy as calculated is 1:10,000; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, license number and seal this 17th day of January, A.D., 2023.

NORTH CAROLINA PROFESSIONAL SEAL L-4686 LAND SURVEYOR RICHARD M. OWENS JR.

DocuSigned by: Richard M. Owens Jr.
Richard M. Owens Jr. PLS
L-4686

THIS SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND.



VICINITY MAP
NOT TO SCALE

SHEET 1 OF 1

| OWNER OF RECORD | SURVEY FOR |
|---|---|
| Mountain Housing Opportunities, Inc. | Mountain Housing Opportunities, Inc. |
| PROPERTY DESIGNATION<br>PIN: 8616-42-5402 | Waynesville Township<br>Haywood County, NC |

| SURVEY DATE: | PROJECT NUMBER | DRAWN BY: | APPROVED BY: | DRAWING SCALE: |
|---|---|---|---|---|
| 01/25/21 | 21-2-1190 | RTO | RMO | 1"=40' |

| DATE | REVISIONS |
|---|---|
| | |

Owens Surveying

Owens Surveying, PLLC
P-2242

Richard M. Owens Jr. PLS
19 Forga Plaza Loop
Waynesville, North Carolina
Telephone (828) 456-9500
owenssurveying.com

# U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action ID: **SAW-2022-02495** County: **Haywood** U.S.G.S. Quad: **Clyde**

## NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner/Applicant: **Mountain Housing Opportunities, Inc.**
Address: **Equinox Environmental (agent acting on behalf)**
**Attn: Charles Lawson**
**37 Haywood Street, Suite 100**
**Asheville, North Carolina 28801**
Telephone Number: **828-253-6856**
Email: **charles@equinoxenvironmental.com**

Size (acres): **5.6**
Nearest Town: **Waynesville**
Nearest Waterway: **Richland Creek**
Coordinates: **35.50512, -82.98402**
River Basin/HUC: **Pigeon (06010106)**

Location description: **The site is located on a tract of land (PIN 8616-42-5402) at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina.**

## Indicate Which of the Following Apply:

### A. Preliminary Determination

**X** There are waters, including wetlands, on the above described property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). The waters, including wetlands, have been delineated, and the delineation has been verified by the Corps to be sufficiently accurate and reliable. Therefore this preliminary jurisdiction determination may be used in the permit evaluation process, including determining compensatory mitigation. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction.

_ There are wetlands on the above described property, that may be subject to Section 404 of the Clean Water Act (CWA)(33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). However, since the waters, including wetlands, have not been properly delineated, this preliminary jurisdiction determination may not be used in the permit evaluation process. Without a verified wetland delineation, this preliminary determination is merely an effective presumption of CWA/RHA jurisdiction over all of the waters, including wetlands, at the project area, which is not sufficiently accurate and reliable to support an enforceable permit decision. We recommend that you have the waters of the U.S. on your property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

### B. Approved Determination

_ There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are waters of the U.S., including wetlands, on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ We recommend you have the waters of the U.S. on your property delineated. As the Corps may not be able to accomplish this wetland delineation in a timely manner, you may wish to obtain a consultant to conduct a delineation that can be verified by the Corps.

_ The waters of the U.S., including wetlands, on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

_ The waters of the U.S., including wetlands, have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are no waters of the U.S., to include wetlands, present on the above described project area which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Morehead City, NC, at (252) 808-2808 to determine their requirements.

Placement of dredged or fill material within waters of the US, including wetlands, without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). Placement of dredged or fill material, construction or placement of structures, or work within navigable waters of the United States without a Department of the Army permit may constitute a violation of Sections 9 and/or 10 of the Rivers and Harbors Act (33 USC § 401 and/or 403). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Brooke Davis** at **828-271-7980**, **ext. 4232** or **brooke.a.davis@usace.army.mil**.

## C. Basis for Determination*:*

See attached preliminary jurisdictional determination form.

## D. Remarks:

None

## E. Attention USDA Program Participants

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

## F. Appeals Information for Approved Jurisdiction Determinations **(as indicated in Section B. above)**

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Mr. Philip A. Shannin
Administrative Appeal Review Officer
60 Forsyth Street SW, Floor M9
Atlanta, Georgia 30303-8803
OR
philip.a.shannin@usace.army.mil

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by, N/A (preliminary jurisdictional determination).

**It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.**

Corps Regulatory Official:

**Brooke Davis**

Issue Date of JD: **December 19, 2022**

Expiration Date of JD: N/A Preliminary JD

## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

| Applicant: **Mountain Housing Opportunities, Inc.** | File Number: **SAW-2022-02495** | Date: **December 19, 2022** |
|---|---|---|

| Attached is: | See Section below |
|---|---|
| ☐ INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission) | A |
| ☐ PROFFERED PERMIT (Standard Permit or Letter of permission) | B |
| ☐ PERMIT DENIAL | C |
| ☐ APPROVED JURISDICTIONAL DETERMINATION | D |
| ☒ PRELIMINARY JURISDICTIONAL DETERMINATION | E |

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.**

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT: You may accept or appeal the permit**

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION**: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

| SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT | | |
|---|---|---|
| REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.) | | |
| ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record. | | |
| POINT OF CONTACT FOR QUESTIONS OR INFORMATION: | | |
| If you have questions regarding this decision and/or the appeal process you may contact:<br>**Ms. Brooke Davis, Regulatory Specialist**<br>**U.S. Army Corps of Engineers, Wilmington District**<br>**Asheville Regulatory Field Office**<br>**151 Patton Avenue, Room 208**<br>**Asheville, North Carolina 28801-5006**<br>**Phone: (828) 271-7980, ext. 4232** | If you only have questions regarding the appeal process you may also contact:<br>**Mr. Phillip Shannin, Administrative Appeal Review Officer**<br>**CESAD-PDO**<br>**U.S. Army Corps of Engineers, South Atlantic Division**<br>**60 Forsyth Street, Room 10M15**<br>**Atlanta, Georgia 30303-8801**<br>**Phone: (404) 562-5137** | |
| RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations. | | |
| _____<br>Signature of appellant or agent. | Date: | Telephone number: |

***For appeals on Initial Proffered Permits send this form to:***

**District Engineer, Wilmington Regulatory Division**, **Attn.: Tommy Fennell, 69 Darlington Avenue, Wilmington, North Carolina 28403**

***For Permit denials, Proffered Permits and approved Jurisdictional Determinations send this form to:***

**Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Phillip Shannin, Administrative Appeal Officer, CESAD-PDO, 60 Forsyth Street, Room 10M15, Atlanta, Georgia 30303-8801**
**Phone: (404) 562-5137**

**PRELIMINARY JURISDICTIONAL DETERMINATION (JD) FORM**
**U.S. Army Corps of Engineers**

## BACKGROUND INFORMATION

**A. REPORT COMPLETION DATE FOR PRELIMINARY JD:** December 19, 2022

**B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**
Mountain Housing Opportunities, Inc.
Equinox Environmental (agent acting on behalf)
Attn: Charles Lawson
37 Haywood Street, Suite 100
Asheville, North Carolina 28801

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER:**
CESAW-RG-A, SAW-2022-02495, MHO-Balsam Edge

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**
The site is located on a tract of land (PIN 8616-42-5402) at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina.

**State:** NC **County/parish/borough:** Haywood **City:** Waynesville
**Center coordinates of site (lat/long in degree decimal format):** 35.50512, -82.98402
**Universal Transverse Mercator:** N/A
**Name of nearest waterbody:** Richland Creek

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**
☒ Office (Desk) Determination. Date: **December 19, 2022**
☐ Field Determination. Date(s):

**TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION**

| Site Number | Latitude (decimal degrees) | Longitude (decimal degrees) | Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable) | Type of aquatic resource (i.e., wetland vs. non-wetland waters) | Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404) |
|---|---|---|---|---|---|
| S1 | 35.503954 | -82.984636 | 315 feet | Non-wetland waters | Section 404 |
| W1 | 35.50379 | -82.984617 | 0.34 acres | Wetland | Section 404 |

1. The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the

permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA**

**Data reviewed for preliminary JD (check all that apply) -** Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

☒ Maps, plans, plots or plat submitted by or on behalf of preliminary JD requester: **Equinox Environmental**
☒ Data sheets prepared/submitted by or on behalf of preliminary JD requester. **Equinox Environmental**
  ☒ Office concurs with data sheets/delineation report.
  ☐ Office does not concur with data sheets/delineation report. Rational:
☐ Data sheets prepared by the Corps:
☐ Corps navigable waters' study:
☐ U.S. Geological Survey (USGS) Hydrologic Atlas:
  ☐ USGS NHD data.
  ☐ USGS 8 and 12 digit HUC maps.
☒ USGS map(s). Cite scale & quad name: **1:24,000 Clyde**
☒ Natural Resources Conservation Service (NRCS) Soil Survey.
  Citation: **Haywood County, NC**
☐ National wetlands inventory (NWI) map(s). Cite name:
☐ State/Local wetland inventory map(s):
☐ Federal Emergency Management Agency (FEMA) / Flood Insurance Rate Map (FIRM) maps:
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): **Numerous on Google Earth**
  or ☐ Other (Name & Date):
☐ Previous determination(s). File no. and date of response letter:
☐ Applicable/supporting scientific literature:
☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

**Brooke Davis, December 19, 2022**
Signature and date of Regulatory staff member completing preliminary JD

**Mountain Housing Opportunities, Inc.**
Signature and date of person requesting preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

***Two copies of this Preliminary JD Form have been provided. Please sign both copies. Keep one signed copy for your record and return a signed copy to the Asheville Regulatory Field Office by mail or e-mail.***

***US Army Corps of Engineers-Wilmington District***
***Asheville Regulatory Field Office***
***151 Patton Avenue, Room 208***
***Asheville, NC 28801-5006***

[1] Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

# MHO Balsam Edge Location

# MHO Balsam Edge

Prepared by:

EQUINOX

# MHO Balsam Edge Aerial Map

## MHO Balsam Edge

Prepared by:

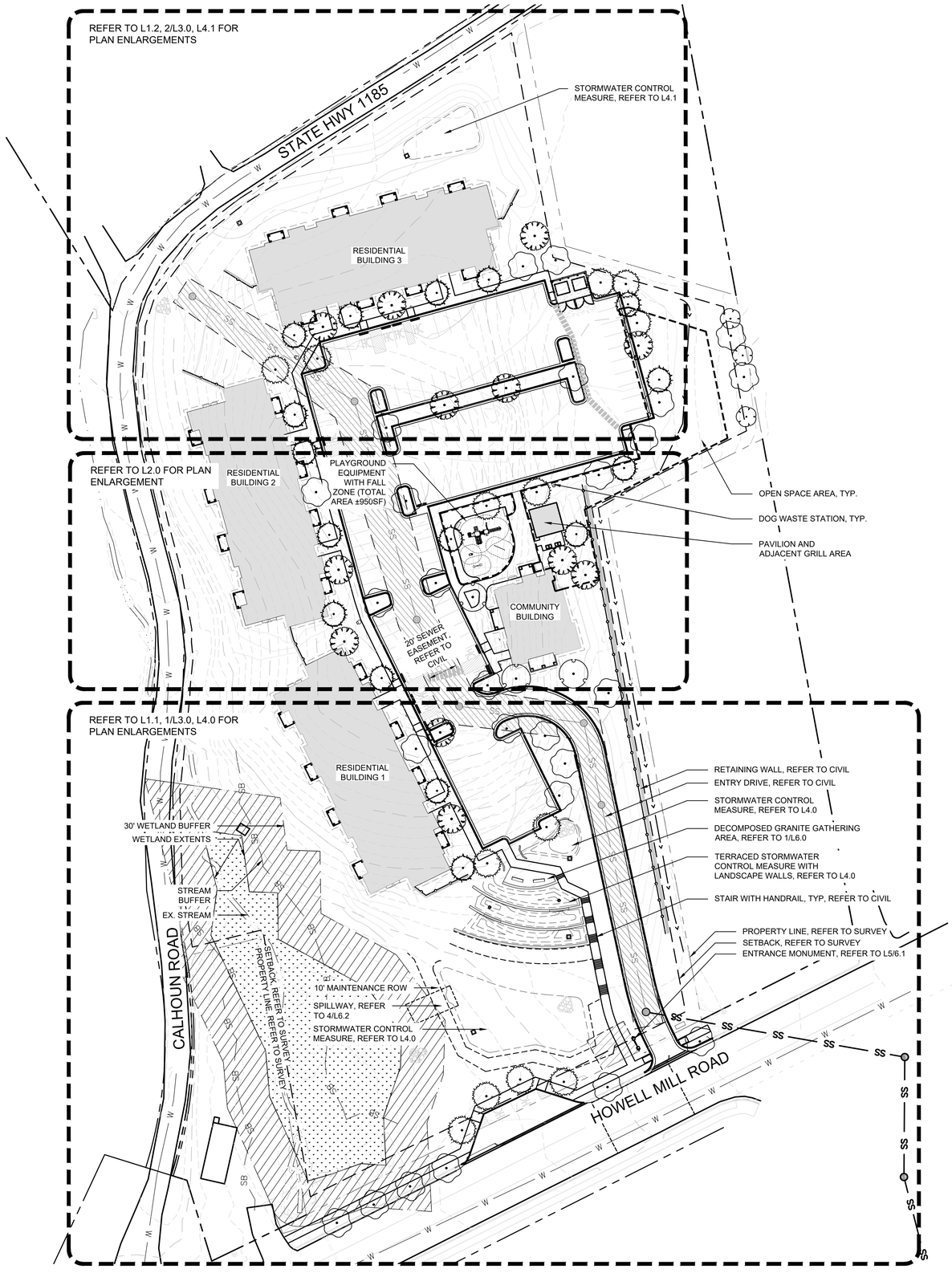
EQUINOX

# MHO Balsam Edge Topo

## MHO Balsam Edge

Prepared by:

EQUINOX




## LEGEND

- PROPERTY LINE
- PROPERTY SETBACK
- WETLAND BUFFER
- WETLAND EDGE
- EXISTING STREAM
- SB — STREAM BUFFER
- SCM POOL LIMITS
- HEADWALL

NOTE: REFER TO L5.0 FOR ALL PLANTING

Know what's below. Call before you dig.

N

0 20' 40' 80'

SCALE: 40'-0"

EQUINOX
37 Haywood St.
Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256

SEAL

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1542 DAVID P. TUCH

| DESIGN BY: | DRAWN BY: | CHECKED BY: |
|---|---|---|

DATE

REVISIONS

Mountain Housing Opportunities

# BALSAM EDGE

291 Howell Mill Road
Waynesville, NC

Copyright © 2023, Equinox Environmental Consultation & Design, Inc.

PHASE
FOR CONSTRUCTION

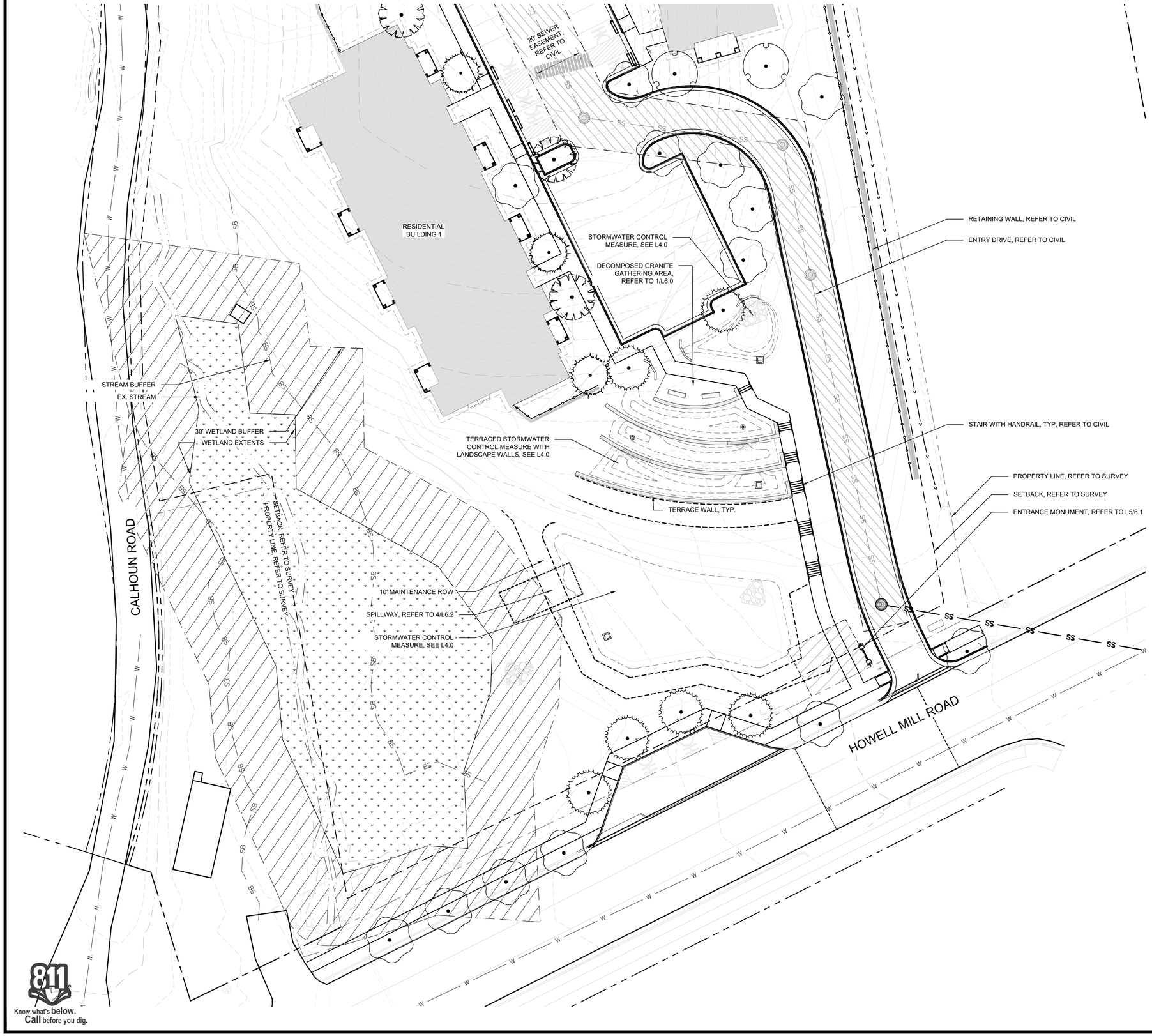
DATE
MAY 19, 2023

DRAWING SCALE
AS SHOWN

NOTE: If this drawing is not 24X36" it has been revised from its original size and the scales noted on drawings/details are no longer applicable.

DRAWING NAME
SITE PLAN

L1.0




LEGEND

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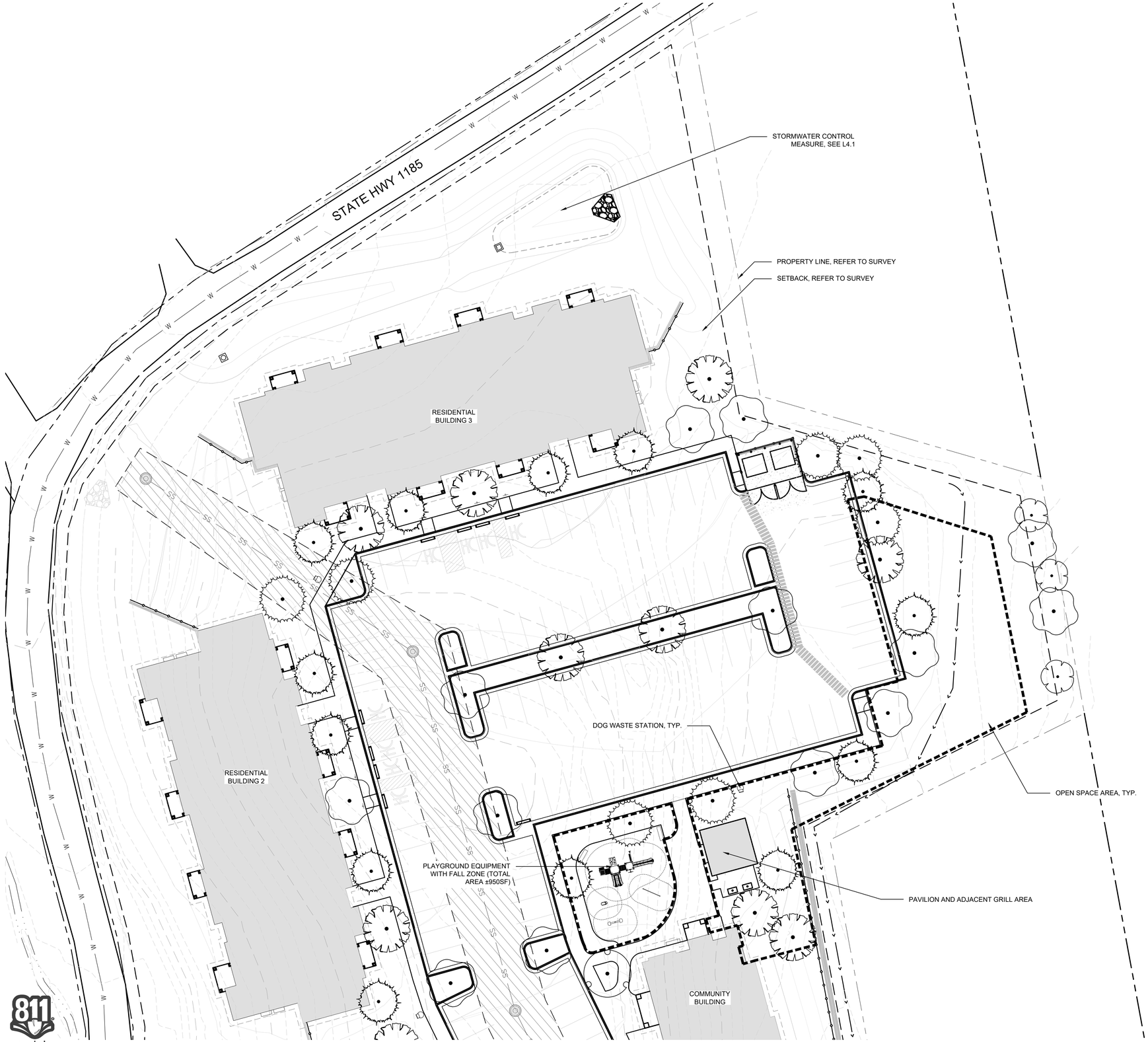
DRAWING NAME

SITE PLAN ENLARGEMENT

L1.1




## LEGEND

- PROPERTY LINE
- PROPERTY SETBACK
- WETLAND BUFFER
- WETLAND EDGE
- EXISTING STREAM
- SB — STREAM BUFFER
- SCM POOL LIMITS
- HEADWALL

NOTE: REFER TO L5.0 FOR ALL PLANTING

811 Know what's **below.** **Call** before you dig.

N

0 10' 20' 40'

SCALE: 20'-0"

EQUINOX
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MAY 19, 2023

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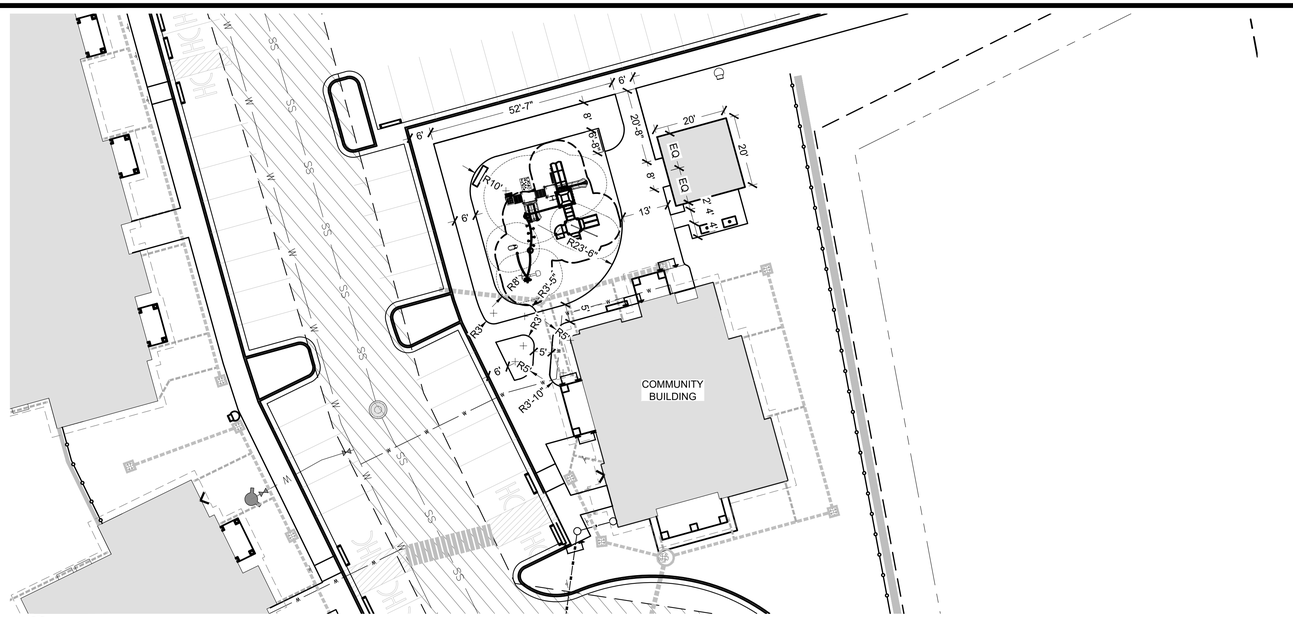
DRAWING NAME
SITE PLAN ENLARGEMENT

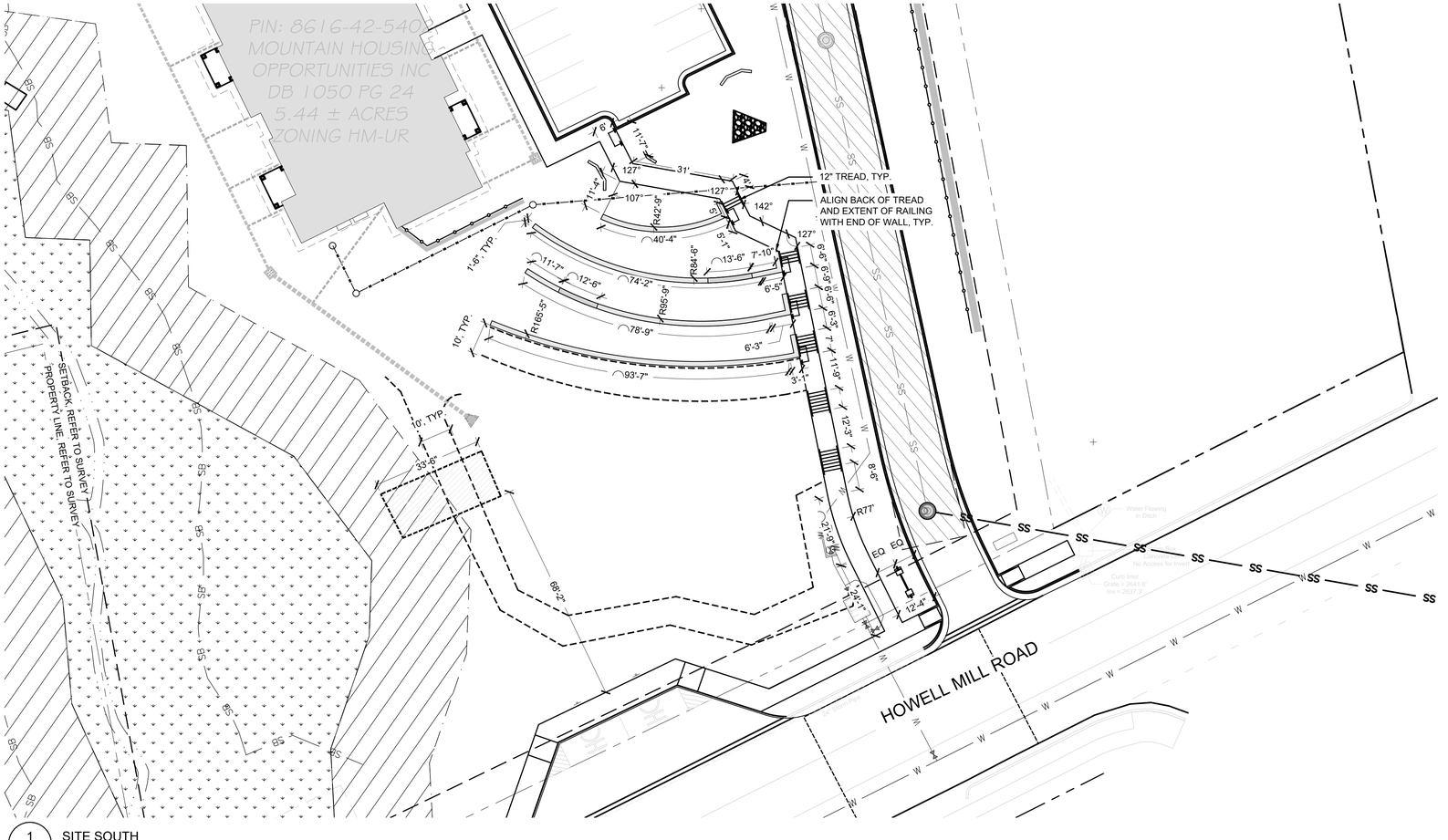
L1.2




2 L2.0 SITE NORTH
1"=20'

## LEGEND

- PROPERTY LINE
- PROPERTY SETBACK
- EXISTING WETLAND BUFFER
- EXISTING STREAM
- HEADWALL




1 L2.0 SITE SOUTH
1"=20'

N

0 10' 20' 40'
SCALE: 20'-0"

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Asheville, NC 28801
t 828.253.6856
f 828.253.8256

SEAL

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1542 DAVID P. TUCH

| DESIGN BY: | DRAWN BY: | CHECKED BY: |
|---|---|---|

DATE

REVISIONS

Mountain Housing Opportunities
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Waynesville, NC

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MAY 19, 2023

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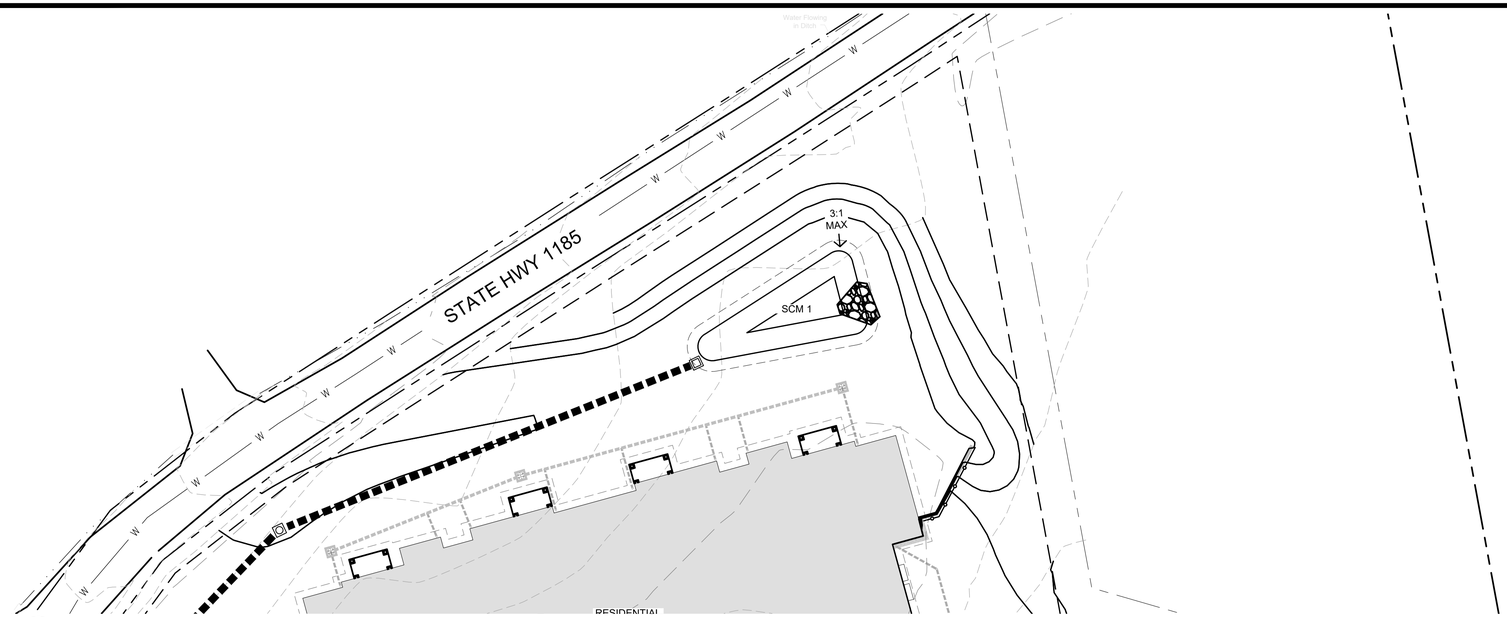
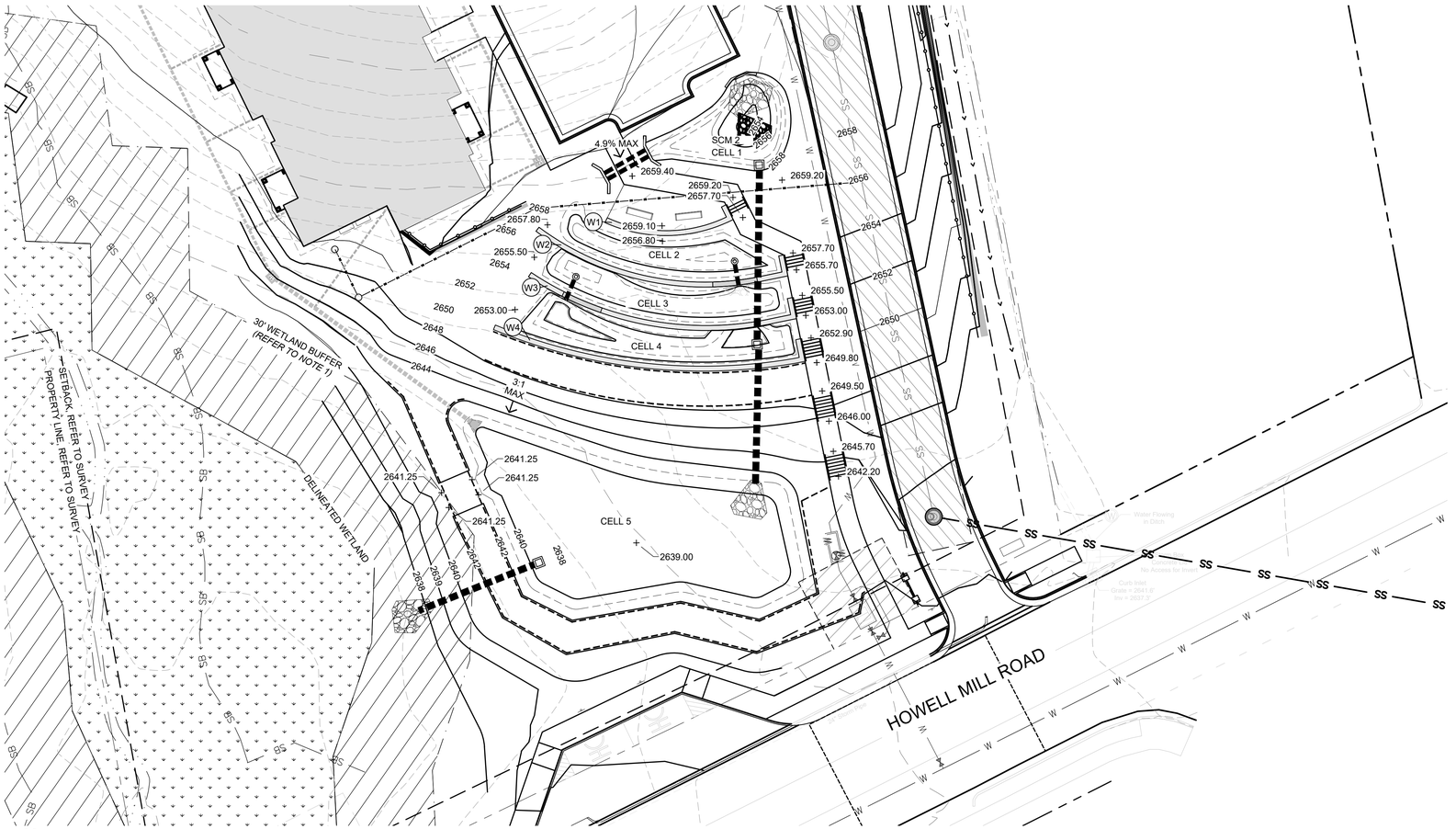
DRAWING NAME
LAYOUT PLAN

L2.0




2 L3.0 SITE NORTH
1"=20'




1 L3.0 SITE SOUTH
1"=20'

## LEGEND

- PROPERTY LINE
- PROPERTY SETBACK
- EXISTING WETLAND BUFFER
- EXISTING STREAM
- SB — STREAM BUFFER
- MAINTENANCE BERM
- HEADWALL

## WALL SCHEDULE

| WALL ID | MAX. HEIGHT | AVG. HEIGHT | FACE FOOTAGE (SF) |
|---|---|---|---|
| W1 | 2' | 2' | 90 |
| W2 | 6' | 3' | 264 |
| W3 | 4'-6" | 3' | 276 |
| W4 | 2'-6" | 2'6" | 260 |

NOTES:
1. PER ORDINANCE, SCMs MAY ENCROACH IN BUFFER WITH VEGETATIVE SCREENING. NO OTHER ENCROACHMENTS PERMITTED.
2. GRADE ADJACENT TO THE WETLAND CELLS SHALL BE A MIN. OF 12" ABOVE TEMPORARY PONDING.
3. REFER TO L4.0 FOR ADDITIONAL SCM GRADING INFORMATION.

Know what's below. Call before you dig.

N

0 10' 20' 40'
SCALE: 20'-0"

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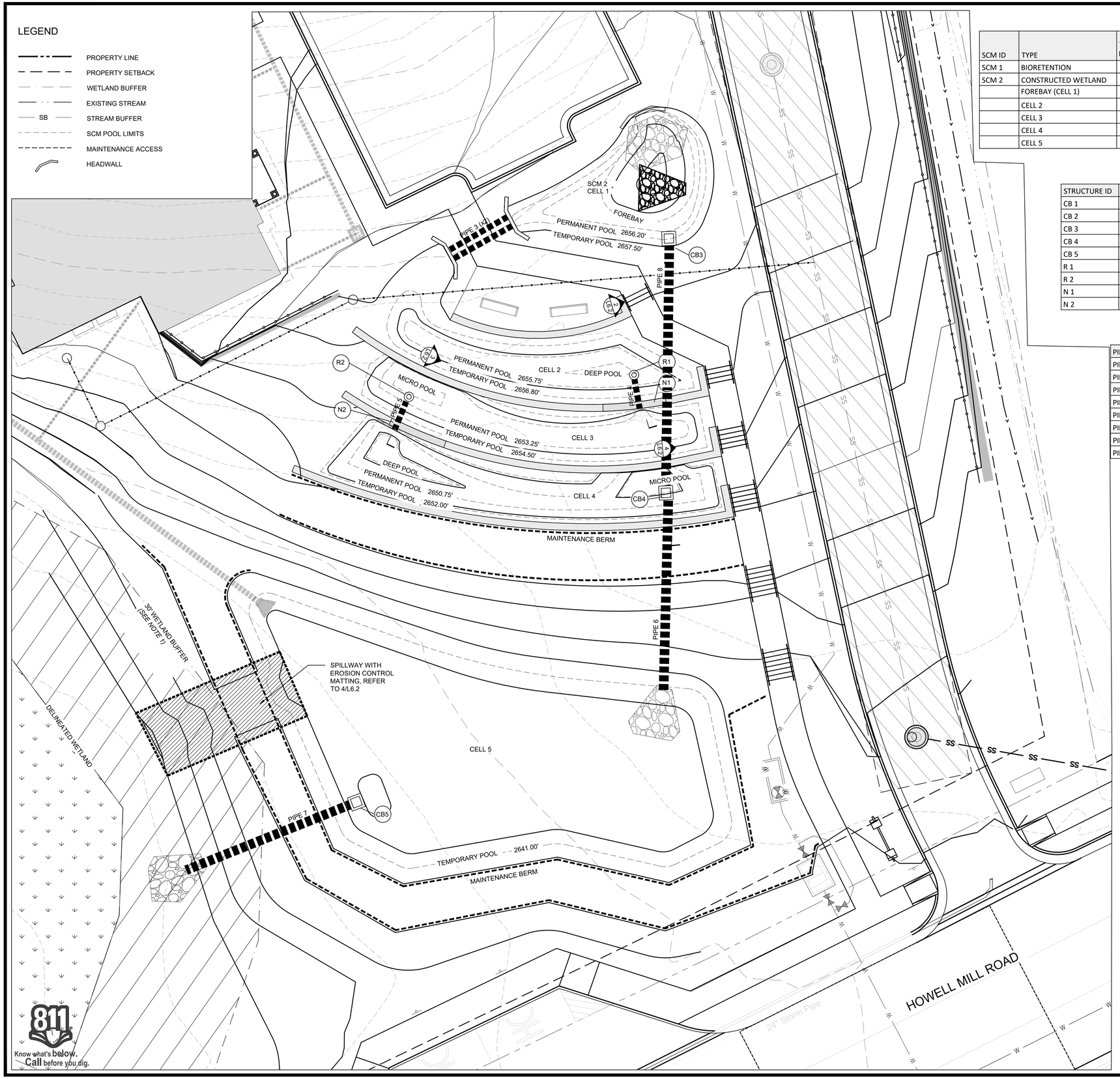
DRAWING NAME
GRADING PLAN

L3.0




## SCM SCHEDULE

| SCM ID | TYPE | TREATMET DEPTH (In.) | OUTFALL ELEVATION | STORAGE VOLUME (CF) REQUIRED | STORAGE VOLUME (CF) DESIGNED | MAX SIDE SLOPES | DETAILS |
|---|---|---|---|---|---|---|---|
| SCM 1 | BIORETENTION | 36 | | 2,718 | 2,880 | 3:1 | 6/L6.1 |
| SCM 2 | CONSTRUCTED WETLAND | | | 9,099 | 9,824 | | |
| | FOREBAY (CELL 1) | 15 | 2658.10 | | | | 1/L6.1 |
| | CELL 2 | 15 | 2656.80 | | | 3:1 | 2/L6.1 |
| | CELL 3 | 15 | 2654.75 | | | 3:1 | 3/L6.1 |
| | CELL 4 | 15 | 2652.00 | | | 3:1 | 4/L6.1 |
| | CELL 5 | 0 | 2637.80 | | | 3:1 | 5/L6.1 |

## STRUCTURE SCHEDULE

| STRUCTURE ID | TYPE | TOP TREATMENT | SIDE TREATMENT | RIM ELEV. | DETAIL |
|---|---|---|---|---|---|
| CB 1 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | NA | 2661.00 | 8/L6.2 , 6/L6.1 |
| CB 2 | CONCRETE BOX | CLOSED, MANHOLE | NA | NA | 8/L6.2 |
| CB 3 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | ORIFICE | 2658.10 | 8/L6.2, 2/L6.2 |
| CB 4 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | ORIFICE | 2652.00 | 8/L6.2 , 4/L6.1 |
| CB 5 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | VERT. NOTCH | 2641.00 | 8/L6.2 , 5/L6.1 |
| R 1 | RISER | TRASH RACK | ORIFICE | 2657.00 | 1/L6.2 , 2/L6.1 |
| R 2 | RISER | TRASH RACK | ORIFICE | 2654.50 | 1/L6.2 , 3/L6.1 |
| N 1 | WEIR NOTCH | NA | NA | 2657.20 | 7/L6.2 |
| N 2 | WEIR NOTCH | NA | NA | 2655.00 | 7/L6.2 |

## PIPE SCHEDULE

| PIPE ID | TYPE | INV IN | INV OUT | LENGTH (FT) | SIZE (In.) |
|---|---|---|---|---|---|
| PIPE 1 | HDPE (smooth) | 2658.00 | 2657.30 | 121.00 | 24 |
| PIPE 2 | HDPE (smooth) | 2657.20 | 2656.80 | 70.00 | 24 |
| PIPE 3 | HDPE (smooth); Double Barrel | 2657.50 | 2657.30 | 22.00 | 15 each |
| PIPE 4 | HDPE (smooth) or PVC | 2654.65 | 2654.60 | 6.50 | 12 |
| PIPE 5 | HDPE (smooth) or PVC | 2652.15 | 2652.10 | 6.50 | 12 |
| PIPE 6 | HDPE (smooth) | 2643.20 | 2641.20 | 41.00 | 30 |
| PIPE 7 | HDPE (smooth) | 2635.60 | 2635.40 | 38.00 | 30 |
| PIPE 8 | HDPE (smooth) | 2646.70 | 2644.20 | 50.00 | 24 |

## CONSTRUCTED WETLAND NOTES

FOREBAY

- ENTRANCE SHALL BE DEEPER THAN EXIT
- DEPTH SHOULD BE 24-40" BELOW PERMANENT POOL
- IF DEPTH <15", CLEAN OUT FOREBAY

TEMPORARY INUNDATION ZONE

- DRAW DOWN TIME TO BE BETWEEN 2 & 5 DAYS
- WETLAND MAY TEMPORARILY POND PEAK ATTENUATION VOLUME AT A DEPTH EXCEEDING 15"

NON-FOREBAY DEEP POOL

- DESIGN TO RETAIN WATER BETWEEN STORM EVENTS
- MINIMUM OF 18" BELOW PERMANENT POOL

EMBANKMENT & PERIMETER FILL SLOPES

- PLANT WITH NON-CLUMPING TURF GRASS
- NO TREES OR WOODY SHRUBS

NOTES:

1. WETLAND SHOULD BE GRADED SO THAT WATER ENTERS FOREBAY FIRST.
2. BEYOND THE FOREBAY, THE WETLAND SHALL BE GRADED TO HAVE LOWER AND HIGHER ELEVATIONS (SHALLOW POOL AND DEEP POOL) FOR PROPER WETLAND FUNCTION, FOLLOW GRADING PLAN AND PONDING ELEVATIONS ON STORMWATER PLAN.
3. SLOPES SHALL BE A MAXIMUM OF 3:1 WITH AN AVERAGE OF 8:1.
4. ADD A CLAY LINER IN ALL DEEP POOL LOCATIONS AT A MINIMUM.
5. CONTRACTOR SHALL CONSTRUCT THE WETLAND IN A WAY THAT REDUCES THE POTENTIAL FOR EROSION WHICH MAY INCLUDE TEMPORARY DIVERSION DITCHES.
6. STRIP & STOCKPILE TOPSOIL. SOILS UNCOVERED DURING EXCAVATION THAT CONTAIN CLAY CAN BE USED WITHIN THE WETLAND AREA. NO SAND, GRAVEL, OR ROCK MAY BE USED WITHIN THE WETLAND.
7. REMOVE SILT, SEDIMENT, SAND, GRAVEL OR CONDITIONS THAT WOULD IMPACT WETLAND FUNCTION FROM FILL DIRT.
8. EQUINOX TO OVERSEE FINE GRADING OF CONSTRUCTED WETLAND (HIGH POINTS & LOW POINTS GIVEN ON PLAN FOR GENERAL DIRECTION).
9. STOCKPILED SOIL TO BE MIXED WITH TOPSOIL (OR APPROVED PLANTING MIX) AND ADDED AS TOP 12" AND LIGHTLY COMPACTED IN 6" LIFTS. NO SAND, GRAVEL, OR ROCK MAY BE USED WITH THE SOIL LIFTS.
10. SPREAD SOIL MIX AND SMOOTH OVER THE BOTTOM & SIDES OF THE COMPLETED WETLAND AND UP THE INSIDE SLOPES OF THE WETLAND TO A DEPTH OF 12" AND SHALL MEET PROPOSED FINISHED GRADE SHOWN ON PLAN.

N

0 5' 10' 20'

SCALE: 10'-0"

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f 828.253.8256

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DATE

REVISIONS

Mountain Housing Opportunities

BALSAM EDGE

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Waynesville, NC

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DATE

MAY 19, 2023

DRAWING SCALE

AS SHOWN

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DRAWING NAME

SCM PLAN ENLARGEMENT

L4.0

## SCM SCHEDULE

| SCM ID | TYPE | TREATMET DEPTH (In.) | OUTFALL ELEVATION | STORAGE VOLUME (CF) REQUIRED | STORAGE VOLUME (CF) DESIGNED | MAX SIDE SLOPES | DETAILS |
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| | CELL 3 | 15 | 2654.75 | | | 3:1 | 3/L6.1 |
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| STRUCTURE ID | TYPE | TOP TREATMENT | SIDE TREATMENT | RIM ELEV. | DETAIL |
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| CB 2 | CONCRETE BOX | CLOSED, MANHOLE | NA | NA | 8/L6.2 |
| CB 3 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | ORIFICE | 2658.10 | 8/L6.2, 2/L6.2 |
| CB 4 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | ORIFICE | 2652.00 | 8/L6.2 , 4/L6.1 |
| CB 5 | CONCRETE BOX | OPEN THROAT, FOUR SIDES | VERT. NOTCH | 2641.00 | 8/L6.2 , 5/L6.1 |
| R 1 | RISER | TRASH RACK | ORIFICE | 2657.00 | 1/L6.2 , 2/L6.1 |
| R 2 | RISER | TRASH RACK | ORIFICE | 2654.50 | 1/L6.2 , 3/L6.1 |
| N 1 | WEIR NOTCH | NA | NA | 2657.20 | 7/L6.2 |
| N 2 | WEIR NOTCH | NA | NA | 2655.00 | 7/L6.2 |

## PIPE SCHEDULE

| PIPE ID | TYPE | INV IN | INV OUT | LENGTH (FT) | SIZE (In.) |
|---|---|---|---|---|---|
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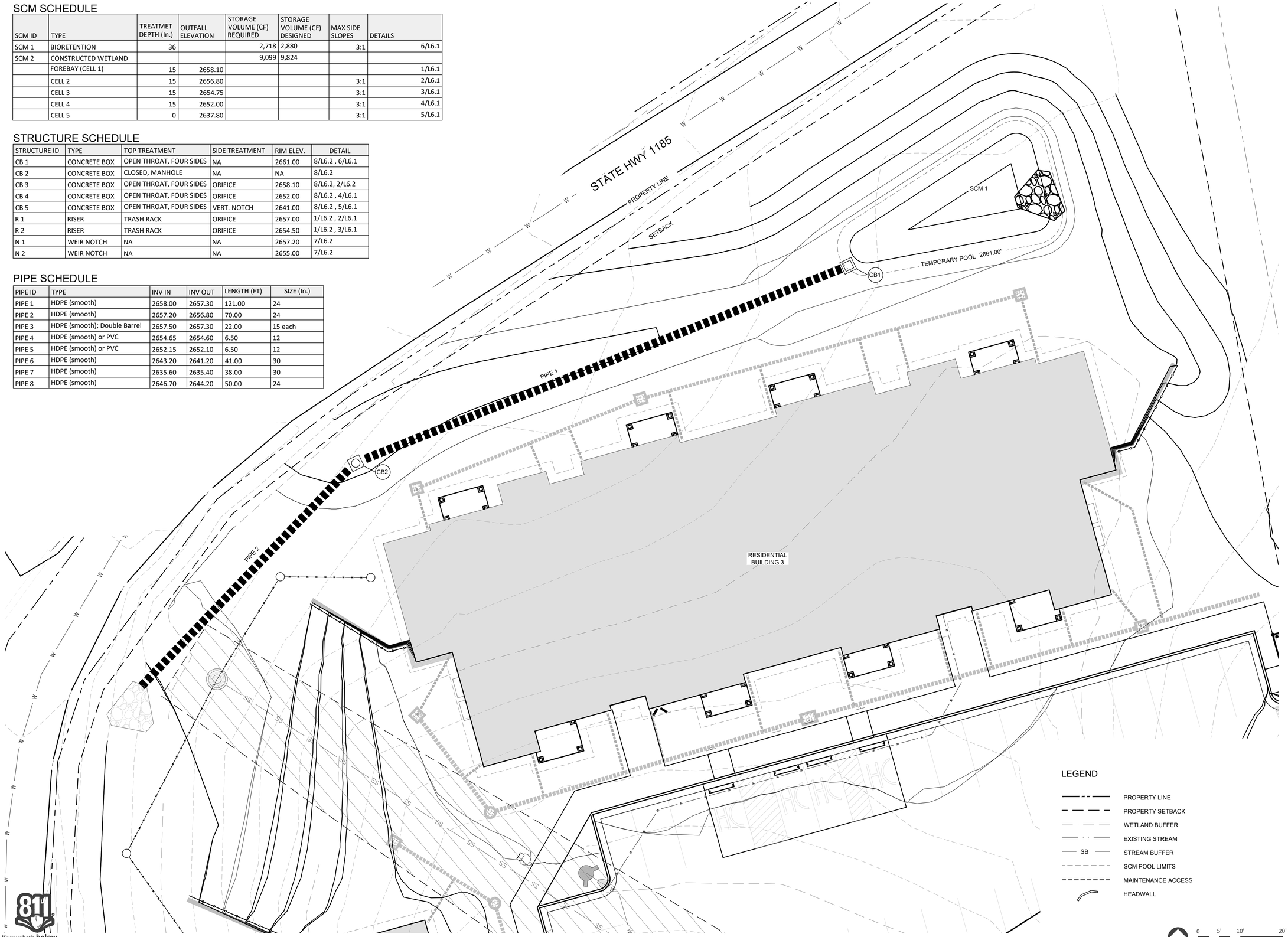
| PIPE 3 | HDPE (smooth); Double Barrel | 2657.50 | 2657.30 | 22.00 | 15 each |
| PIPE 4 | HDPE (smooth) or PVC | 2654.65 | 2654.60 | 6.50 | 12 |
| PIPE 5 | HDPE (smooth) or PVC | 2652.15 | 2652.10 | 6.50 | 12 |
| PIPE 6 | HDPE (smooth) | 2643.20 | 2641.20 | 41.00 | 30 |
| PIPE 7 | HDPE (smooth) | 2635.60 | 2635.40 | 38.00 | 30 |
| PIPE 8 | HDPE (smooth) | 2646.70 | 2644.20 | 50.00 | 24 |

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Waynesville, NC

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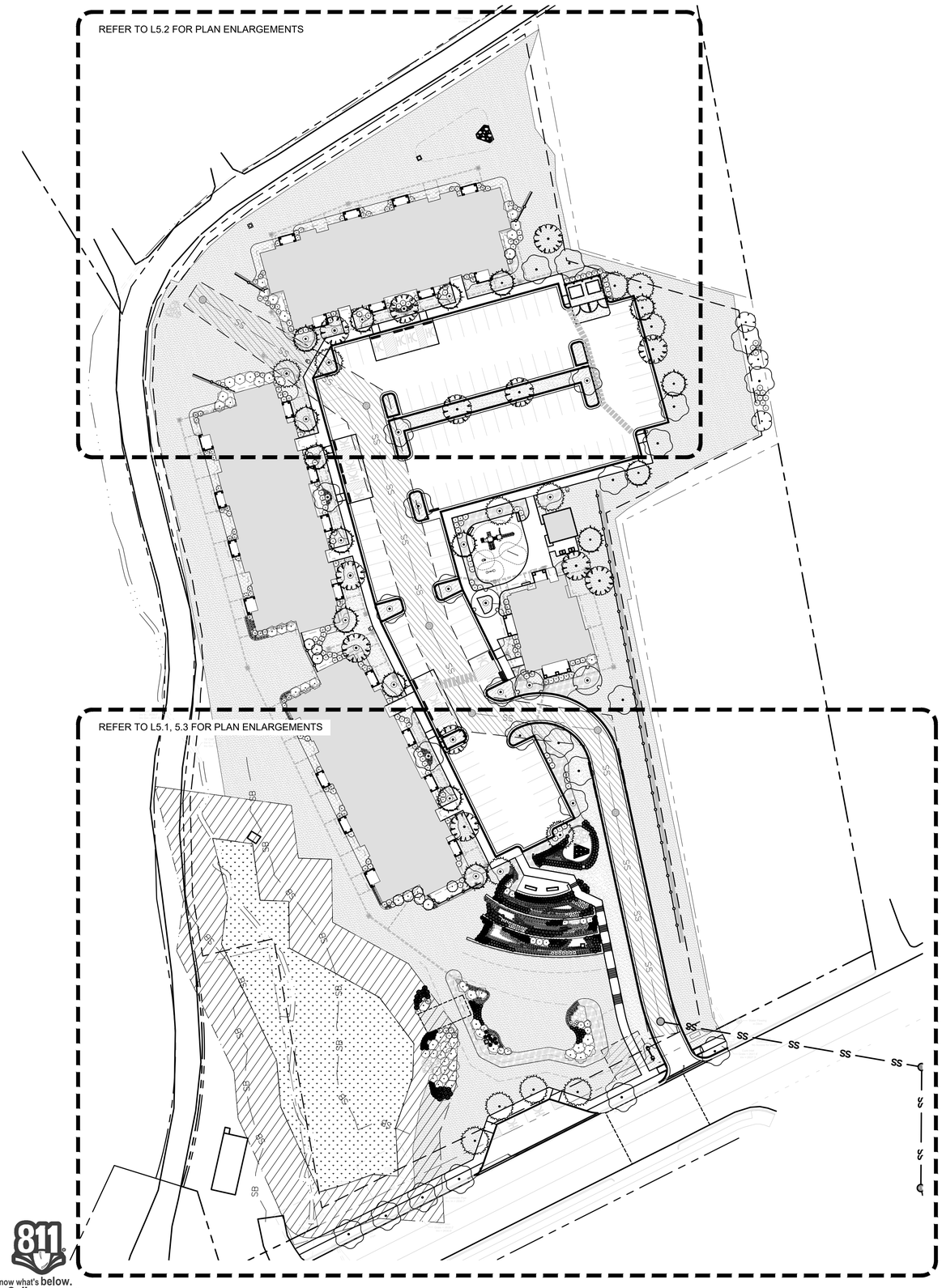
DRAWING NAME
SCM PLAN ENLARGEMENT

L4.1




PLANTING NOTES:

1. CONTRACTOR SHALL VERIFY ALL QUANTITIES, MEASUREMENTS AND SITE CONDITIONS. NO PLANT SUBSTITUTIONS ALLOWED UNLESS WRITTEN PERMISSION FROM LANDSCAPE ARCHITECT IS GIVEN.
2. IF THERE IS A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE PLAN AND THE QUANTITIES IN THE PLANT SCHEDULE USE THE HIGHER NUMBER OF PLANTS. IF THIS OCCURS NOTIFY THE PROJECT LANDSCAPE ARCHITECT, EQUINOX.
3. ALL PLANTING BEDS ARE TO BE CLEANED OF ROCKS AND DEBRIS >1", TILLED TO 12" DEPTH AND AMENDED WITH 3"OF NATURES HELPER (OR APPROVED EQUAL), THEN THOROUGHLY TILLED TOGETHER. SEE STONE & ROCK.
4. PLANTING SOIL SHALL BE TOPSOIL AMENDED WITH 3" OF NATURES HELPER (OR APPROVED EQUAL) AND THOROUGHLY TILLED TOGETHER.
5. ANY REMAINING DISTURBED, NON-PLANTED AREAS ARE TO BE FINE GRADED AND SEEDED WITH FESCUE BLEND OR MULCHED AS NOTED ON PLAN.
6. ALL PLANTS, MATERIALS, PLANTING AND SEEDING ACTIVITIES SHALL CONFORM TO LANDSCAPE INDUSTRY STANDARDS. COMPLY WITH SIZING AND GRADING STANDARDS OF THE LATEST EDITION OF "AMERICAN STANDARD OF NURSERY STOCK". PROVIDE STOCK TRUE TO BOTANICAL NAME AND LEGIBLY TAGGED.
7. STOCKPILE LOCATION(S) TO BE APPROVED BY LANDSCAPE ARCHITECT.
8. KEEP PLANT SPECIES MOIST AND SHADED UNTIL INSTALLATION. DO NOT LEAVE IN THE SUN OR LET PLANTS DRY OUT. SATURATE PLANTS AFTER INSTALLATION. PLANTS SHALL NOT BE DELIVERED ON-SITE PRIOR TO 5 DAYS BEFORE INSTALLATION.
9. DIG, PACK, TRANSPORT AND HANDLE ALL PLANTS WITH CARE TO ENSURE PROTECTION FROM INJURY. STORE PLANTS IN THE MANNER NECESSARY TO ACCOMMODATE THEIR HORTICULTURAL REQUIREMENTS. HEEL-IN PLANTS IF NECESSARY TO PROTECT ROOT BALLS AND KEEP FROM DRYING OUT.
10. ALL PLANTS TO BE INSPECTED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. IF ANY PLANTS ARE IN POOR CONDITION, UNHEALTHY LOOKING, DISEASED, OR DYING THE CONTRACTOR WILL REPLACE AS REQUESTED BY LANDSCAPE ARCHITECT OR THE OWNER.
11. DURING INSTALLATION, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY CONDITIONS WHICH MAY BE HARMFUL TO PLANT LIFE, SUCH AS HAZARDOUS MATERIALS, ETC. LANDSCAPE ARCHITECT SHALL MAKE RECOMMENDATIONS TO ADDRESS THE SPECIFIC SITUATION.
12. CONTRACTOR TO REMOVE ALL STONES OVER 1" IN DIA. AND ALL CONSTRUCTION DEBRIS INCLUDING GRAVEL, CONCRETE, ROOTS, AND OTHER MATERIAL THAT MAY BE HARMFUL OR PREVENT PROPER ESTABLISHMENT AND OR MAINTENANCE OF PLANTING AREAS.
13. IN AREAS WHERE CONSTRUCTION MATERIAL IS EMBEDDED IN THE SOIL, CONTRACTOR SHALL REMOVE CONTAMINATED SOIL TO A DEPTH OF 8" AND ADD FILL WITH CLEAN, WEED-FREE PLANTING SOIL.
14. LARGE MATURING TREES SHALL NOT BE PLANTED UNDER OVERHEAD POWER LINES OR WITHIN SEWER RIGHTS-OF-WAY. CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO RESOLVE ANY ISSUES BEFORE PLANTING.
15. FOR ALL B&B TREES, ROOT BALL SHALL REMAIN MOIST AT ALL TIMES AND SHOULD RETAIN SHAPE WHEN REMOVING TOP 1/2 -2/3 OF WIRE BASKET FOR TRANSPLANTING. CONTRACTOR SHALL REMOVE TOP 1/2 OF BURLAP FROM ROOT BALL.
16. ALL PLANTINGS TO BE WATERED AFTER PLANTING IMMEDIATELY (SAME DAY) AND TO BE CONTINUED TO BE WATERED REGULARLY (2X A DAY) UNTIL CONSTRUCTION IS COMPLETE .
17. ALL CONTAINER, B&B TREES AND SHRUBS TO BE GUARANTEED FOR 1 YEAR (MINIMUM).
18. ALL MULCH TO BE DOUBLE GROUND HARDWOOD MULCH, UNLESS OTHERWISE SPECIFIED.
19. ALL PLANTING BEDS, CONTAINER TREES AND SHRUBS, AND B&B TREES TO BE MULCHED WITH NO MORE THAN 2 1/2 " OF MULCH.
20. ALL EXISTING AND PROPOSED TREES WITHIN LIMITS OF DISTURBANCE AND NOT CONTAINED WITHIN A MULCHED BED ARE TO RECEIVE A 5' DIAMETER CIRCLE OF MULCH.
21. AREAS UNDER EXISTING TREE DRIPLINES ARE NOT TO BE TILLED.
22. ALL PLANT LOCATIONS TO BE APPROVED BY EQUINOX PRIOR TO INSTALLATION.
23. PLANTS TO BE PLANTED IN NATURALIZED DRIFTS, IN TRIANGULATED PATTERNS TO BLEND INTO NATURAL SETTINGS. TYPICALLY TREES AND SHRUBS CAN BE PLANTED ON 10' O.C. (ON CENTERS, TYP.) PLANTS TO BE PLANTED IN GROUPS OF 1, 3, 5, 7, 9, AND 11, TYPICAL.
24. PLANTINGS CAN BE A VARIETY OF TREE AND SHRUB MATERIALS, INCLUDING CONTAINERS AND BALL & BURLAP - SEE PLANTING DETAILS FOR INSTALLATION PROCEDURES.
25. MAINTENANCE: PRUNE UP TREES FOR CLEARANCE AT 6'0" TYPICAL.
26. IF THERE IS A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE PLAN AND THE QUANTITIES IN THE PLANT SCHEDULE USE THE HIGHER NUMBER OF PLANTS. IF THIS OCCURS NOTIFY THE PROJECT LANDSCAPE ARCHITECT, EQUINOX.

LEGEND

- PROPERTY LINE
- PROPERTY SETBACK
- EXISTING WETLAND BUFFER
- EXISTING STREAM
- SB — STREAM BUFFER
- MAINTENANCE BERM

N

0 20' 40' 80'

SCALE: 40'-0"

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SEAL

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1542 DAVID P. TUCH

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DRAWING NAME
PLANTING PLAN

L5.0

MATCH LINE, SEE L5.2

MATCH LINE, SEE L5.2

(13) ILGL
(3) HYQU

(3) ILPA
(11) CHLA2
(3) LEZE
(6) ILGL
(8) FOBS

LOW PLANTINGS
(157 sf)
(11) AMTAM
(5) ASTUM
(41) BOGRM
(7) COVEM
(7) ECPUM
(5) SYPDM
(8) ZIAUM

(4) FOBS
(3) JUBU

TALL PLANTINGS
(119 sf)
(3) AMHUM
(4) HEAUM
(5) MOJAM
(14) PAVIM
(4) PYVIM
(5) RUHIM
(4) SYNOM

(36) BULB
(2) NYSY

(11) ILGL
(20) COVM
(1) QUAL

PARKING LOT
PLANTINGS (317
sf)
(13) ASTUM
(17) COVEM
(74) MUCAM
(13) SYPDM

(2) QUSH
(395 sf) COMI
(4) ILGL
(3) FOBS

(6) QUAL
(3,409 sf) COMI

LOW PLANTINGS
(157 sf)
(11) AMTAM
(5) ASTUM
(41) BOGRM
(7) COVEM
(7) ECPUM
(5) SYPDM
(8) ZIAUM

(1) ILVE
(6) ILGL
(6) FOBS
TALL PLANTINGS
(566 sf)
(10) AMHUM
(15) HEAUM
(23) MOJAM
(66) PAVIM
(15) PYVIM
(23) RUHIM
(15) SYNOM

TALL PLANTINGS
(1,063 sf)
(19) AMHUM
(28) HEAUM
(42) MOJAM
(123) PAVIM
(28) PYVIM
(42) RUHIM
(28) SYNOM

(10) ILGL
(2) TADI

LOW PLANTINGS
(13 sf)
(1) AMTAM
(1) ASTUM
(4) BOGRM
(1) COVEM
(1) ECPUM
(1) SYPDM
(1) ZIAUM

SHADE PLANTINGS
(409 sf)
(170) CAAP
(19) GEMA
(19) HECA
(29) OSCI
(48) POBI

(2) ILGL
(5) LOSM

(14) CHLA2
(3) ILGL
(6) HYQU

REFER TO L5.3 FOR PLAN ENLARGEMENT

LOW PLANTINGS (531 sf)
(37) AMTAM
(14) ASTUM
(138) BOGRM
(21) COVEM
(21) ECPUM
(14) SYPDM
(25) ZIAUM

(6) QUAL
(4) TADI

(12) SORU2
(4) CEOC
(8) ILGL
(37) ASIN
(5) ILVE
(9) CAFL

0 10' 20' 40'
SCALE: 20'-0"

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DRAWING NAME
PLANTING PLAN - SOUTH

L5.1

SHADE PLANTINGS
(446 sf)
(186) CAAP
(21) GEMA
(21) HECA
(31) OSCI
(52) POBI

SHADE PLANTINGS
(398 sf)
(166) CAAP
(19) GEMA
(19) HECA
(28) OSCI
(46) POBI

(4) ILPA
(6) LEZE

(11) ITVS

(6) ILGL
(1) HYQU
(1) QUSH
(2) QUAL

TALL PLANTINGS (132 sf)
(3) AMHUM
(4) HEAUM
(6) MOJAM
(16) PAVIM
(4) PYVIM
(6) RUHIM
(4) SYNOM

(13) ILGL

(3) TADI
(3) JUBU

(74,022 sf) COMI

(4) LEZE
(3) ILPA

(6) LEZE
(1) ILVE
(6) ILGL

TALL PLANTINGS
(165 sf)
(3) AMHUM
(5) HEAUM
(7) MOJAM
(20) PAVIM
(5) PYVIM
(7) RUHIM
(5) SYNOM

(7) ILGL
(15) COVM
(2) QUSH
(390 sf) COMI

(4) JUBU
(6) ILGL

LOW PLANTINGS
(103 sf)
(8) AMTAM
(3) ASTUM
(27) BOGRM
(5) COVEM
(5) ECPUM
(3) SYPDM
(5) ZIAUM

TALL PLANTINGS
(89 sf)
(2) AMHUM
(3) HEAUM
(4) MOJAM
(11) PAVIM
(3) PYVIM
(4) RUHIM
(3) SYNOM

(3) AEPA
(2) QUAL
(12) ILGL

(6) ILGL
LOW PLANTINGS
(102 sf)
(8) AMTAM
(3) ASTUM
(27) BOGRM
(4) COVEM
(4) ECPUM
(3) SYPDM
(5) ZIAUM

(2) TADI
PARKING LOT
PLANTINGS (143 sf)
(6) ASTUM
(8) COVEM
(34) MUCAM
(6) SYPDM
(1) ILVE
(5) ILGL

(2) QUSH
(2) QUAL

(1) QUSH
(3) QUAL

(5) ILPA
(4) LEZE

(3) ILPA
(10) LEZE

LOW PLANTINGS
(338 sf)
(24) AMTAM
(9) ASTUM
(88) BOGRM
(14) COVEM
(14) ECPUM
(9) SYPDM
(16) ZIAUM

PARKING LOT
PLANTINGS (342 sf)
(14) ASTUM
(18) COVEM
(80) MUCAM
(14) SYPDM

PARKING LOT
PLANTINGS (378 sf)
(15) ASTUM
(20) COVEM
(88) MUCAM
(15) SYPDM

(1) FOBS
(3) ILGL
(2) JUBU
(407 sf) COMI
(7) ILGL
(15) COVM
(1) QUAL

(1) QUAL
PARKING LOT
PLANTINGS (142 sf)
(6) ASTUM
(8) COVEM
(33) MUCAM
(6) SYPDM

(2) TADI
(3) FOBS

(3) ILGL
(2) JUBU
LOW PLANTINGS
(163 sf)
(12) AMTAM
(5) ASTUM
(43) BOGRM
(7) COVEM
(7) ECPUM
(5) SYPDM
(8) ZIAUM

TALL PLANTINGS
(688 sf)
(12) AMHUM
(18) HEAUM
(27) MOJAM
(80) PAVIM
(18) PYVIM
(27) RUHIM
(18) SYNOM

LOW PLANTINGS
(171 sf)
(12) AMTAM
(5) ASTUM
(45) BOGRM
(7) COVEM
(7) ECPUM
(5) SYPDM
(8) ZIAUM

(7) ILGL
(2) JUBU
(2) QUSH
(3) FOBS
TALL PLANTINGS
(125 sf)
(3) AMHUM
(4) HEAUM
(5) MOJAM
(15) PAVIM
(4) PYVIM
(5) RUHIM
(4) SYNOM

(2) QUSH
(3) FOBS
(11) ILGL
(1) NYSY

SHADE PLANTINGS
(539 sf)
(225) CAAP
(25) GEMA
(25) HECA
(38) OSCI
(63) POBI

TALL PLANTINGS
(45 sf)
(1) AMHUM
(2) HEAUM
(2) MOJAM
(6) PAVIM
(2) PYVIM
(2) RUHIM
(2) SYNOM

LOW PLANTINGS
(308 sf)
(22) AMTAM
(9) ASTUM
(81) BOGRM
(13) COVEM
(13) ECPUM
(9) SYPDM
(15) ZIAUM

(8) ITVS
(22) CHLA2

PARKING LOT
PLANTINGS (317 sf)
(13) ASTUM
(17) COVEM
(74) MUCAM
(13) SYPDM
(2) QUAL
(1,554 sf) COMI

(34) BULB

(3) ILPA
(3) ILGL

MATCH LINE, SEE L5.1

MATCH LINE, SEE L5.1

811 Know what's **below.** **Call** before you dig.

N

0 10' 20' 40'
SCALE: 20'-0"

EQUINOX

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Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256

SEAL

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1542 DAVID P. TUCH

| DESIGN BY: | DRAWN BY: | CHECKED BY: |
|---|---|---|

DATE

REVISIONS

Mountain Housing Opportunities
# BALSAM EDGE
291 Howell Mill Road
Waynesville, NC

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PHASE
FOR CONSTRUCTION

DATE
MAY 19, 2023

DRAWING SCALE
AS SHOWN

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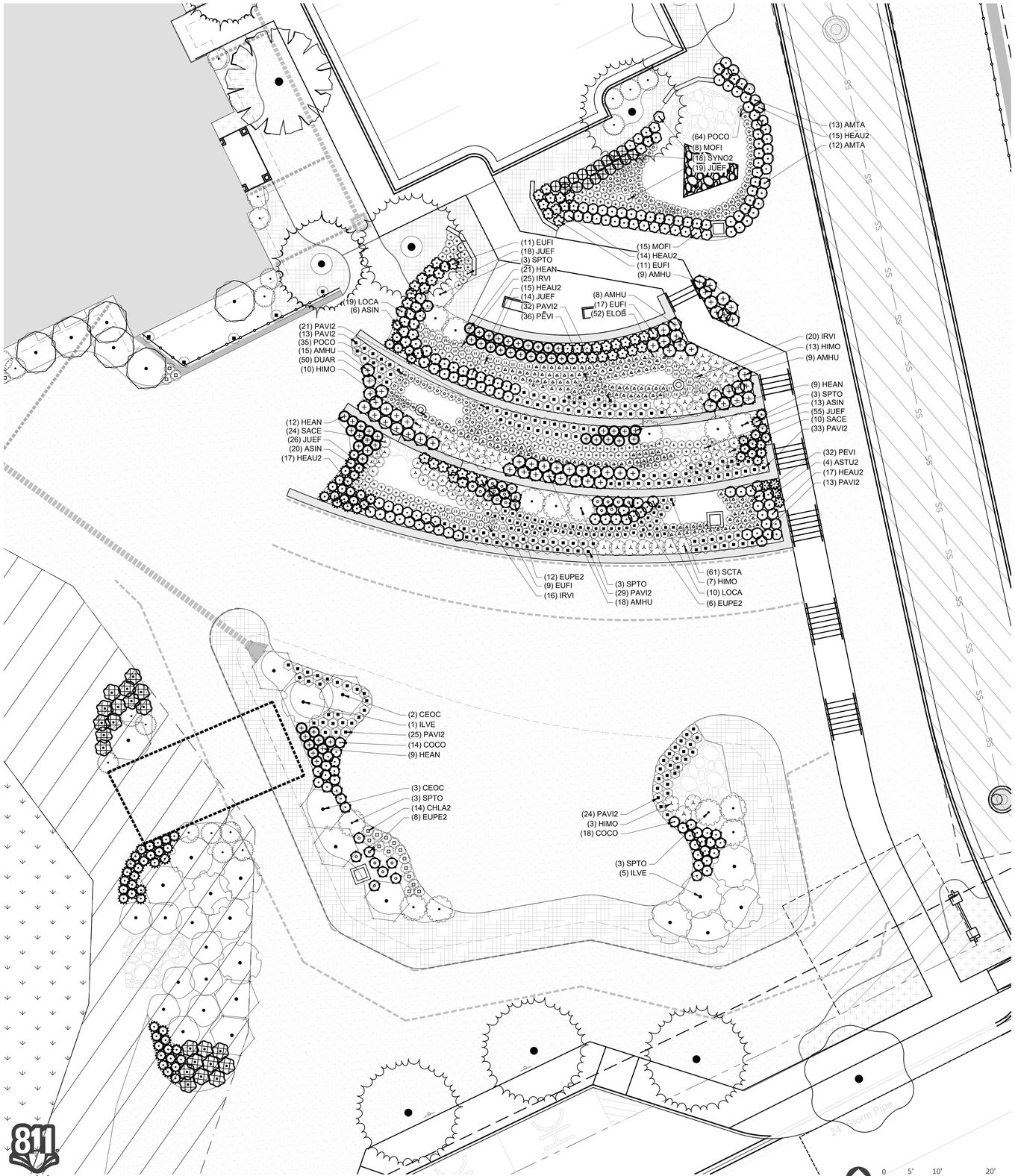
DRAWING NAME
PLANTING PLAN - NORTH

L5.2

NOTE: THIS SHEET IS WETLAND PLANTING SPECIFIC. QUANTITIES IN TABLE ARE FOR WETLAND PLANTS ONLY. FOR OTHER PLANTS, REFER TO THE PLANTING SCHEDULE ON SHEET L5.4




Know what's **below.** **Call** before you dig.

## PLANT SCHEDULE WETLAND PLANTING

| SHRUBS | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | CEOC | 5 | Cephalanthus occidentalis<br>Buttonbush | 10 gal. | | | |
| | ILVE | 6 | Ilex verticillata<br>Winterberry | 10 gal. | | | |
| | SPTO | 15 | Spiraea tomentosa<br>Steeplebush | 5 gal. | Pot | | |

| GRASSES | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | CHLA2 | 14 | Chasmanthium latifolium<br>Northern Sea Oats | 4" | Pot | | |
| | PAVI2 | 190 | Panicum virgatum<br>Switch Grass | Quart | Pot | | |

| PERENNIALS | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | AMHU | 59 | Amsonia hubrichtii<br>Arkansas Bluestar | Quart | Pot | | |
| | AMTA | 25 | Amsonia tabernaemontana<br>Eastern Bluestar | 4" | Pot | | |
| | ASIN | 39 | Asclepias incarnata<br>Swamp Milkweed | 4" | Pot | | |
| | ASTU2 | 4 | Asclepias tuberosa<br>Butterfly Milkweed | 1 gal. | Pot | | |
| | COCO | 32 | Conoclinium coelestinum<br>Wild Ageratum | 4" | Pot | | |
| | EUPE2 | 26 | Eupatorium perfoliatum<br>Common Boneset | 4" | Pot | | |
| | EUFI | 48 | Eutrochium fistulosum<br>Hollow Joe-pyeweed | 4" | Pot | | |
| | HEAU2 | 78 | Helenium autumnale<br>Sneezeweed | 4" | Pot | | |
| | HEAN | 51 | Helianthus angustifolius<br>Swamp Sunflower | Quart | Pot | | |
| | HIMO | 33 | Hibiscus moscheutos<br>Rose Mallow | 1 gal. | Pot | | |
| | LOCA | 29 | Lobelia cardinalis<br>Cardinal Flower | 4" | Pot | | |
| | MOFI | 23 | Monarda fistulosa<br>Bergamot | 4" | Pot | | |
| | SYNO2 | 18 | Symphyotrichum novae-angliae<br>New England Aster | Quart | Pot | | |

| WETLAND PLANTS | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | DUAR | 50 | Dulichium arundinaceum<br>Threeway Sedge | --- | B.R. | | |
| | ELOB | 52 | Eleocharis obtusa<br>Blunt Spikerush | 1` Ht. | B.R. | | |
| | IRVI | 61 | Iris virginica<br>Blue Flag Iris | --- | B.R. | | |
| | JUEF | 132 | Juncus effusus<br>Common Rush | --- | plug | | |
| | PEVI | 68 | Peltandra virginica<br>Arrow Arum | 1` Ht. | B.R. | | |
| | POCO | 99 | Pontederia cordata<br>Pickerel Weed | 1` Ht. | B.R. | | |
| | SACE | 34 | Saururus cernuus<br>Lizard's Tail | 1` Ht. | B.R. | | |
| | SCTA | 61 | Schoenoplectus tabernaemontani<br>Softstem Bulrush | 1` Ht. | B.R. | | |

## CONCEPT_PLANT_SCHEDULE_WETLAND_PLANTING

| TALL PLANTINGS (1,488 sf) | Qty. | Size | Spacing |
|---|---|---|---|
| Amsonia hubrichtii / Arkansas Bluestar | 26 | #1 | 15% @ 36" oc |
| Helenium autumnale / Sneezeweed | 39 | #1 | 10% @ 24" oc |
| Monarda didyma 'Jacob Cline' / Jacob Cline Bee Balm | 58 | #1 | 15% @ 24" oc |
| Panicum virgatum / Switch Grass | 172 | plug | 25% @ 18" oc |
| Pycnanthemum virginianum / Mountain Mint | 39 | #1 | 10% @ 24" oc |
| Rudbeckia hirta / Black-eyed Susan | 58 | #1 | 15% @ 24" oc |
| Symphyotrichum novae-angliae / New England Aster | 39 | #1 | 10% @ 24" oc |


EQUINOX
37 Haywood St.
Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256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DATE

REVISIONS

Mountain Housing Opportunities
# BALSAM EDGE
291 Howell Mill Road
Waynesville, NC


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DRAWING NAME
PLANTING PLAN - WETLANDS

L5.3

# PLANT SCHEDULE MAIN PLANTING

| TREES | CODE | QTY | BOTANICAL / COMMON NAME | HEIGHT | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | AEPA | 3 | Aesculus pavia<br>Red Buckeye | 6` Ht. | B&B | | |
| | JUBU | 16 | Juniperus virginiana 'Burkii'<br>Burk Eastern Redcedar | 8` Ht. | B&B | | |
| | NYSY | 3 | Nyssa sylvatica<br>Tupelo | 10` Ht. | B&B | | |
| | QUAL | 26 | Quercus alba<br>White Oak | 10` Ht. | B&B | | |
| | QUSH | 12 | Quercus shumardii<br>Shumard Oak | 10` Ht. | B&B | | 2.5" caliper min. |
| | TADI | 13 | Taxodium distichum<br>Bald Cypress | 10` Ht. | B&B | | 2.5" caliper min. |

| SHRUBS | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | CAFL | 9 | Calycanthus floridus<br>Sweetshrub | 5 gal. | | | |
| | CEOC | 4 | Cephalanthus occidentalis<br>Buttonbush | 10 gal. | | | |
| | FOBS | 32 | Fothergilla x intermedia 'Blue Shadow'<br>Blue Shadow Fothergilla | 5 gal. | | | |
| | HYQU | 10 | Hydrangea quercifolia<br>Oakleaf Hydrangea | 10 gal. | | | |
| | ILGL | 158 | Ilex glabra `Densa`<br>Inkberry Holly | 5 gal. | | | |
| | ILVE | 9 | Ilex verticillata<br>Winterberry | 10 gal. | | | |
| | ILPA | 21 | Illicium parviflorum<br>Anise Tree | 10 gal. | | | |
| | ITVS | 22 | Itea virginica 'Sprich' TM<br>Little Henry Sweetspire | 5 gal. | | | |
| | LEZE | 33 | Leucothoe fontanesiana 'Zeblid'<br>Scarletta® Drooping Leucothoe | --- | | | |

| GRASSES | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | CHLA2 | 47 | Chasmanthium latifolium<br>Northern Sea Oats | 4" | Pot | | |

| PERENNIALS | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|
| | ASIN | 37 | Asclepias incarnata<br>Swamp Milkweed | 4" | Pot | | |
| | COCO | 4 | Conoclinium coelestinum<br>Wild Ageratum | 4" | Pot | | |
| | COVM | 50 | Coreopsis verticillata 'Moonbeam'<br>Moonbeam Tickseed | Quart | | | |
| | LOSM | 5 | Lonicera sempervirens 'Major Wheeler'<br>Major Wheeler Trumpet Honeysuckle | 1 gal. | Pot | | |
| | SORU2 | 22 | Solidago rugosa<br>Goldenrod | Quart | Pot | | |

| GROUND COVERS | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | SPACING | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | BULB | 70 | Bulbs<br>Bulbs | Bulb | | 12" o.c. | | Mix of Mertensia virginica, Iris cistata,Dahlia spp. |

| SOD/SEED | CODE | QTY | BOTANICAL / COMMON NAME | SIZE | CONTAINER | SPACING | DETAIL | REMARKS |
|---|---|---|---|---|---|---|---|---|
| | COMI | 81,234 sf | ERNMX-114<br>5311 Conservation Mix | seed | | | | Apply at rate of 150lbs/acre. See Ernst Seeds for appropriate cover crop and rate of application. |

# CONCEPT_PLANT_SCHEDULE_MAIN_PLANTING

| SHADE PLANTINGS (1,792 sf) | Qty. | Size | Spacing |
|---|---|---|---|
| Carex appalachica / Appalachian Sedge | 745 | plug | 40% @ 12" oc |
| Geranium maculatum / Spotted Geranium | 83 | #1 | 10% @ 18" oc |
| Heuchera x 'Caramel' / Caramel Coral Bells | 83 | #1 | 10% @ 18" oc |
| Osmunda cinnamomea / Cinnamon Fern | 125 | #1 | 15% @ 18" oc |
| Polygonatum biflorum / Solomon's Seal | 207 | #1 | 25% @ 18" oc |

| PARKING LOT PLANTINGS (1,640 sf) | | | |
|---|---|---|---|
| Asclepias tuberosa / Butterfly Milkweed | 64 | 1 gal. | 15% @ 24" oc |
| Coreopsis verticillata 'Moonbeam' / Moonbeam Tickseed | 86 | #1 | 20% @ 24" oc |
| Muhlenbergia capillaris 'White Cloud' / White Cloud Muhly Grass | 379 | plug | 50% @ 18" oc |
| Symphyotrichum novae-angliae 'Purple Dome' / Purple Dome New England Aster | 64 | #1 | 15% @ 24" oc |

| TALL PLANTINGS (2,992 sf) | | | |
|---|---|---|---|
| Amsonia hubrichtii / Arkansas Bluestar | 52 | #1 | 15% @ 36" oc |
| Helenium autumnale / Sneezeweed | 78 | #1 | 10% @ 24" oc |
| Monarda didyma 'Jacob Cline' / Jacob Cline Bee Balm | 117 | #1 | 15% @ 24" oc |
| Panicum virgatum / Switch Grass | 346 | plug | 25% @ 18" oc |
| Pycnanthemum virginianum / Mountain Mint | 78 | #1 | 10% @ 24" oc |
| Rudbeckia hirta / Black-eyed Susan | 117 | #1 | 15% @ 24" oc |
| Symphyotrichum novae-angliae / New England Aster | 78 | #1 | 10% @ 24" oc |

| LOW PLANTINGS (2,042 sf) | | | |
|---|---|---|---|
| Amsonia tabernaemontana / Eastern Bluestar | 142 | #1 | 15% @ 18" oc |
| Asclepias tuberosa / Butterfly Milkweed | 54 | 1 gal. | 10% @ 24" oc |
| Bouteloua gracilis 'Blonde Ambition' / Blonde Ambition Blue Grama | 531 | plug | 25% @ 12" oc |
| Coreopsis verticillata 'Moonbeam' / Moonbeam Tickseed | 80 | #1 | 15% @ 24" oc |
| Echinacea purpurea / Coneflower | 80 | #1 | 15% @ 24" oc |
| Symphyotrichum novae-angliae 'Purple Dome' / Purple Dome New England Aster | 54 | #1 | 10% @ 24" oc |
| Zizia aurea / Golden Alexander | 95 | #1 | 10% @ 18" oc |

NOTE: EACH HATCH IS A PLANTING GROUP/MIX TO BE PLANTED IN THE HATCHED REAGIONS WITH THE QUANTITIES AND SPACING PROVIDED. CONTRACTOR IS ENCOURAGED TO PLANT SPECIES IN GROUPS OF NO LESS THAN THREE AND FOLLOW THE PLANT SPACING DETAIL ON 6/L6.3

NOTE: ALL QUANTITIES ON THIS SHEET ARE FOR THE MAIN PLANTING AREAS ONLY. FOR WETLAND PLANTINGS AND QUANTITIES, REFER TO SHEET L5.3.

EQUINOX
37 Haywood St.
Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1542 DAVID P. TUCH

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BALSAM EDGE
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DRAWING SCALE
AS SHOWN
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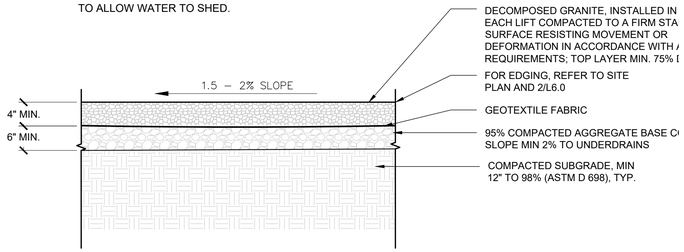
DRAWING NAME
PLANT SCHEDULE

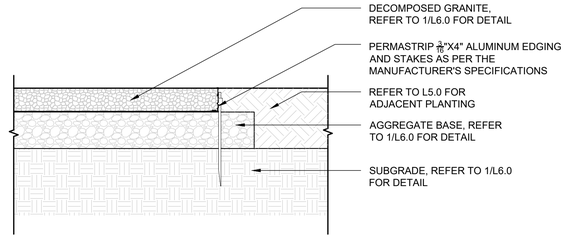
L5.4

NOTES:

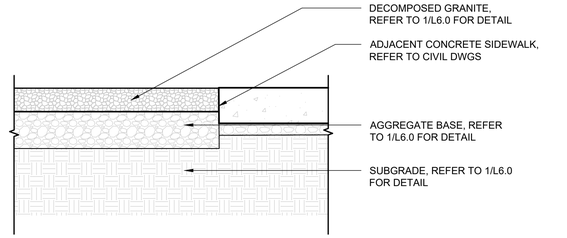
1. APPLY EDGING FIRST OR USE WOOD FORMWORK TO DEFINE WORK LIMITS.
2. EDGING ON DOWNHILL SLOPE SHOULD BE FLUSH WITH DECOMPOSED GRANITE TO ALLOW WATER TO SHED.



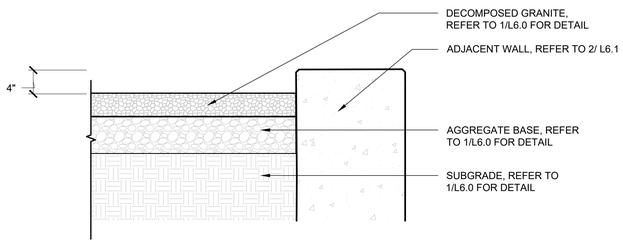

1 L6.0 DECOMPOSED GRANITE (DG)
1" = 1'




2 L6.0 DG WITH METAL EDGE
1" = 1'

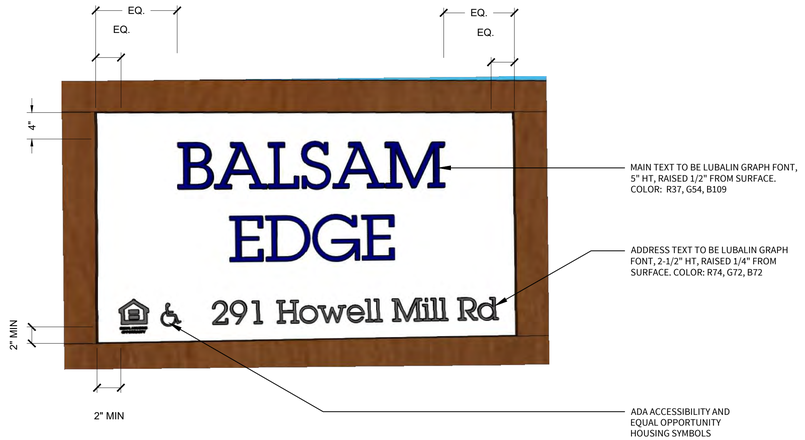



3 L6.0 DG AT CONCRETE SIDEWALK
1" = 1'




4 L6.0 DG AT CONCRETE WALL
1" = 1'

5 L6.1 ENTRY SIGN
X" = X"

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t 828.253.6856
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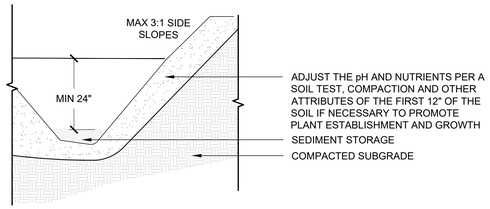
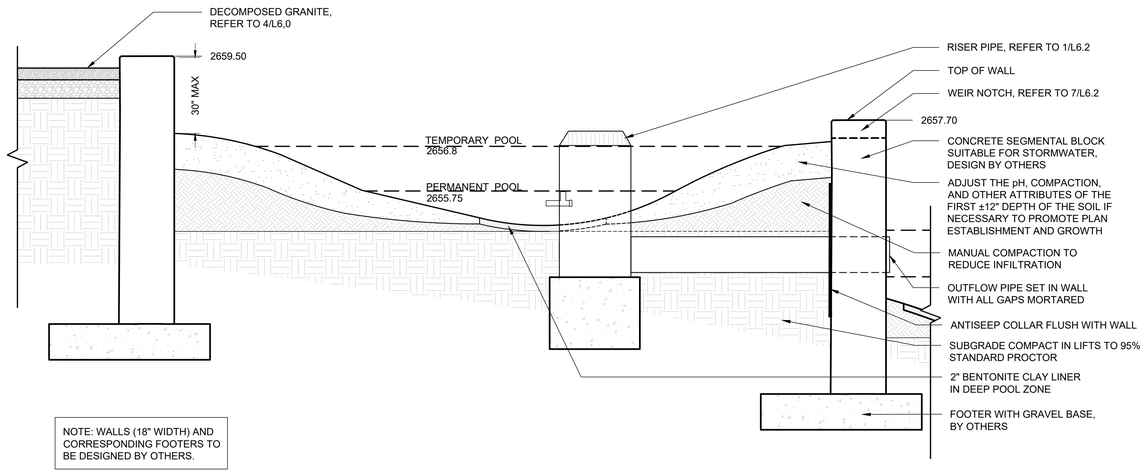
DRAWING NAME
SITE DETAILS

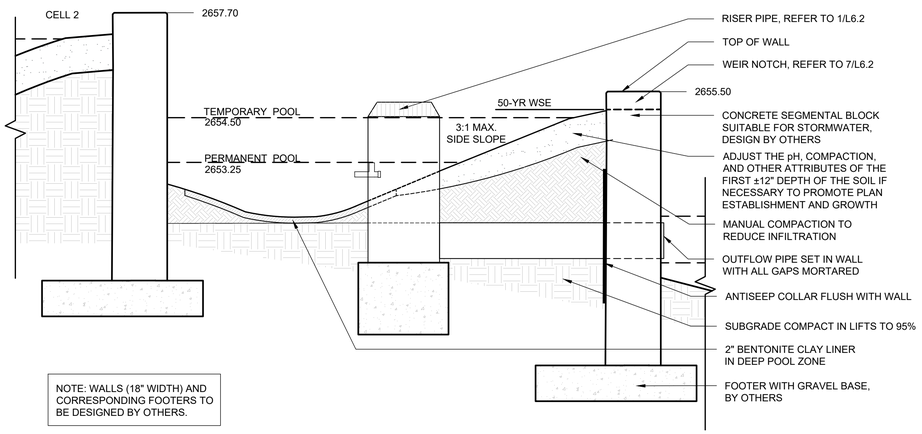
L6.0



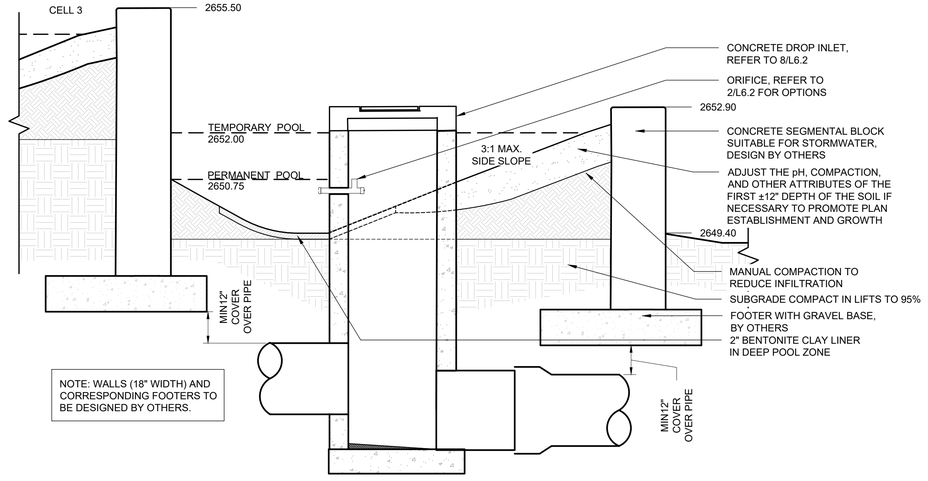

1 L6.1 FOREBAY (CELL 1)
1"=2'



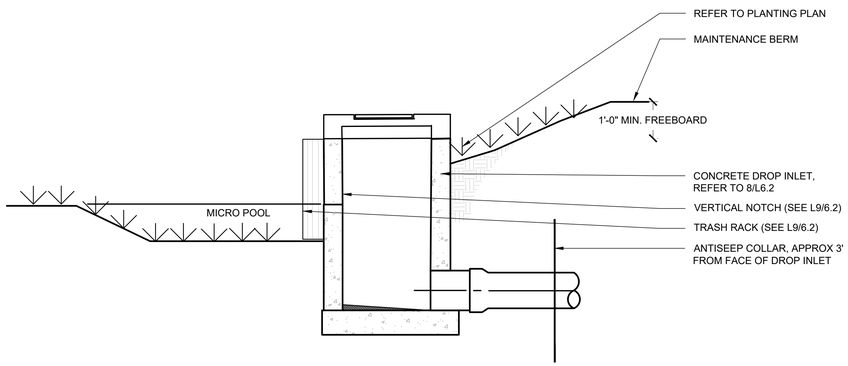

2 L6.1 CELL 2
1"=2'




3 L6.1 CELL 3
1"=2'



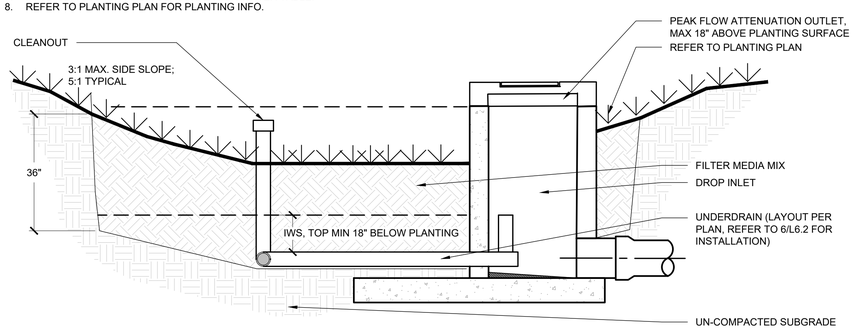

4 L6.1 CELL 4
1"=2'




5 L6.1 CELL 5
1"=2'

NOTES:

1. SHALL BE DESIGNED TO ACHIEVE A FLOW DEPTH OF SIX INCHES OR LESS.
2. AVOID COMPACTION OF SUBGRADE.
3. BIORETENTION SOIL MIX SHOULD MEET NCDENR STANDARDS AND SHALL CONSIST OF SAND (75-85%), FINES (SILT AND CLAY) (8-10%) & AGED PINE BARK OR COMPOST (5-10%).PHOSPHORUS INDEX OF SOIL MIX MUST BE BELOW 30
4. AVIOD SOIL COMPACTION WITHIN AND AROUND THE TREATMENT AREA; SHALL BE KEPT TO A MINIMUM.
5. SEDIMENTATION OF THE SYSTEM WILL CAUSE FAILURE, THEREFORE INSTALL SOIL MIX ONLY AFTER ALL SEDIMENT AND EROSION ON-SITE IS CONTROLLED AND SITE IS STABILIZED
6. REFER TO GRADING PLAN FOR ELEVATIONS AND GRADING.
7. MIN 2' SEPARATION FROM SEASONAL HIGH WATER TABLE.
8. REFER TO PLANTING PLAN FOR PLANTING INFO.




6 L6.1 BIORETENTION
1"=2'

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Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256

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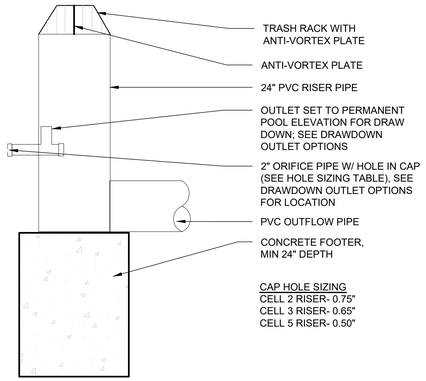
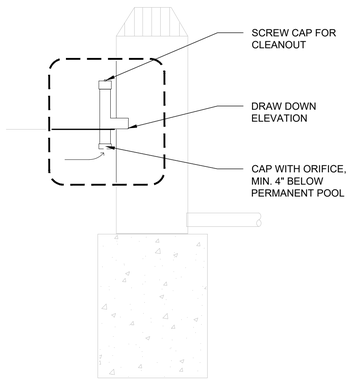
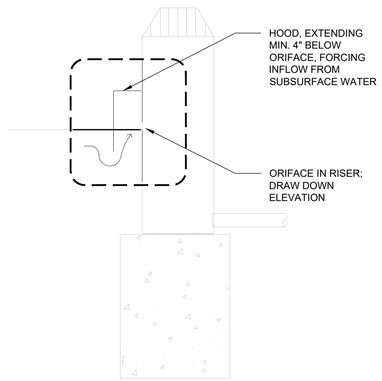
DRAWING NAME
STORMWATER DETAILS

L6.1

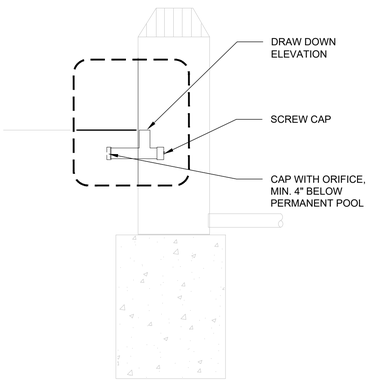



OPTION A



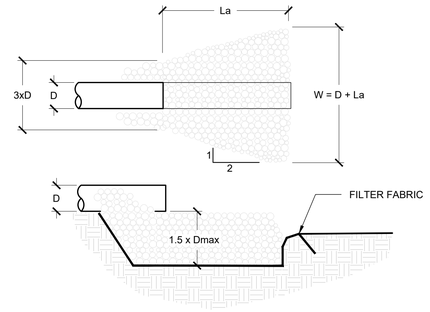

OPTION B




OPTION C

## 1 L6.2 PVC RISER
1"=1'

## 2 L6.2 ORIFICE OPTIONS
1"=1'




NOTES:

1. D = PIPE DIA. IN INCHES Dmax = MAXIMUM STONE SIZE (1.5 x d50)
2. FOR METHOD SEE 8.06 OF NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

| PIPE OUTFALL | CLASS RIP-RAP | La |
|---|---|---|
| 2 | CLASS 1 | 14'-0" |
| 12 | CLASS B | 10'-0" |
| 20 | CLASS B | 8'-0" |

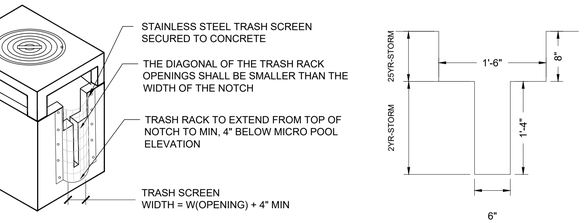
## 3 L6.2 PIPE OUTFALL
1"=1'




## 4 L6.2 SPILLWAY
1"=2'




## 5 L6.2 HEADWALL (DOUBLE)
NTS

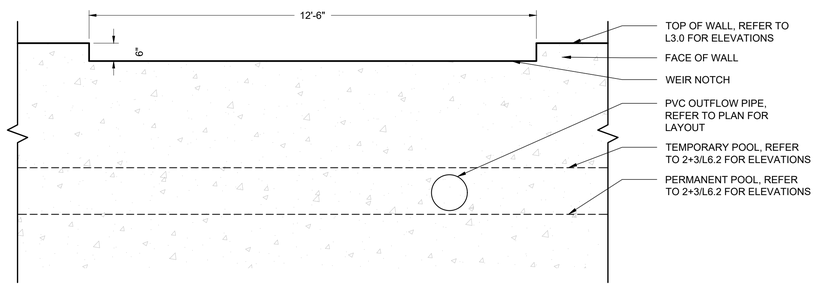



A. PLAN

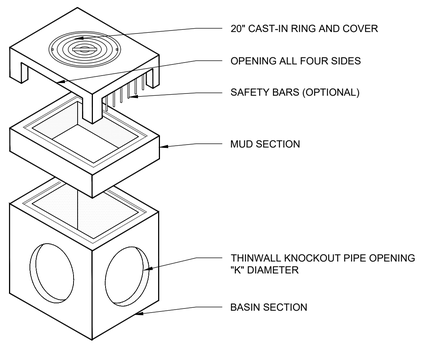
B. SECTION

NOTES:
1. FOR CONDITION IN BIORETENTION, SEE 6/L6.1.
2. FOR CONDITION IN DECOMPOSED GRANITE, SEE 1/L6.0

## 6 L6.2 UNDERDRAIN
1"=2'




## 7 L6.2 WEIR NOTCH
1"=2'




ISOMETRIC VIEW - NTS

## 8 L6.2 CONCRETE DROP INLET
N.T.S.




TRASH RACKS:

1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
2. BAR GATE TRASH RACKS SHALL BE ALUMINUM AND SHALL BE BOLTED USING STAINLESS STEEL HARDWARE.
3. STRUCTURAL DESIGN OF TRASH RACKS SHALL BE BASED ON FULL HYDROSTATIC HEAD WITH ZERO HEAD DOWNSTREAM OF THE RACK.

## 9 L6.2 TRASH RACK & VERTICAL NOTCH
N.T.S.

EQUINOX
37 Haywood St.
Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256

SEAL

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1542 DAVID P. TUCH

| DESIGN BY: | DRAWN BY: | CHECKED BY: |
|---|---|---|

DATE

REVISIONS

Mountain Housing Opportunities
BALSAM EDGE
291 Howell Mill Road
Waynesville, NC

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PHASE
FOR CONSTRUCTION

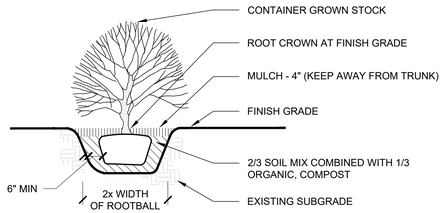
DATE
MAY 19, 2023

DRAWING SCALE
AS SHOWN

NOTE: If this drawing is not 24x36" it has been revised from its original size and the scales noted on drawings/details are no longer applicable.

DRAWING NAME
STORMWATER DETAILS

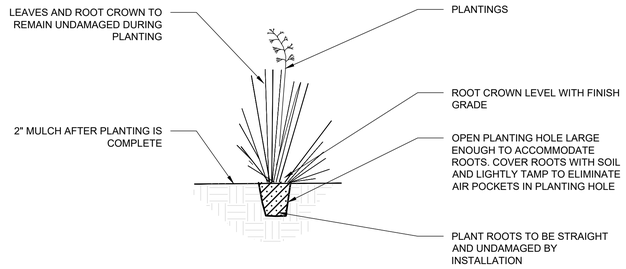
L6.2




NOTES:

1. WATER THOROUGHLY IMMEDIATELY AFTER PLANTING AND WATER WEEKLY UNTIL ESTABLISHED.
2. NO FERTILIZER IS NECESSARY DURING PLANTING.

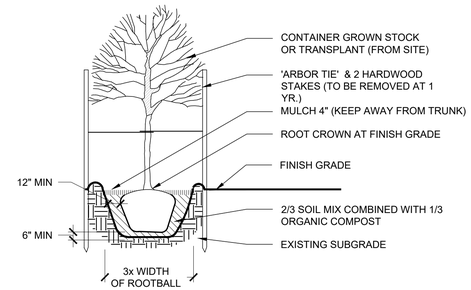
1 L6.3 SHRUB PLANTING 1"=1'




NOTES:

1. WATER THOROUGHLY IMMEDIATELY AFTER PLANTING AND WATER WEEKLY UNTIL ESTABLISHED.
2. NO FERTILIZER IS NECESSARY DURING PLANTING.

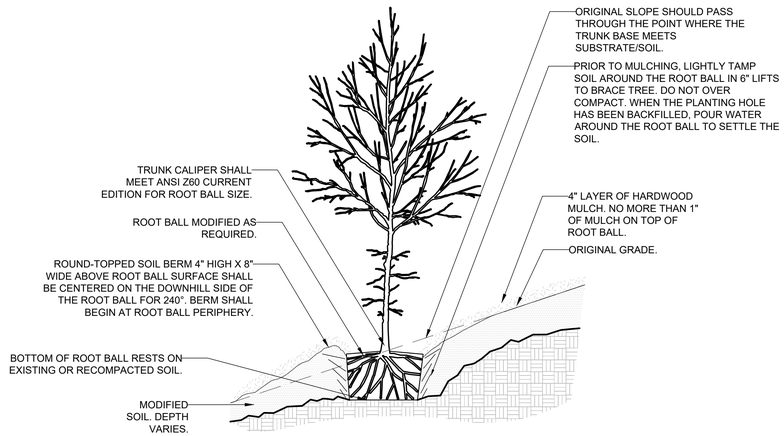
2 L6.3 PERENNIALS 1"=1'



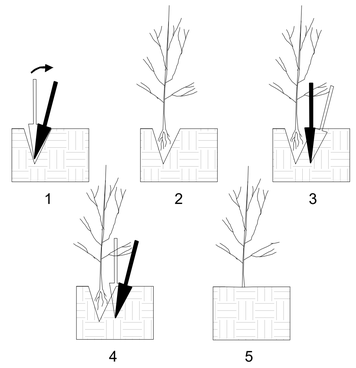

NOTES:

1. WATER THOROUGHLY IMMEDIATELY AFTER PLANTING AND WATER WEEKLY UNTIL ESTABLISHED.
2. APPLY MYCORRHIZAE (MYKE TREE AND SHRUB) TO EACH TREE PLANTING. FOLLOW MANUFACTURERS DIRECTIONS FOR APPLICATION.

3 L6.3 TREES 1"=1'



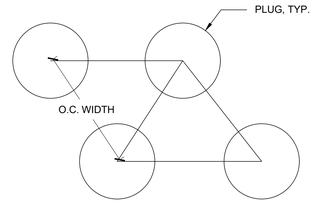

4 L6.3 TREE PLANTING ON SLOPE 1"=1'




NOTES:

1. USE A SPADE AND CUT IN SOIL.
2. REMOVE SPADE AND INSERT SEEDLING SO THAT THE ROOT COLLAR IS JUST BELOW GROUND SURFACE WITH ROOTS FACING STRAIGHT DOWN IN THE PLANTING HOLE.
3. INSERT SPADE 3 INCHES TO ONE SIDE OF THE SEEDLING/PLUG AND PULL HANDLE TO CLOSE THE BOTTOM OF THE HOLE.
4. PUSH HANDLE OF SPADE FORWARD TO CLOSE THE TOP OF THE HOLE. OPEN PLANTING HOLE LARGE ENOUGH TO ACCOMMODATE ROOTS.
5. REMOVE SPADE AND CAREFULLY CLOSE THE OPENING BY TAMPING GENTLY WITH A TAMPER OR HEEL BEING CAREFUL NOT TO INJURE THE SEEDLING.

5 L6.3 PLUG PLANTING DETAIL 1"=1'




NOTES:

1. TREES AND SHRUBS TO BE PLANTED AS SHOWN ON PLAN
2. USE DIBBLE TO PLANT PLUGS.

6 L6.3 PLUG SPACING DETAIL 1"=1'

EQUINOX
37 Haywood St.
Suite 100
Asheville, NC 28801
t 828.253.6856
f 828.253.8256

SEAL

NOTE: Drawings are invalid without signed stamp by professional

| DESIGN BY: | DRAWN BY: | CHECKED BY: |
|---|---|---|

DATE

REVISIONS

Mountain Housing Opportunities
BALSAM EDGE
291 Howell Mill Road
Waynesville, NC

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PHASE
FOR CONSTRUCTION

DATE
MAY 19, 2023

DRAWING SCALE
AS SHOWN
NOTE: If this drawing is not 24x36" it has been revised from its original size and the scales noted on drawings/details are no longer applicable.

DRAWING NAME
PLANTING DETAILS

L6.3

# Water Of the US Delineation Report

## Balsam Edge

### Haywood County, NC

**July 2023**

**Prepared by:**

EQUINOX

*balance through proper planning*

# TABLE OF CONTENTS

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**5 Regulatory Considerations ..... 5**
**5.1 Special Classifications and Buffers ..... 5**
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# 1 Summary

Mountain Housing Opportunities (MHO) contracted Equinox Environmental Consultation and Design, Inc. ("Equinox") to conduct delineation of "Waters of the US Assessment" (WOTUS) to identify, potentially jurisdictional features within the 5.63 +/- acre Balsam Edge Property ("Property") located in Haywood County, North Carolina.

Equinox has performed a wetland delineation of the Property that conforms to the requirements of the 1987 US Army Corps of Engineers Wetland Delineation Manual and Eastern Mountain and Piedmont Regional Supplement. Stream identification followed the State of North Carolina DWQ Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Ver 4.11. **Based upon this survey it was determined that Waters of the US occur on site. One jurisdictional wetland and one perennial stream was identified within the boundaries of the property. No other jurisdictional or non-jurisdictional features were identified within the boundaries of the property.**

# 2 Introduction

The property located at 271 Howell Mill Rd, referred to as the Balsam Edge Property or Property throughout this report, is located in the city of Waynesville in central Haywood County, North Carolina. The Property is composed of 5.63 +/- acre parcel, Haywood County Tax Parcel Identification Number (PIN) 8616-42-5402. This report describes the findings of the jurisdictional delineation conducted by Equinox on November 8, 2022.

The site was an open agricultural property containing a residential structure on the central knoll and associated out buildings. A second residential structure and associated outbuildings were located in the south west corner of the parcel. A mapped unnamed tributary to Richland Creek was present in the southwestern edge of the Property. The majority of the property was open field with a linear forested community along the western property boundary. Isolated large hardwood trees were associated with the centrally located residential structures.

Wetlands as defined by 24 CFR 55.2(b)(11) are those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. This definition includes those wetland areas separated from their natural supply of water as a result of activities such as the construction of structural flood protection methods or solid-fill road beds and activities such as mineral extraction and navigation improvements. This definition includes both wetlands subject to and those not subject to section 404 of the Clean Water Act as well as constructed wetlands.

Stream as defined by 15A NCAC 2B.0233(2)(k) a body of concentrated flowing water in a natural low area or natural channel on the land surface. Perennial stream is defined by 15A

NCAC 2B.0233(2)(i) as a well-defined channel that contains water year around during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with a continuous conveyance of water. Intermittent stream is defined by 15A NCAC 2B.0233(2)(g) as a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the conveyance of water.

# 3 Methodology

This report describes the findings of the jurisdictional delineation conducted by Equinox on November 8, 2022 using the 1987 US Army Corps of Engineers Wetland Delineation Manual and Eastern Mountain and Piedmont Regional Supplement, in conjunction with the 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands. Stream identification followed the State of North Carolina DWQ Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Ver 4.11.

## 3.1 Desktop review

Equinox utilized the following publicly available data for desktop review.

- USGS topographic maps, aerial imagery, and elevational data were referenced utilizing Arc Pro version 3.1.2.
- Soil Survey maps were produced using NRCS Web Soil Survey.
- The US Fish and Wildlife Service National Wetlands Inventory, Wetlands Mapper.

Equinox reviewed the above resources in order to identify any previously mapped wetlands, identify potential topographic features consistent with jurisdictional resources, such as topographic crenulations, stream systems, concave landscape, evidence of long-term saturation, and wetland soils.

## 3.2 Field Methodology

Wetlands were delineated using the routine determination methods described in Part IV, Section D of the 1987 Corps of Engineers Wetlands Delineation Manual. The 2020 Eastern Mountains and Piedmont Regional Supplement, and USDA Soil Survey maps were also used in the determination. Hydrophytic plant species and classification were determined using the National Wetland Plants List provided by the US Department of Agriculture.

Equinox, utilizing information gathered during the desktop review, inspected the site for additional areas likely to contain potential jurisdictional features. Following a general site overview Equinox then proceeded with wetland delineations per the US Army Corps of Engineers methodology referenced above. A hydrophytic plant community profile was generated within areas of potential hydrology. Following identification of hydrology and a hydrophytic plant dominated community, soil cores were extracted to a maximum depth ranging from 14-24 inches and evaluated for hydric soil indicators and groundwater hydrology.

Upon locating a "Wetland" point, an "Upland" point was established using the same criteria as above to provide a vegetative, hydrological, parent soil and condition profile. This profile, in conjunction with the known wetland point profile, was used to establish a reference for the expected wetland/upland boundary profile. Data forms contained within the US Army Corps of Engineers Eastern Mountains and Piedmont Regional Supplement were used to document determination.

Streams were characterized using forms provided in the NC DWQ Methodology for Identification of Intermittent and Perennial Streams and Their Origins version 4.11. The NCDWQ identification method evaluates streams based upon observable characteristics of geomorphology, hydrology, and biology.

# 4 Findings

## 4.1 Desktop Review Findings

The Desktop review revealed the following conditions within the Balsam Edge Property.

- The USGS Topographic Quadrangle of Waynesville identifies an intermittent stream bisecting the southwest corner of the property.
- Aerial imagery of the project location confirms the presence of a channel with an estimated bank to bank width of 2-3.5 feet.
- NC Onemap 4' contours for the site indicate ground surface slopes at 1% in the along the stream channel and extreme southwestern corner of the property.
- Soils within the property contain Evard-Cowee (EvD), Dillsboro loam (DsB and DsC). None of these soils are listed as or containing hydric subcomponents.
- National Wetland Inventory Mapping depicts no mapped wetlands within the property. One Riverine system is mapped within the property and coincides with the intermittent stream identified in the USGS topographic quadrangle.

## 4.2 Field Investigation Findings

- One perennial stream was field verified in the location depicted in both the USGS Topographic Map and the NWI map. This stream runs for **315 linear feet** and

encompasses an area of **0.007 acres** within the southwestern corner of the property. This stream originates from the northwest (off-site) entering the property approximately 320 feet north of Howell Mill Rd. contained sorted bed materials, aquatic insects, and maintained a well-defined channel.

- One riparian wetland was identified associated with the perennial stream system. This wetland encompasses **0.34 acres** of the southwest central portion of the property. This wetland occurs within a bowl-shaped topographic feature and has likely been influenced by increased impervious surface surrounding the site and the history of cattle.
- No non-jurisdictional wetlands or stream systems were identified during the course of the field survey.

| Site Number | Lat | Long | Length/Area | Resource Type | Regulatory Authority |
|---|---|---|---|---|---|
| S1 | 35.50512 | -82.98402 | 315 l(0.007 ac) | Non-Wetland | 404/401 |
| W1 | 35.50512 | -82.98402 | 0.34 ac | Wetland | 404/401 |

# 5 Regulatory Considerations

At the request of the Client, Equinox coordinated with the US Army Corps of Engineers and obtained a Preliminary Jurisdictional Determination (Action ID: SAW-2022-02495). The features identified within the property are jurisdictional and covered under both Section 401 and 404 of the Clean Water Act. The delineation was utilized in the planning process to ensure avoidance of impacts to waters of the US and State waters.

## 5.1 Special Classifications and Buffers

The project occurs within the French Broad Basin, Pigeon River (HUC 06010106). Richland Creek is the receiving waters of the site. Richland Creek is Class B, protected for primary contact recreation.

No special buffer requirements are present within this watershed.

Richland Creek is classified as Hatchery Supported Water. Trout buffer requirements apply. Land disturbing activity should not occur within 25 feet of top of bank and buffer impacts should not impact more than 10% of the total linear feet of buffer within the project area.

The project does not fall within the mapped flood zone of Richland Creek or tributaries to Richland Creek. No other “High Hazard” areas were documented within or near the project area.

# 6 Conclusions

One jurisdictional wetland (0.34 ac) and one jurisdictional stream (0.007ac) were identified within the property. These features have been validated through a Preliminary Jurisdictional Determination. No non-jurisdictional wetlands or stream systems were identified within the property boundary.

# 7 References

1. ArcGIS Pro, version 3.1.2, ESRI Inc.
2. Executive Order 11990: Wetlands Protection (1977).
3. Federal Manual for Identifying and Delineating Jurisdictional Wetlands: An interagency Cooperative Publication (1989).
4. NC DWQ Methodology for Identification of Intermittent and Perennial Streams and Their Origins. Version 4.11
5. NC ONEMAP Aerial Orthoimagery, latest (2022).
6. NC ONEMAP FEMA Flood data (2014)
7. USACE, Corps of Engineers Wetlands Delineation Manual (1987).
8. USACE, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0 (April 2012)
9. U.S. Army Corps of Engineers 2020 National Wetland Plant List, version 3.5 http://wetland-plants.usace.army.mil/
10. USDA, NRCS. 2016. The PLANTS Database (http://plants.usda.gov, today's date). National Plant Data Team, Greensboro, NC 27401-4901 USA.
11. USGS 7.5 Minute Series Topographic Maps, Waynesville Quadrangle

# 8 Appendices

## 8.1 Site Photographs

## 8.2 Site Location Map

## 8.3 Aerial Photograph of the Property

## 8.4 USGS Topographic Map of the Property

## 8.5 National Wetland Inventory Map

## 8.6 NRCS Soils Map

## 8.7 Flood zone Map

## 8.8 Slope Map

# 8.1 Site Photographs

# 8.1

1.Southern pasture area facing southwest.

2.Central knoll and former house site facing NNW toward property interior.

3. Former residential area on central knob.

4. Abandoned residence in the southwest corner of the property.

5. Unnamed tributary to Richland Creek and upstream extents of the wetland area facing SSE

6. Unnamed tributary to Richland Creek and upstream extents of the wetland area facing west.

7. Wetland area facing south from toe of slope

8. Wetland area facing north from Howell Mill road frontage.

# 8.2 Site Location Map

# MHO Balsam Edge Location

# MHO Balsam Edge

Prepared by:

EQUINOX

## 8.3 Aerial Photograph of the Property

# MHO Balsam Edge Aerial Map

## MHO Balsam Edge

Prepared by:

EQUINOX
balance through proper planning

## 8.4 USGS Topographic Map of the Property

# MHO Balsam Edge Topo

## MHO Balsam Edge

Prepared by:

EQUINOX
balance through proper planning

## 8.5 National Wetland Inventory Map

U.S. Fish and Wildlife Service
National Wetlands Inventory

# MHO Balsam Edge NWI Map

November 11, 2022

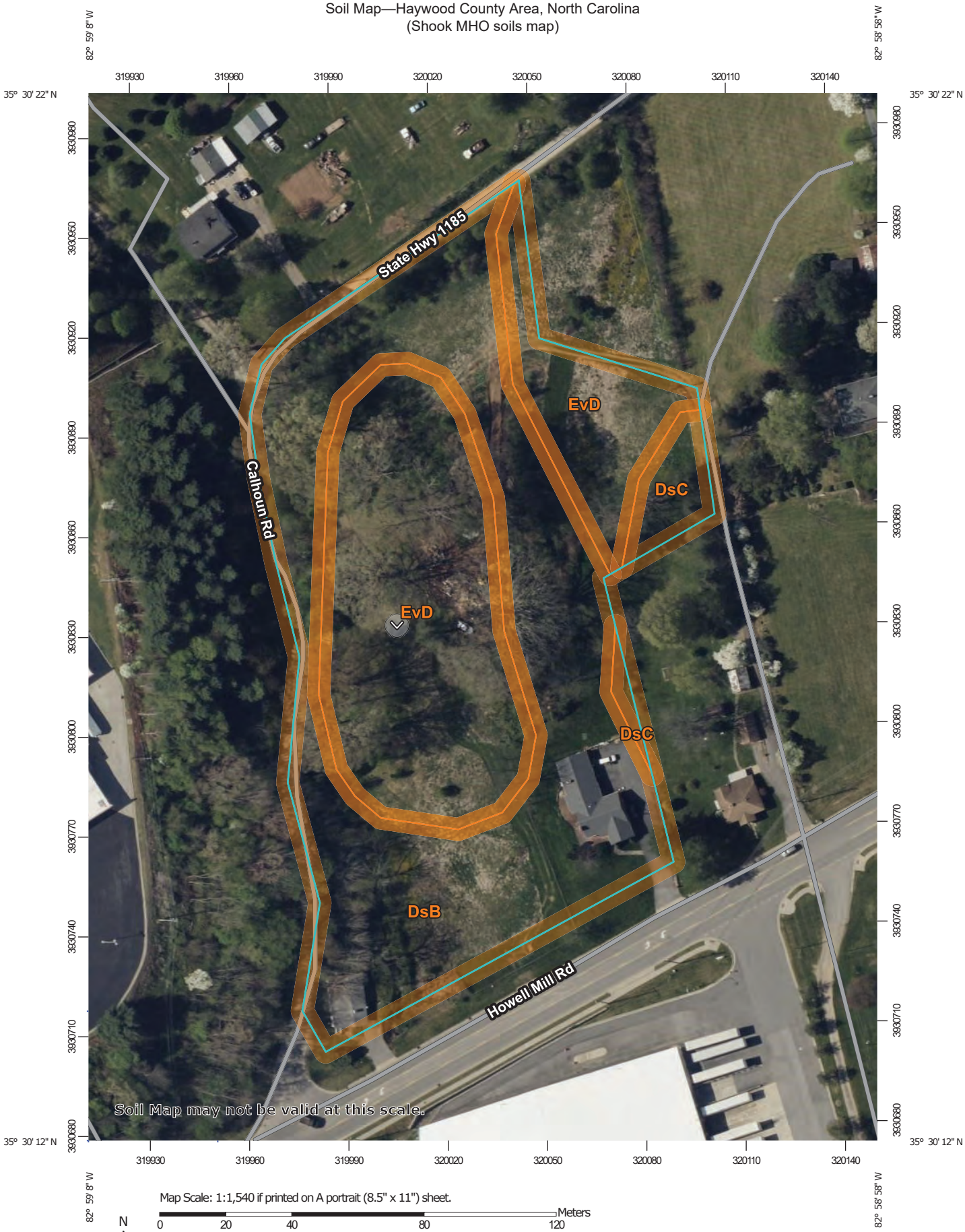
**Wetlands**

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# 8.6 NRCS Soils Map

Soil Map—Haywood County Area, North Carolina
(Shook MHO soils map)




Map Scale: 1:1,540 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

**Background**
- Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Haywood County Area, North Carolina
Survey Area Data: Version 24, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2022—May 9, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| DsB | Dillsboro loam, 2 to 8 percent slopes | 3.2 | 55.9% |
| DsC | Dillsboro loam, 8 to 15 percent slopes | 0.2 | 3.8% |
| EvD | Evard-Cowee complex, 15 to 30 percent slopes | 2.3 | 40.3% |
| **Totals for Area of Interest** | | **5.7** | **100.0%** |

# 8.7 Flood zone Map

# MHO Balsam Edge Floodzone

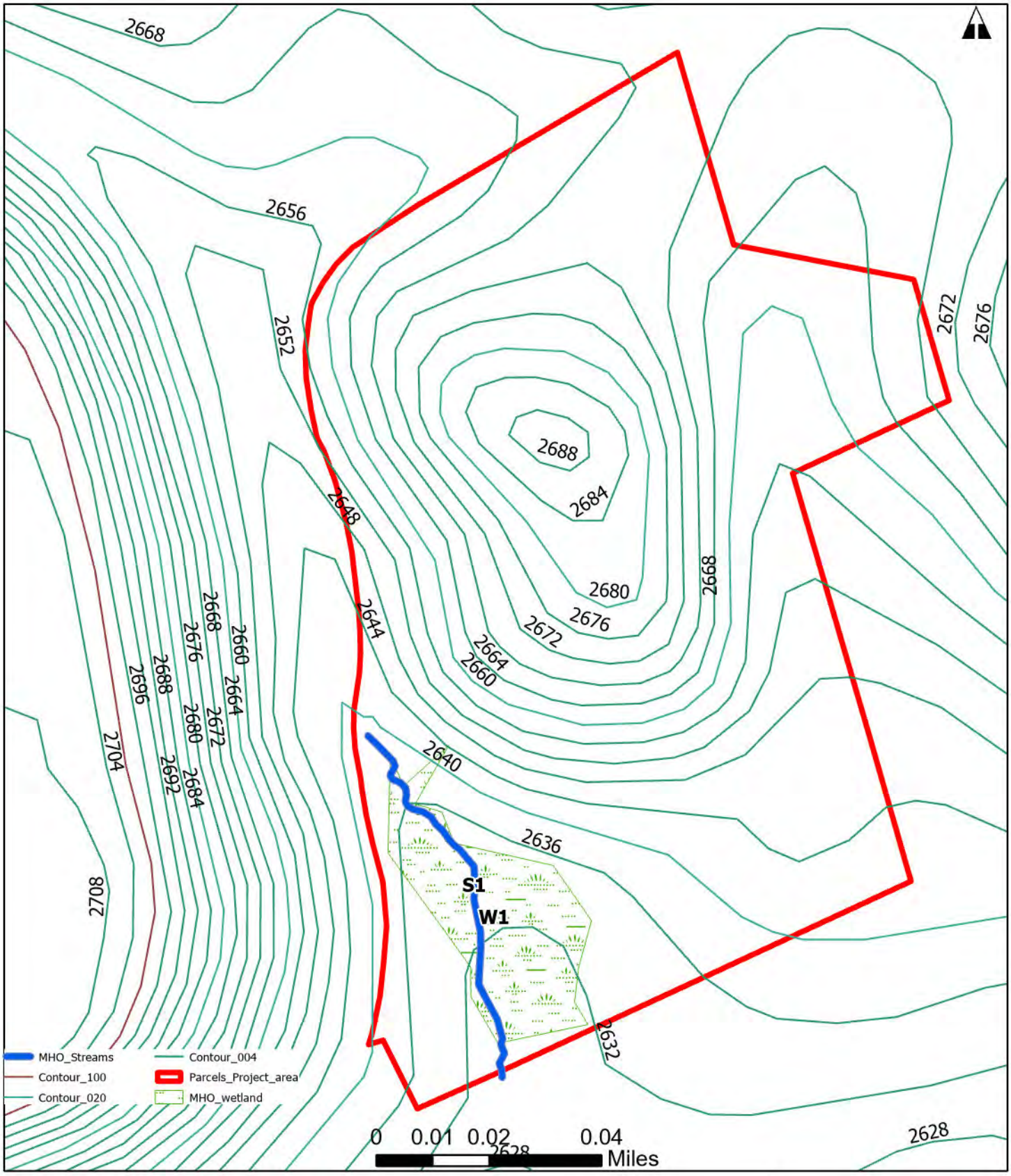
## MHO Balsam Edge

Prepared by:

EQUINOX
balance through proper planning

# 8.8 Slope Map

# MHO Balsam Edge Elevation




# MHO Balsam Edge

Prepared by:

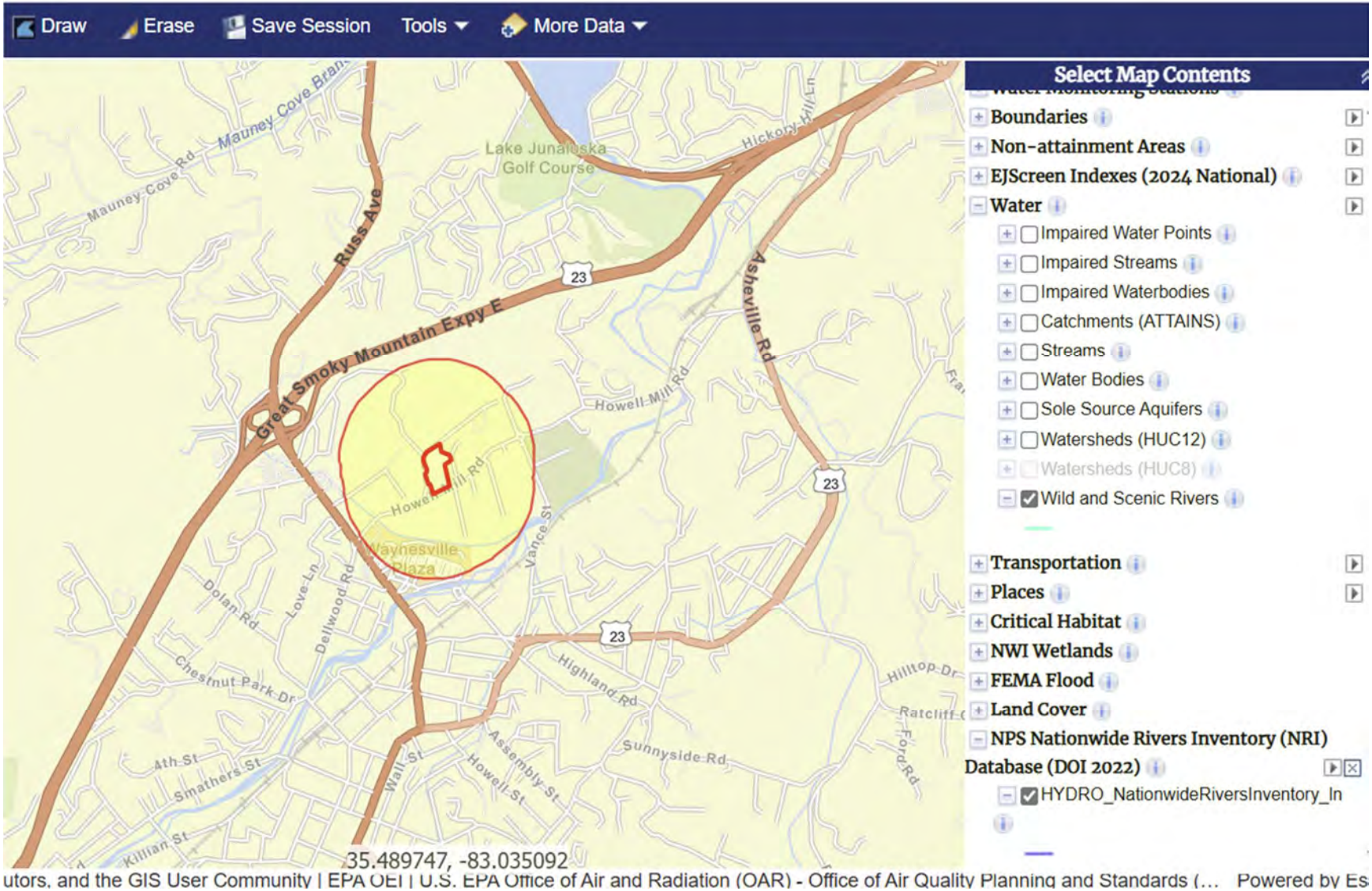
EQUINOX

# ATTACHMENT 16:

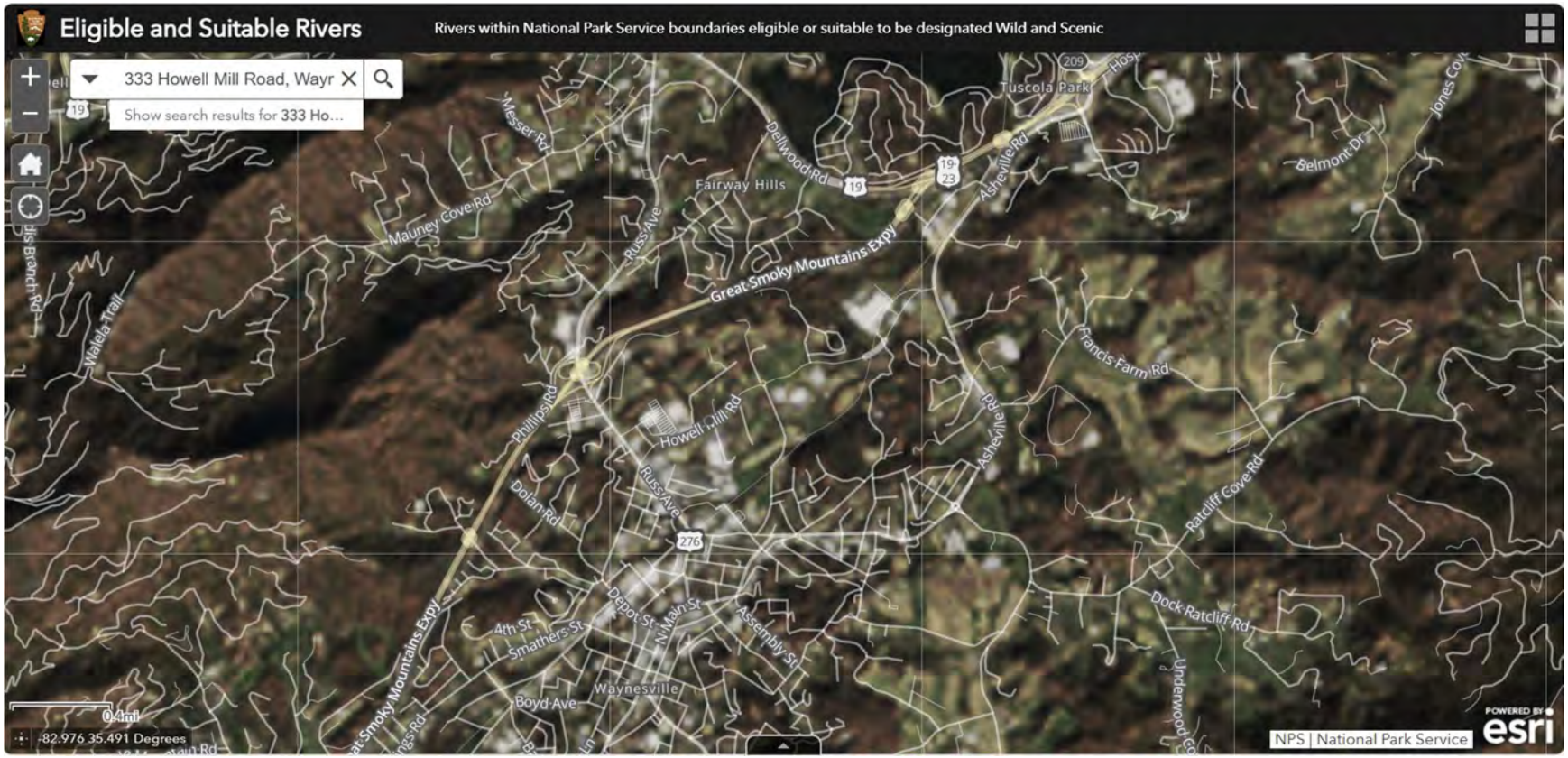
## Wild and Scenic Rivers

NEPAssist Map of DOI NPS Nationwide Rivers Inventory and National Wild and Scenic Rivers System Showing 0.25-mile Buffer

# Balsam Edge – WSR Map with 0.25-mile Buffer



# Balsam Edge – Eligible and Suitable WSR Map



# Appendix O
# Wild and Scenic Rivers

# Wild and Scenic Rivers in or near North Carolina
**April 18, 2003**

| River | Drainage Basin | Designated Reach | River Counties |
|---|---|---|---|
| Chattooga River | Savannah | The segment from 0.8 miles below Cashiers Lake in North Carolina to the Tugaloo Reservoir. The West Fork from its confluence with the main stem upstream 7.3 miles | Jackson |
| Horsepasture River | Savannah | From Bohaynee Road (N.C. 281) downstream to Lake Jocassee. | Jackson |
| New River | New | The South Fork from its confluence with Dog Creek downstream 22 miles to the confluence with the North Fork. The main stem from the confluence of the North and South Forks with Dog Creek downstream approximately 4.5 miles to the Virginia state line | Ashe and Alleghany |
| Lumber River | Lumber | From State Route 1412/1203 (river mile 0) to the Scotland/Robeson County lines at the end of the Maxton Airport Swamp (river mile 22) and from Back Swamp (river mile 56) to the North/South Carolina border (river mile 115). | Hoke, Scotland, Robeson and Columbus |
| Wilson Creek | Catawba | From the headwaters below Calloway Peak to the confluence with Johns River. | Avery and Caldwell |

The official source of information for Wild and Scenic Rivers is found at https://www.nps.gov/orgs/1912/plan-your-visit.htm

# Nationwide Rivers Inventory

National Park Service
U.S. Department of the Interior

This is a listing of more than 3,200 free-flowing river segments in the U.S. that are believed to possess one or more "outstandingly remarkable" values.

DRAFT

# NATIONAL WILD AND SCENIC RIVERS SYSTEM

## Designations as of November 2016

### The National Wild and Scenic Rivers System

Established by Congress under the Wild and Scenic Rivers Act of 1968, the National Wild and Scenic Rivers System was created to preserve the free-flow, water quality, and outstanding natural, cultural, and recreational values of select rivers for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

More information about the National Wild and Scenic Rivers System or specific designated rivers can be found at the Interagency Wild & Scenic Rivers Coordinating Council's website, www.rivers.gov, or by contacting one of the federal river administering agencies:

**U.S. Forest Service**
www.fs.fed.us

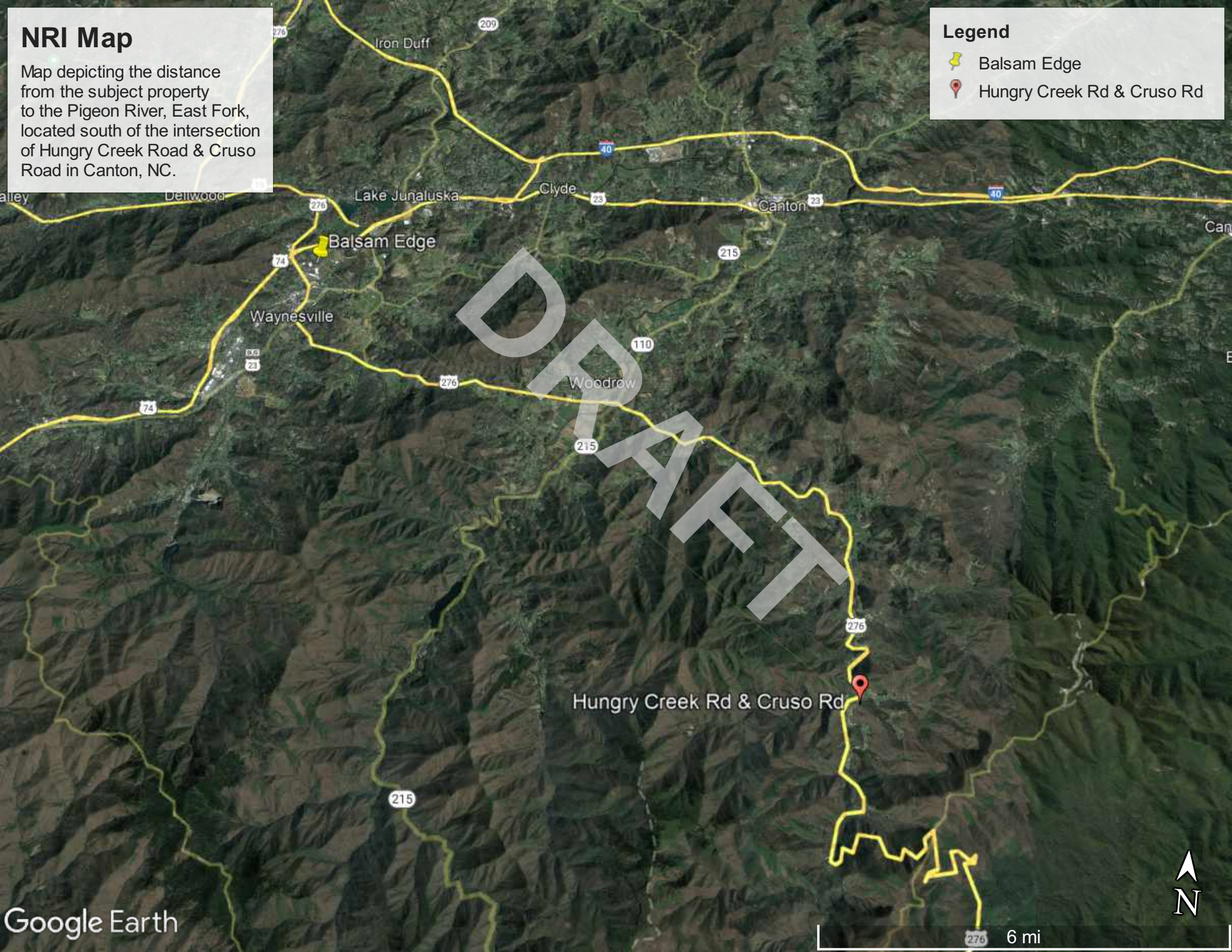
**National Park Service**
www.nps.gov/wsr

**Bureau of Land Management**
www.blm.gov

**U.S. Fish and Wildlife Service**
www.fws.gov

### Names of Numbered Wild and Scenic Rivers

1 Sandy
2 Zig Zag
3 Middle Fork Hood
4 East Fork Hood
5 Fifteenmile Creek
6 White
7 Salmon
8 Clackamas
9 Collawash
10 Fish Creek
11 South Fork Clackamas
12 Roaring and South Fork Roaring
13 Eagle Creek
14 Metolius
15 Deschutes
16 North Fork Crooked
17 Whychus Creek
18 North Fork Smith
19 River Styx
20 Big Marsh
21 Crescent Creek
22 Little Deschutes
23 Crooked
24 North Fork Crooked
25 South Fork John Day
26 North Fork John Day
27 North Powder
28 Joseph Creek
29 Lostine
30 Donner und Blitzen
31 Wildhorse Creek and Kiger Creek
32 North Fork Owyhee
33 Red Canyon
34 South Fork Owyhee
35 Battle Creek
36 Deep Creek
37 Dickshooter Creek
38 Little Jacks Creek
39 Big Jacks Creek
40 Duncan Creek and Wickahoney Creek
41 Cottonwood Creek
42 Sheep Creek

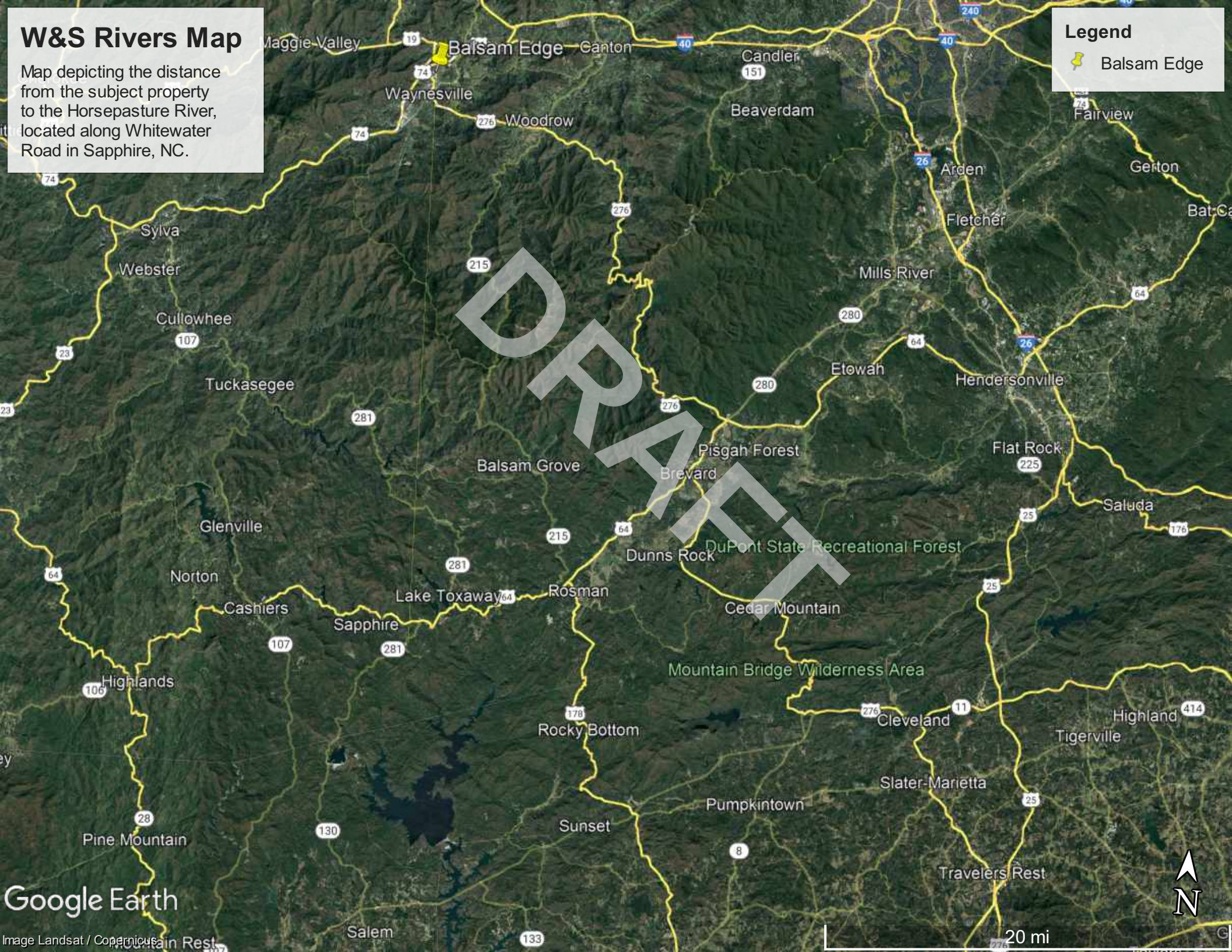

NRI Map
Map depicting the distance from the subject property to the Pigeon River, East Fork, located south of the intersection of Hungry Creek Road & Cruso Road in Canton, NC.
Legend
Balsam Edge
Hungry Creek Rd & Cruso Rd
Iron Duff
Lake Junaluska
Clyde
Canton
Balsam Edge
Waynesville
Woodrow
Hungry Creek Rd & Cruso Rd
DRAFT
Google Earth
6 mi
N

# W&S Rivers Map

Map depicting the distance from the subject property to the Horsepasture River, located along Whitewater Road in Sapphire, NC.

**Legend**

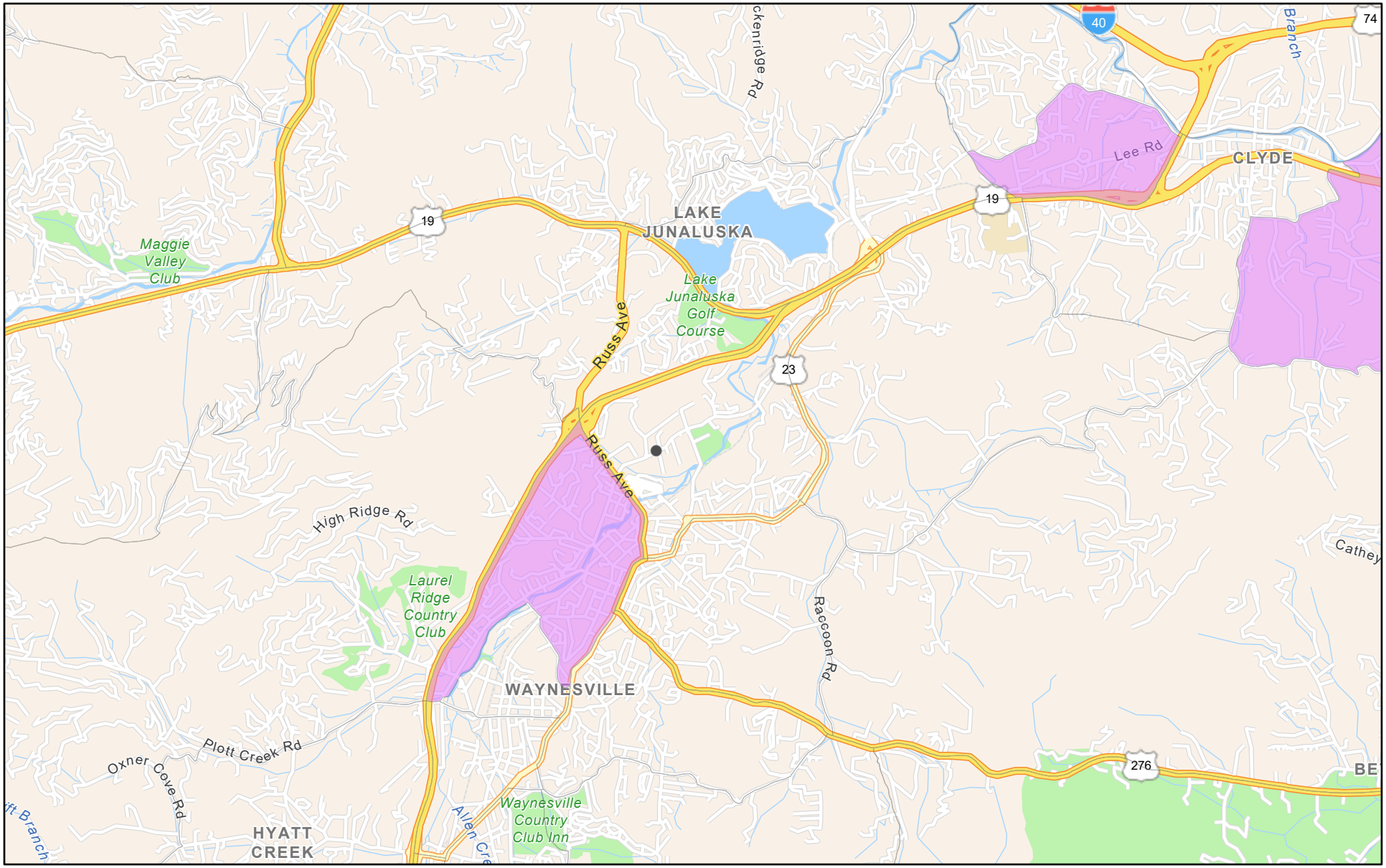
Balsam Edge



# ATTACHMENT 17:

# Environmental Justice

# NC DEQ Potentially Underserved Block Groups 2019




1/27/2025, 9:23:44 AM

1:72,224

0 0.5 1 2 mi

0 0.75 1.5 3 km

NC DEQ's Potentially Underserved Block Groups 2019 - 2019CombinedShapefile

Not Potentially Underserved

County Only

State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

NC Division of Waste Management

State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS | Copyright:© 2013 National Geographic Society, i-cubed | NCDOT GIS Unit | This dataset was transformed by the Project Team

# Appendix P

# Environmental Justice

# EJScreen Report (Version 2.1)

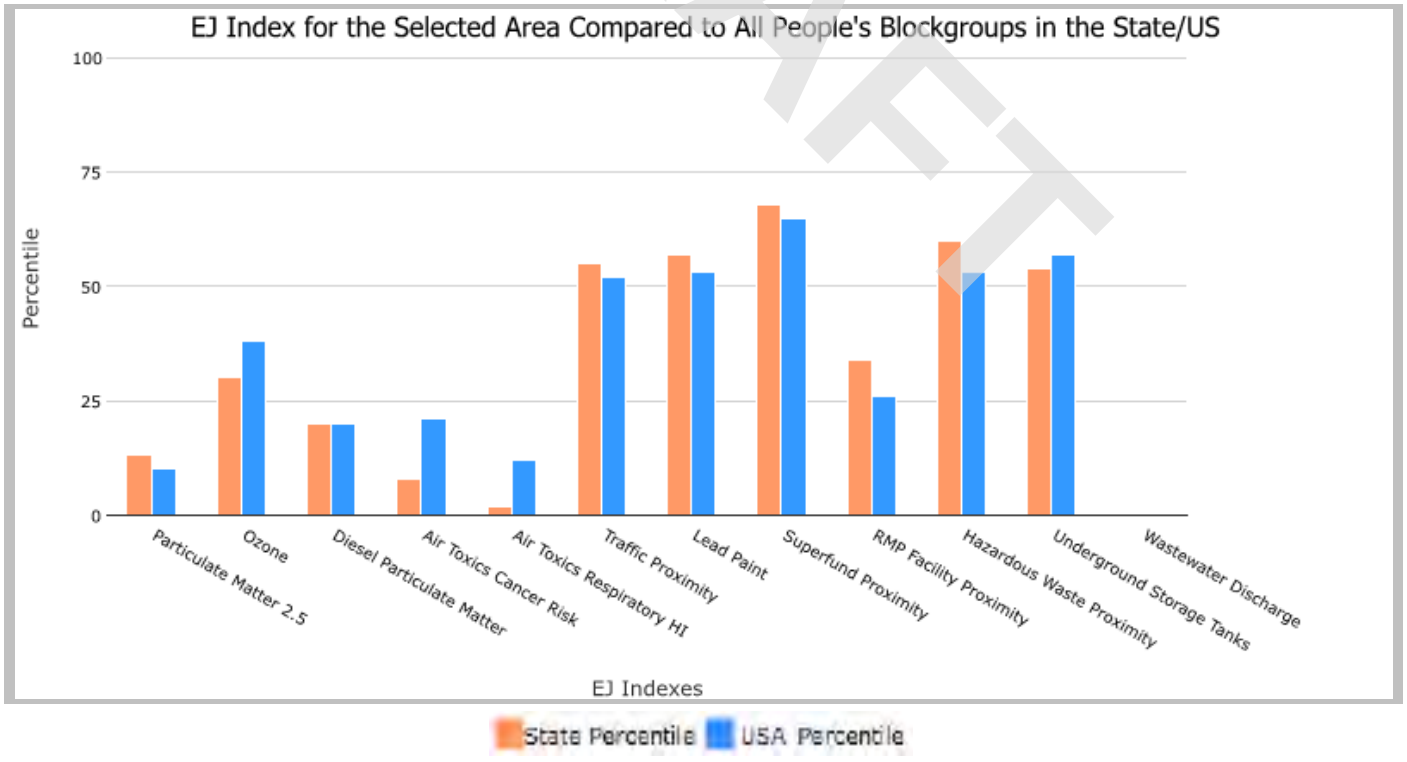
**1 mile Ring around the Area, NORTH CAROLINA, EPA Region 4**

**Approximate Population: 2,718**

**Input Area (sq. miles): 3.54**

**Balsam Edge**

| Selected Variables | State Percentile | USA Percentile |
|---|---|---|
| **Environmental Justice Indexes** | | |
| EJ Index for Particulate Matter 2.5 | 13 | 10 |
| EJ Index for Ozone | 30 | 38 |
| EJ Index for Diesel Particulate Matter* | 20 | 20 |
| EJ Index for Air Toxics Cancer Risk* | 8 | 21 |
| EJ Index for Air Toxics Respiratory HI* | 2 | 12 |
| EJ Index for Traffic Proximity | 55 | 52 |
| EJ Index for Lead Paint | 57 | 53 |
| EJ Index for Superfund Proximity | 68 | 65 |
| EJ Index for RMP Facility Proximity | 34 | 26 |
| EJ Index for Hazardous Waste Proximity | 60 | 53 |
| EJ Index for Underground Storage Tanks | 54 | 57 |
| EJ Index for Wastewater Discharge | 0 | 0 |




DRAFT

This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

# EJScreen Report (Version 2.1)

**1 mile Ring around the Area, NORTH CAROLINA, EPA Region 4**

**Approximate Population: 2,718**

**Input Area (sq. miles): 3.54**

**Balsam Edge**

| Sites reporting to EPA | |
|---|---|
| Superfund NPL | 0 |
| Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF) | 2 |

# EJScreen Report (Version 2.1)

**1 mile Ring around the Area, NORTH CAROLINA, EPA Region 4**

**Approximate Population: 2,718**

**Input Area (sq. miles): 3.54**

**Balsam Edge**

| Selected Variables | Value | State Avg. | %ile in State | USA Avg. | %ile in USA |
|---|---|---|---|---|---|
| **Pollution and Sources** | | | | | |
| Particulate Matter 2.5 (µg/m$^3$) | 6.5 | 7.67 | 14 | 8.67 | 8 |
| Ozone (ppb) | 41 | 41.5 | 38 | 42.5 | 38 |
| Diesel Particulate Matter* (µg/m$^3$) | 0.102 | 0.178 | 19 | 0.294 | <50th |
| Air Toxics Cancer Risk* (lifetime risk per million) | 20 | 28 | 21 | 28 | <50th |
| Air Toxics Respiratory HI* | 0.2 | 0.36 | 3 | 0.36 | <50th |
| Traffic Proximity (daily traffic count/distance to road) | 570 | 400 | 80 | 760 | 70 |
| Lead Paint (% Pre-1960 Housing) | 0.38 | 0.15 | 85 | 0.27 | 64 |
| Superfund Proximity (site count/km distance) | 0.37 | 0.08 | 97 | 0.13 | 93 |
| RMP Facility Proximity (facility count/km distance) | 0.13 | 0.41 | 35 | 0.77 | 22 |
| Hazardous Waste Proximity (facility count/km distance) | 1.7 | 0.83 | 85 | 2.2 | 67 |
| Underground Storage Tanks (count/km$^2$) | 4.7 | 3.9 | 75 | 3.9 | 76 |
| Wastewater Discharge (toxicity-weighted concentration/m distance) | 0 | 0.28 | 0 | 12 | 0 |
| **Socioeconomic Indicators** | | | | | |
| Demographic Index | 20% | 35% | 28 | 35% | 33 |
| People of Color | 11% | 37% | 20 | 40% | 25 |
| Low Income | 30% | 33% | 45 | 30% | 55 |
| Unemployment Rate | 3% | 5% | 41 | 5% | 41 |
| Limited English Speaking Households | 1% | 2% | 68 | 5% | 57 |
| Less Than High School Education | 14% | 11% | 64 | 12% | 68 |
| Under Age 5 | 5% | 6% | 55 | 6% | 53 |
| Over Age 64 | 28% | 16% | 85 | 16% | 86 |

DRAFT

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

For additional information, see: www.epa.gov/environmentaljustice

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

# EJSCREEN ACS Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Balsam Edge

| Summary of ACS Estimates | 2016 - 2020 |
|---|---|
| Population | 2,718 |
| Population Density (per sq. mile) | 711 |
| People of Color Population | 289 |
| % People of Color Population | 11% |
| Households | 1,201 |
| Housing Units | 1,386 |
| Housing Units Built Before 1950 | 311 |
| Per Capita Income | 31,236 |
| Land Area (sq. miles) (Source: SF1) | 3.82 |
| % Land Area | 100% |
| Water Area (sq. miles) (Source: SF1) | 0.01 |
| % Water Area | 0% |

| | 2016 - 2020 ACS Estimates | Percent | MOE (±) |
|---|---|---|---|
| **Population by Race** | | | |
| Total | 2,718 | 100% | 419 |
| Population Reporting One Race | 2,686 | 99% | 843 |
| White | 2,528 | 93% | 411 |
| Black | 48 | 2% | 139 |
| American Indian | 17 | 1% | 58 |
| Asian | 29 | 1% | 56 |
| Pacific Islander | 0 | 0% | 13 |
| Some Other Race | 65 | 2% | 166 |
| Population Reporting Two or More Races | 31 | 1% | 73 |
| Total Hispanic Population | 174 | 6% | 197 |
| Total Non-Hispanic Population | 2,544 | | |
| White Alone | 2,429 | 89% | 411 |
| Black Alone | 48 | 2% | 139 |
| American Indian Alone | 13 | 0% | 58 |
| Non-Hispanic Asian Alone | 29 | 1% | 56 |
| Pacific Islander Alone | 0 | 0% | 13 |
| Other Race Alone | 1 | 0% | 15 |
| Two or More Races Alone | 25 | 1% | 73 |
| **Population by Sex** | | | |
| Male | 1,354 | 50% | 216 |
| Female | 1,364 | 50% | 232 |
| **Population by Age** | | | |
| Age 0-4 | 144 | 5% | 126 |
| Age 0-17 | 375 | 14% | 171 |
| Age 18+ | 2,342 | 86% | 292 |
| Age 65+ | 763 | 28% | 129 |

DRAFT

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020 .

# EJSCREEN ACS Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Balsam Edge

| | 2016 - 2020 ACS Estimates | Percent | MOE (±) |
|---|---|---|---|
| **Population 25+ by Educational Attainment** | | | |
| Total | 2,052 | 100% | 264 |
| Less than 9th Grade | 84 | 4% | 61 |
| 9th - 12th Grade, No Diploma | 204 | 10% | 104 |
| High School Graduate | 532 | 26% | 116 |
| Some College, No Degree | 499 | 24% | 140 |
| Associate Degree | 232 | 11% | 104 |
| Bachelor's Degree or more | 501 | 24% | 204 |
| **Population Age 5+ Years by Ability to Speak English** | | | |
| Total | 2,574 | 100% | 412 |
| Speak only English | 2,432 | 94% | 331 |
| Non-English at Home[1+2+3+4] | 142 | 6% | 112 |
| [1]Speak English "very well" | 99 | 4% | 93 |
| [2]Speak English "well" | 23 | 1% | 45 |
| [3]Speak English "not well" | 18 | 1% | 52 |
| [4]Speak English "not at all" | 2 | 0% | 14 |
| [3+4]Speak English "less than well" | 20 | 1% | 52 |
| [2+3+4]Speak English "less than very well" | 43 | 2% | 59 |
| **Linguistically Isolated Households*** | | | |
| Total | 9 | 100% | 24 |
| Speak Spanish | 0 | 0% | 13 |
| Speak Other Indo-European Languages | 5 | 56% | 20 |
| Speak Asian-Pacific Island Languages | 4 | 44% | 16 |
| Speak Other Languages | 0 | 0% | 13 |
| **Households by Household Income** | | | |
| Household Income Base | 1,201 | 100% | 135 |
| < $15,000 | 99 | 8% | 68 |
| $15,000 - $25,000 | 165 | 14% | 98 |
| $25,000 - $50,000 | 357 | 30% | 95 |
| $50,000 - $75,000 | 303 | 25% | 95 |
| $75,000 + | 277 | 23% | 107 |
| **Occupied Housing Units by Tenure** | | | |
| Total | 1,201 | 100% | 135 |
| Owner Occupied | 823 | 69% | 135 |
| Renter Occupied | 378 | 31% | 102 |
| **Employed Population Age 16+ Years** | | | |
| Total | 2,378 | 100% | 311 |
| In Labor Force | 1,282 | 54% | 265 |
| Civilian Unemployed in Labor Force | 36 | 1% | 31 |
| Not In Labor Force | 1,096 | 46% | 198 |

DRAFT

**Data Note:** Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

# EJSCREEN ACS Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Balsam Edge

| | 2016 - 2020 ACS Estimates | Percent | MOE (±) |
|---|---|---|---|
| **Population by Language Spoken at Home*** | | | |
| Total (persons age 5 and above) | 2,491 | 100% | 368 |
| English | 2,326 | 93% | 369 |
| Spanish | 105 | 4% | 117 |
| French, Haitian, or Cajun | 4 | 0% | 57 |
| German or other West Germanic | 9 | 0% | 14 |
| Russian, Polish, or Other Slavic | 0 | 0% | 13 |
| Other Indo-European | 27 | 1% | 57 |
| Korean | 0 | 0% | 13 |
| Chinese (including Mandarin, Cantonese) | 1 | 0% | 13 |
| Vietnamese | 0 | 0% | 13 |
| Tagalog (including Filipino) | 0 | 0% | 13 |
| Other Asian and Pacific Island | 9 | 0% | 21 |
| Arabic | 0 | 0% | 13 |
| Other and Unspecified | 11 | 0% | 15 |
| Total Non-English | 165 | 7% | 521 |

DRAFT

**Data Note:** Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.

# EJSCREEN Census 2010 Summary Report

Location: User-specified polygonal location
Ring (buffer): 1-miles radius
Description: Balsam Edge

| Summary | Census 2010 |
|---|---|
| Population | 3,165 |
| Population Density (per sq. mile) | 833 |
| People of Color Population | 346 |
| % People of Color Population | 11% |
| Households | 1,311 |
| Housing Units | 1,591 |
| Land Area (sq. miles) | 3.80 |
| % Land Area | 100% |
| Water Area (sq. miles) | 0.00 |
| % Water Area | 0% |

| Population by Race | Number | Percent |
|---|---|---|
| Total | 3,165 | ------- |
| Population Reporting One Race | 3,128 | 99% |
| White | 2,908 | 92% |
| Black | 73 | 2% |
| American Indian | 19 | 1% |
| Asian | 12 | 0% |
| Pacific Islander | 2 | 0% |
| Some Other Race | 114 | 4% |
| Population Reporting Two or More Races | 37 | 1% |
| Total Hispanic Population | 210 | 7% |
| Total Non-Hispanic Population | 2,955 | 93% |
| White Alone | 2,819 | 89% |
| Black Alone | 73 | 2% |
| American Indian Alone | 19 | 1% |
| Non-Hispanic Asian Alone | 12 | 0% |
| Pacific Islander Alone | 2 | 0% |
| Other Race Alone | 1 | 0% |
| Two or More Races Alone | 30 | 1% |

| Population by Sex | Number | Percent |
|---|---|---|
| Male | 1,472 | 46% |
| Female | 1,693 | 54% |

| Population by Age | Number | Percent |
|---|---|---|
| Age 0-4 | 160 | 5% |
| Age 0-17 | 548 | 17% |
| Age 18+ | 2,617 | 83% |
| Age 65+ | 735 | 23% |

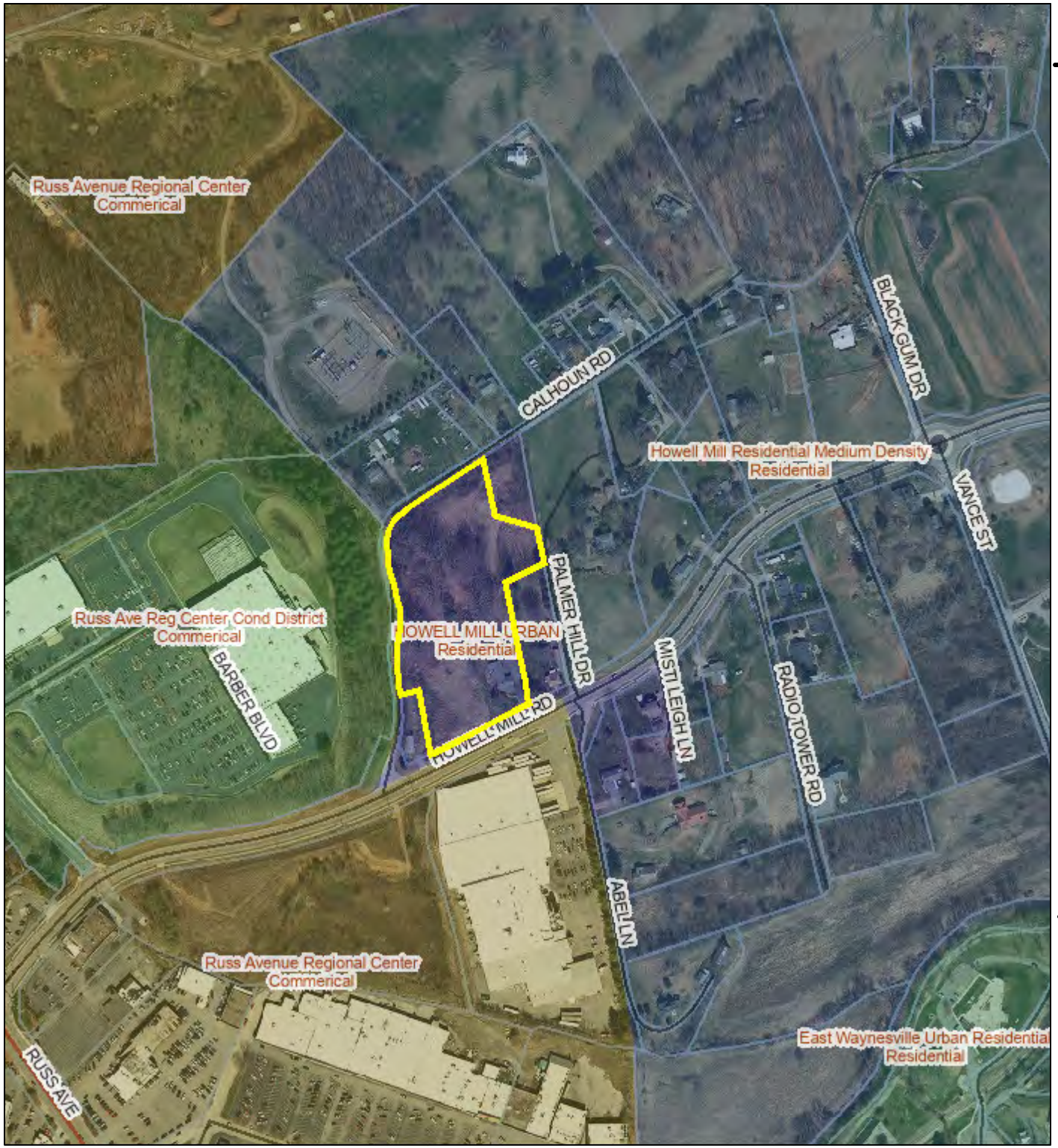
| Households by Tenure | Number | Percent |
|---|---|---|
| Total | 1,311 | |
| Owner Occupied | 784 | 60% |
| Renter Occupied | 527 | 40% |

**Data Note:** Detail may not sum to totals due to rounding. Hispanic population can be of any race.
**Source:** U.S. Census Bureau, Census 2010 Summary File 1.

DRAFT

# ATTACHMENT 18:

# Zoning




# Report For

MOUNTAIN HOUSING OPPORTUNITIES INC A I
64 CLINGMAN AVE UNIT 101
ASHEVILLE, NC 28801-3328

## Account Information

**PIN:** 8616-42-5414

**Deed:** 1050/24

1084/2370
CABD/2169

## Site Information

DWELLING

333 HOWELL MILL RD

| | |
|---|---|
| **Heated Area:** | 1880 |
| **Year Built:** | 1950 |
| **Total Acreage:** | 5.31 |
| **Township:** | Waynesville Out |

## Site Value Information

| | |
|---|---|
| **Land Value:** | $49,700 |
| **Building Value:** | $204,200 |
| **Market Value:** | $253,900 |
| **Defered Value:** | $0 |
| **Assessed Value:** | $253,900 |
| **Sale Price:** | $965,000 |
| **Sale Date:** | 12/06/2021 |
| **Tax Bill 1:** | $1,555 |
| **Tax Bill 2:** | |

1 inch = 400 feet
January 27, 2025

Disclaimer: The maps on this site are not surveys. They are prepared from the inventory of real property found within this jurisdiction and are compiled from recorded deeds, plats and other public records and data. Users of this site are hereby notified that the aforementioned public primary information sources should be consulted for verification of any information contained on these maps. Haywood county and the website provider assume no legal responsibility for the information contained on these maps.

ECS SOUTHEAST, LLP
"Setting the Standard for Service"
Geotechnical • Construction Materials • Environmental • Facilities
NC Registered Engineering Firm F-1078
NC Registered Geologists Firm C-553
SC Registered Engineering Firm 3239

# ZONING CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

The above project site is zoned HM-UR and permits [✓] or does not permit [ ] the proposed use; or, zoning is not present, and the proposed use has [✓] has not [ ] been approved for the site.

Additional Comments/Conditions/Concerns See Attached

12-1-2022
Date

(Officials Signature)

ELIZABETH TEAGUE
(Officials Name – Print or Type)

DEVELOPMENT SERVICES DIRECTOR
(Official's Title)

DEVELOPMENT SERVICES DEPT.
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

DRAFT

# TOWN OF WAYNESVILLE

Development Services Department
PO Box 100
9 South Main Street
Waynesville, NC 28786
Phone (828) 456-8647 • Fax (828) 452-1492
www.waynesvillenc.gov


December 1, 2022

Adeline Wolfe
Project Manager and Real Estate Developer
Mountain Housing Opportunities
64 Clingman Avenue, Suite 101
Asheville, NC 28801

**Re: Balsam Edge Project Zoning Certification**
**PIN: 8616-42-5402**
**271 Howell Mill Road, Waynesville NC 28786**

DRAFT

Dear Ms. Wolfe,

This property is zoned Howell Mill Urban Residential (HM-UR) in which multi-family is a permitted use. The Town of Waynesville approved the development and site plan submitted by Mountain Housing Opportunities at a public hearing before the Planning Board on March 15, 2021. A minor revision to the site plan was approved administratively on April 28th, 2021, to accommodate HUD requirements for ADA compliance and to decrease the impervious surface area of a portion of the parking lot.

In accordance with the Town of Waynesville Land Development Standards, Section 15.2.3, this zoning permit was initially valid for a period of two years (until March 15, 2023), and has been granted an extension for up to 3 additional years (until March 15, 2026) to accommodate the experienced delay in securing funding through the NC Low Income Housing Tax Credit Program.

Please contact me if you have any questions, need clarification on these items, or if I may be of assistance to you in the future.

Sincerely,

Elizabeth Teague, AICP, CTP
Development Services Director

Cc: ECS Southeast, LLP

# ATTACHMENT 19:

# Soil Suitability/ Slope/ Erosion/ Drainage/ Stormwater Runoff

USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

Contact Us | Subscribe | Archived Soil Surveys | Soil Survey Status | Glossary | Preferences | Link | Logout | Help

A | A | A

Area of Interest (AOI) | Soil Map | Soil Data Explorer | Download Soils Data | Shopping Cart (Free)

View Soil Information By Use: All Uses

Printable Version | Add to Shopping Cart

Intro to Soils | Suitabilities and Limitations for Use | Soil Properties and Qualities | Ecological Sites | Soil Reports

Search

Properties and Qualities Ratings

Open All | Close All

Soil Chemical Properties

**Soil Erosion Factors**

K Factor, Rock Free

K Factor, Whole Soil

View Description | View Rating

**View Options**

Map ☑

Table ☑

Description of Rating ☑

Rating Options ☑

Detailed Description ☐

**Advanced Options**

Aggregation Method: Dominant Condition

Component Percent Cutoff:

Tie-break Rule: ○ Lower ◉ Higher

Layer Options (Horizon Aggregation Method):
◉ Surface Layer (Not applicable)
○ Depth Range (Weighted Average)
Top Depth:
Bottom Depth:
○ Inches
○ Centimeters
○ All Layers (Weighted Average)

View Description | View Rating

T Factor

Wind Erodibility Group

Wind Erodibility Index

Soil Health Properties

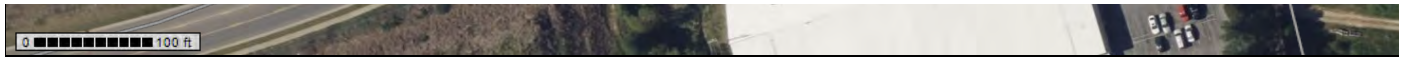
Soil Physical Properties

Soil Qualities and Features

Map — K Factor, Whole Soil

Scale (not to scale)

Water Features




*Warning: Soil Ratings Map may not be valid at this scale.*

Tables — K Factor, Whole Soil — Summary By Map Unit

**Summary by Map Unit — Haywood County Area, North Carolina (NC606)**

| Summary by Map Unit — Haywood County Area, North Carolina (NC606) | | | | |
|---|---|---|---|---|
| **Map unit symbol** | **Map unit name** | **Rating** | **Acres in AOI** | **Percent of AOI** |
| DsB | Dillsboro loam, 2 to 8 percent slopes | .24 | 2.8 | 53.1% |
| DsC | Dillsboro loam, 8 to 15 percent slopes | .24 | 0.1 | 2.5% |
| EvD | Evard-Cowee complex, 15 to 30 percent slopes | .10 | 2.3 | 44.5% |
| **Totals for Area of Interest** | | | **5.3** | **100.0%** |

Description — K Factor, Whole Soil

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

"Erosion factor Kw (whole soil)" indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Factor K does not apply to organic horizons and is not reported for those layers.

Rating Options — K Factor, Whole Soil

**Aggregation Method:** Dominant Condition

**Component Percent Cutoff:** *None Specified*

**Tie-break Rule:** Higher

**Layer Options (Horizon Aggregation Method):** Surface Layer (Not applicable)

DRAFT

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USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

Contact Us | Subscribe | Archived Soil Surveys | Soil Survey Status | Glossary | Preferences | Link | Logout | Help

A | A | A

Area of Interest (AOI) | Soil Map | Soil Data Explorer | Download Soils Data | Shopping Cart (Free)

View Soil Information By Use: All Uses

Printable Version | Add to Shopping Cart

Intro to Soils | Suitabilities and Limitations for Use | Soil Properties and Qualities | Ecological Sites | Soil Reports

Search

Suitabilities and Limitations Ratings

Open All | Close All

**Building Site Development**

- Corrosion of Concrete
- Corrosion of Steel
- Dwellings With Basements

View Description | View Rating

**View Options**

Map ☑

Table ☑

☑ Component Breakdown and Rating Reasons

☑ Numeric Values

Description of Rating ☑

Rating Options ☑

☐ Detailed Description

**Advanced Options**

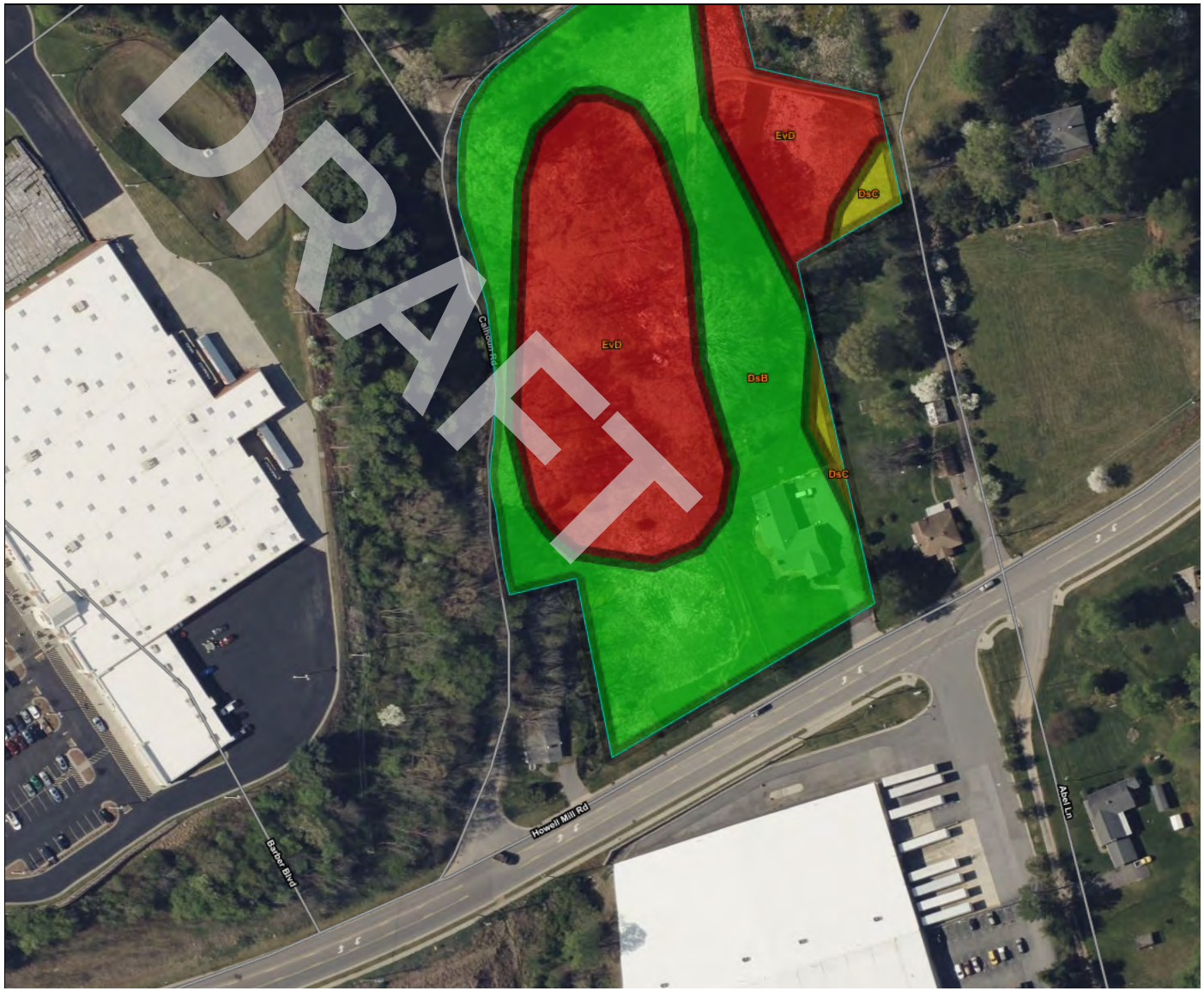
View Description | View Rating

- Dwellings Without Basements
- Lawns, Landscaping, and Golf Fairways
- Local Roads and Streets
- Shallow Excavations
- Small Commercial Buildings
- Solar Arrays, Ballast Anchor Systems
- Solar Arrays, Soil-based Anchor Systems
- Unpaved Local Roads and Streets

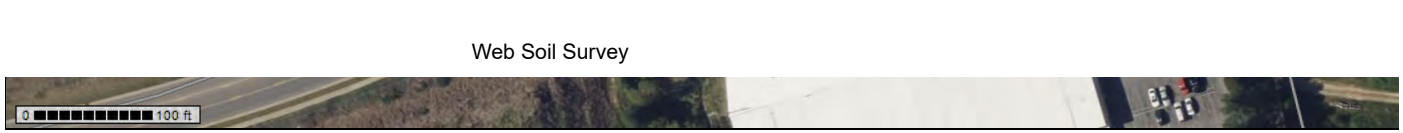
Construction Materials
Disaster Recovery Planning
Land Classifications
Land Management
Military Operations
Recreational Development
Sanitary Facilities

Map — Dwellings With Basements

Scale (not to scale)



| |
|---|
| Soil Health |
| Vegetative Productivity |
| Waste Management |
| Water Management |




*Warning: Soil Ratings Map may not be valid at this scale.*

Tables — Dwellings With Basements — Summary By Map Unit

**Summary by Map Unit — Haywood County Area, North Carolina (NC606)**

Summary by Map Unit — Haywood County Area, North Carolina (NC606)

| Map unit symbol | Map unit name | Rating | Component name (percent) | Rating reasons (numeric values) | Acres in AOI | Percent of AOI |
|---|---|---|---|---|---|---|
| DsB | Dillsboro loam, 2 to 8 percent slopes | Not limited | Dillsboro (85%) | | 2.8 | 53.1% |
| DsC | Dillsboro loam, 8 to 15 percent slopes | Somewhat limited | Dillsboro (85%) | Slope (0.63) | 0.1 | 2.5% |
| EvD | Evard-Cowee complex, 15 to 30 percent slopes | Very limited | Evard (50%) | Slope (1.00) | 2.3 | 44.5% |
| | | | Cowee (30%) | Slope (1.00) | | |
| | | | | Depth to soft bedrock (0.74) | | |
| **Totals for Area of Interest** | | | | | **5.3** | **100.0%** |

Table — Dwellings With Basements — Summary by Rating Value

**Summary by Rating Value**

Summary by Rating Value

| Rating | Acres in AOI | Percent of AOI |
|---|---|---|
| Very limited | 2.3 | 44.5% |
| Not limited | 2.8 | 53.1% |
| Somewhat limited | 0.1 | 2.5% |
| **Totals for Area of Interest** | **5.3** | **100.0%** |

Description — Dwellings With Basements

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

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Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

**Rating Options — Dwellings With Basements**

**Aggregation Method:** Dominant Condition

**Component Percent Cutoff:** *None Specified*

**Tie-break Rule:** Higher

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# ATTACHMENT 20:

# Educational and Cultural Facilities

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NC Registered Engineering Firm F-1078
NC Registered Geologists Firm C-553
SC Registered Engineering Firm 3239

# PUBLIC EDUCATION CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

The above project, which is located in the Haywood County school district(s), will [ ] will not [X] adversely affect the schools serving this project. Furthermore, schools located in this district are [ ] are not [X] considered high risk or poor performing schools per state or federal performance standards.

The schools that will serve project are: Junaluska Elementary, Waynesville Middle School, and Tuscola High School

Additional Comments/Conditions/Concerns

1/4/23
Date

(Officials Signature)

Graham Haynes
(Officials Name – Print or Type)

Assistant Superintendent
(Official's Title)

Haywood County Schools
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

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# ATTACHMENT 21:

# Commercial Facilities

Google Maps

# 333 Howell Mill Rd

Commercial Facilities Map

Imagery ©2023 CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2023 Google 200 ft

# ATTACHMENT 22:

# Health Care and Social Services

# HEALTH SERVICES CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Adequate and appropriate Health Services are [X] are not [ ] available for this project
Furthermore, available Health Services will [ ] will not [X] be adversely affected by this project.

Health Service/Provider organizations that may serve the project are: Haywood Regional Medical Center, Haywood County EMS, Haywood County Health and Human Services Agency, Mercy Urgent Care, HRMC Urgent Care (canton), HRMC Urgent Care (hazelwood), and various primary care providers in the area.

Additional Comments/Conditions/Concerns

11/18/2022
Date

(Officials Signature)

Sarah Henderson
(Officials Name – Print or Type)

Public Health Services Division Director
(Official's Title)

Haywood County Health and Human Services Agency
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

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# ATTACHMENT 23:

# Solid Waste Disposal/ Recycling

**ECS SOUTHEAST, LLP** *"Setting the Standard for Service"*

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NC Registered Engineering Firm F-1078
NC Registered Geologists Firm C-553
SC Registered Engineering Firm 3239

# SOLID WASTE REMOVAL CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Solid Waste disposal for the above project can be adequately handled by public [✓] or private collectors [✓] without adversely affecting landfill capacity, ; or Solid Waste disposal is limited [ ] due to the unavailability of collectors [ ] or adequate landfill capacity [ ] .

Additional Comments/Conditions/Concerns

3 Jan 2023 — (Date)

(Officials Signature)

Kris Boyd — (Officials Name – Print or Type)

Asst County Manager — (Official's Title)

Haywood County — (Department Name)

Note: Copying official letterhead onto this certification is encouraged.

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# ATTACHMENT 24:

# Waste Water/ Sanitary Sewers and Water Supply

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NC Registered Engineering Firm F-1078
NC Registered Geologists Firm C-553
SC Registered Engineering Firm 3239

# PUBLIC SEWER CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Public Sewer is available and adequate [✓] or is not available [ ] to serve the above project. The closest tap is a 8 inch line located about 1,135 feet off-site. This line is approximately 3 feet deep. This will be a gravity flow system [ ] ; a lift station will be required [ ] or will not be required [ ]
Location of line: The line/connection point is at the southern most end of Abel Lane.

Additional Comments/Conditions/Concerns

1/30/2023
Date

(Officials Signature)

Jeffrey Stines
(Officials Name – Print or Type)

Director of Public Services
(Official's Title)

Public Services
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

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NC Registered Geologists Firm C-553
SC Registered Engineering Firm 3239

# PUBLIC WATER CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Public Water is available and adequate [✓] or is not available [ ] to serve the above project. The closest tap is a 10 inch line located about _____ feet off-site.
Location of line: Located adjacent to said property on-site

Additional Comments/Conditions/Concerns

1/30/2023
Date

(Officials Signature)

Jeffrey Stines
(Officials Name – Print or Type)

Director of Public Services
(Official's Title)

Public Services
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

DRAFT

# ATTACHMENT 25:

# Public Safety – Police, Fire and Emergency Medical

## Thomas S Hawkins, PWS

**From:** Zach Windham
**Sent:** Tuesday, January 3, 2023 10:46 AM
**To:** gchristopher@haywoodnc.net
**Cc:** Thomas S Hawkins, PWS
**Subject:** RE: Law Enforcement Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Good morning and Happy New Year,

I wanted to follow up on my previous email to see if you were able to review the attached Certification Letter for the proposed HUD project. Please let me know if you have any questions.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Friday, November 11, 2022 4:40 PM
**To:** gchristopher@haywoodnc.net
**Cc:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Subject:** Law Enforcement Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Good afternoon Greg,

We're assisting with a proposed multi-family housing and urban development (HUD) project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. This inquiry is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Could you please complete the attached certification letter regarding the availability of Law Enforcement Services at the subject property? I've attached a KMZ of the project site boundary and a PDF map depicting the project site. Please let me know if any additional information is needed, and if I should forward this request elsewhere, please provide the contact information for the appropriate parties.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**T** 864.987.1610 | **D** 864.987.1818 | **C** 404.985.9014
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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## Thomas S Hawkins, PWS

**From:** Thomas S Hawkins, PWS
**Sent:** Wednesday, February 22, 2023 10:47 AM
**To:** gina.zachary@haywoodcountync.gov
**Cc:** Zach Windham
**Subject:** Law Enforcement Services - HUD Request
**Attachments:** 49-18762 - Law Enforcement - Certification Letter.pdf

Hi Gina,

I just left a voicemail but wanted to follow up via email. We're working on a HUD project for a proposed multi-family development located at 333 Howell Mill Road in Waynesville, NC. We're hoping to receive confirmation that the county sheriff's office would provide law enforcement services for the property, and if so, what their average response time would be. We previously reached out to Greg Christopher but did not receive a response. I've attached a certification letter here, or if easier, you could respond to my email here or give me a call at (864) 350-2414.

Thank you,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP**
**T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
1200 Woodruff Road, Suite H-12, Greenville, SC 29607
THawkins@ecslimited.com | www.ecslimited.com

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## Zach Windham

**From:** Zach Windham
**Sent:** Wednesday, January 18, 2023 11:10 AM
**To:** Elizabeth Teague
**Cc:** Thomas S Hawkins, PWS; bhickox@waynesvillenc.gov
**Subject:** HUD Certification Letters - Balsam Edge Apartments - Waynesville, Haywood County, NC
**Attachments:** 49-18762 - Law Enforcement - Certification Letter.pdf; 49-18762 - Public Water - Certification Letter.pdf; 49-18762 - Public Sewer - Certification Letter.pdf; 49-18762 - Recreational Services - Certification Letter.pdf; Balsam Edge Apartments Location.kmz; Balsam Edge Apartments - Figures 1-3.pdf

**IsAddInActive:** True
**IsSaveAttachmentsChecked:** False
**IsSaveConversationChecked:** False
**SelectedOfficeNum:** -1
**TargetType:** Project

DRAFT

Good morning Elizabeth,

We're assisting with a proposed multi-family housing and urban development (HUD) project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. I have been trying to contact Sheriff Greg Christopher regarding Law Enforcement Services, Kyle Cook and Wayne Bolin regarding Public Water & Sewer Services, and Ian Smith regarding Recreational Services. These inquiries are necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. I've attached the certification letters that need to be completed, as well as the KMZ of the project site boundary and a PDF map depicting the project site. Could you please direct me to the appropriate departments that can complete the attached certification letters? Please let me know if you have any questions.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP**
**T** 864.987.1610 **D** 864.987.1818
1200 Woodruff Road, Suite H-12, Greenville, SC 29607
ZWindham@ecslimited.com | www.ecslimited.com

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# FIRE PROTECTION CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Fire Protection is available and adequate ☑ for the project as the average response time of 4 minutes falls within the average community response time of four minutes; or adequate Fire Protection is not available ☐ for the project. Furthermore, available Fire Protection will ☐ will not ☑ be adversely affected by the project.

Additional Comments/Conditions/Concerns

11-14-2022 Darrell R Calhoun
Date (Officials Signature)

Darrell R Calhoun
(Officials Name – Print or Type)

Fire Marshal
(Official's Title)

Waynesville Fire Department
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

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# EMERGENCY MEDICAL SERVICE CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Emergency Medical Service is available and adequate [✓] for the project as the average response time of 9 min minutes falls within the average community response time of 9:30 minutes; or adequate Emergency Medical Service is not available [ ] for the project. Furthermore, available Emergency Medical Service will [✓] will not [ ] be adversely affected by the project.

Additional Comments/Conditions/Concerns

11/14/22
Date

(Officials Signature)

Travis Donaldson
(Officials Name – Print or Type)

Director
(Official's Title)

Haywood County Emergency Services
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

DRAFT

## Thomas S Hawkins, PWS

**From:** Travis Donaldson <Travis.Donaldson@haywoodcountync.gov>
**Sent:** Tuesday, February 14, 2023 4:35 PM
**To:** Thomas S Hawkins, PWS
**Cc:** Zach Windham
**Subject:** [EXTERNAL] RE: Emergency Medical Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Thomas,
On the form I selected that we would not be adversely affected.

*Travis Donaldson*
Director
Haywood County Emergency Services
828-452-4770

DRAFT

**From:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Sent:** Tuesday, February 14, 2023 4:31 PM
**To:** Travis Donaldson <Travis.Donaldson@haywoodcountync.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** FW: Emergency Medical Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Hi Travis,

We're nearing the finish line for this project but I just noticed that the document you sent back to us had the box checked that emergency medical service **would** be adversely affected by the project. The way these are formatted, the checkboxes are pretty close together. Could you clarify if that was the answer you meant to select? If so, are there any measures that could be implemented in the development to reduce any impacts to emergency medical services?

Let me know if it's easier to discuss on the phone. My cell is 864-350-2414.

Thank you,

**THOMAS S HAWKINS, PWS** | Environmental Project Manager
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1815 **C** 864.350.2414
THawkins@ecslimited.com | www.ecslimited.com

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Tuesday, February 14, 2023 4:28 PM
**To:** Thomas S Hawkins, PWS <THawkins@ecslimited.com>
**Subject:** FW: Emergency Medical Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

**ZACH WINDHAM** | Environmental Scientist

**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

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**From:** Travis Donaldson <Travis.Donaldson@haywoodcountync.gov>
**Sent:** Monday, November 14, 2022 11:09 AM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Cc:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Subject:** [EXTERNAL] RE: Emergency Medical Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Please see the attached and let me know if you need anything further.

*Travis Donaldson*
Director
Haywood County Emergency Services
828-452-4770

DRAFT

**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Friday, November 11, 2022 4:32 PM
**To:** Travis Donaldson <Travis.Donaldson@haywoodcountync.gov>
**Cc:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Subject:** Emergency Medical Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Good afternoon Travis,

We're assisting with a proposed multi-family housing and urban development (HUD) project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. This inquiry is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Could you please complete the attached certification letter regarding the availability of Emergency Medical Services at the subject property? I've attached a KMZ of the project site boundary and a PDF map depicting the project site. Please let me know if any additional information is needed, and if I should forward this request elsewhere, please provide the contact information for the appropriate parties.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**T** 864.987.1610 | **D** 864.987.1818 | **C** 404.985.9014
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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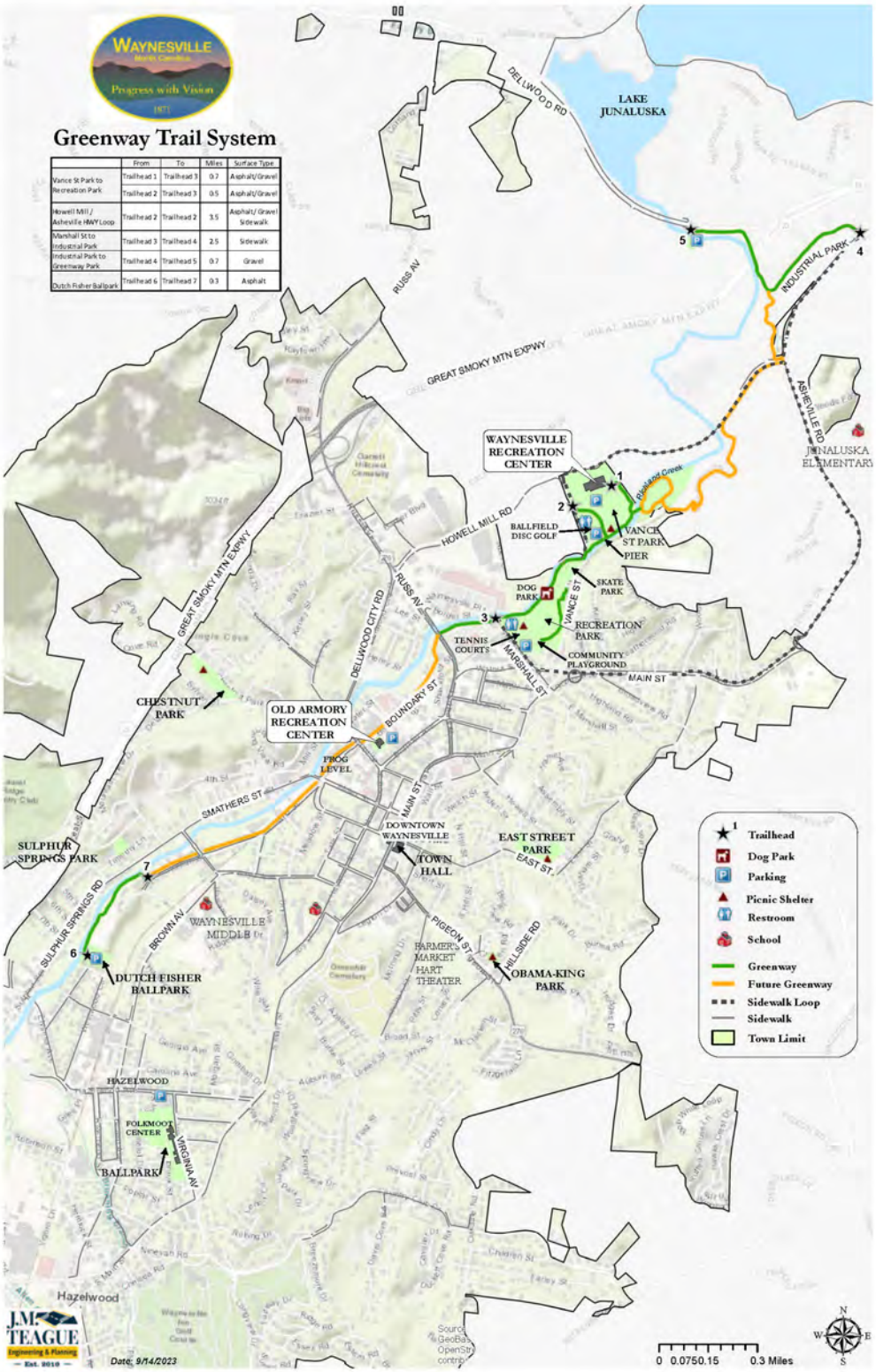
# ATTACHMENT 26:

# Parks, Open Space and Recreation

# Balsam Edge – Waynesville Parks Map




https://www.waynesvillenc.gov/departments/parks-recreation/parks-map

Google Maps

# 333 Howell Mill Rd

Parks, Open Spaces, and Recreation Map

Imagery ©2023 CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2023 Google 200 ft

## Thomas S Hawkins, PWS

**From:** Zach Windham
**Sent:** Tuesday, January 3, 2023 10:50 AM
**To:** ian.smith@haywoodcountync.gov
**Cc:** Thomas S Hawkins, PWS
**Subject:** RE: Recreational Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Good morning and Happy New Year,

I wanted to follow up on my previous email to see if you were able to review the attached Certification Letter for the proposed HUD project. Please let me know if you have any questions.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Friday, November 11, 2022 4:44 PM
**To:** ian.smith@haywoodcountync.gov
**Cc:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Subject:** Recreational Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Good afternoon Ian,

We're assisting with a proposed multi-family housing and urban development (HUD) project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. This inquiry is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Could you please complete the attached certification letter regarding the availability of Recreational Services at the subject property? I've attached a KMZ of the project site boundary and a PDF map depicting the project site. Please let me know if any additional information is needed, and if I should forward this request elsewhere, please provide the contact information for the appropriate parties.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**T** 864.987.1610 | **D** 864.987.1818 | **C** 404.985.9014
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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DRAFT

# ATTACHMENT 27:

# Transportation and Accessibility

# PUBLIC TRANSPORTATION CERTIFICATION

Project Name: Proposed Balsam Edge Apartments
Project Description: Multi-family Residential Apartments for HUD
Address: 271 Howell Mill Road
Waynesville, Haywood County, North Carolina
Parcel ID: 8616-42-5402
Closest street intersection or landmark: Howell Mill Road & Calhoun Road

Public transportation is [X] or is not available [ ] to serve the above project.
If available, Public transportation includes: bus [X] train [ ] cab [ ] other [ ]

Additional Comments/Conditions/Concerns

1.3.23
Date

(Officials Signature)

S. Simmons
(Officials Name – Print or Type)

Director Haywood Public Trans. IT
(Official's Title)

Mountain Projects Inc.
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

DRAFT

## Zach Windham

**From:** Zach Windham
**Sent:** Monday, January 23, 2023 4:01 PM
**To:** Lee, Christopher D
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

No problem, thanks for the update Chris.

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

*Confidential/proprietary message/attachments. Delete message/attachments if not intended recipient.*

**From:** Lee, Christopher D <cdlee@ncdot.gov>
**Sent:** Monday, January 23, 2023 11:43 AM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Hi Zach,
I met with the civil designer at this site last week to discuss some changes for the driveway permit. Once those are worked out and I can make sure no offsite impacts are created I can get this paperwork back to you. Sorry for the delay.

Thanks,

**Chris Lee, PE**
District Engineer
North Carolina Department of Transportation
Division 14: District II – Haywood, Jackson, & Swain Counties

828 497 7333 office
cdlee@ncdot.gov

178 Henry Bird Rd.
Whittier, NC 28789

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Monday, January 23, 2023 11:24 AM
**To:** Lee, Christopher D <cdlee@ncdot.gov>
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

DRAFT

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Hi Chris,

I wanted to follow up on my previous email to see if you had any information regarding the proposed HUD project.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Tuesday, January 3, 2023 11:22 AM
**To:** Lee, Christopher D <cdlee@ncdot.gov>
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Good morning and Happy New Year,

I wanted to follow up to see if you had any additional information regarding the proposed HUD project.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**ECS SOUTHEAST, LLP** | **T** 864.987.1610 **D** 864.987.1818
ZWindham@ecslimited.com | www.ecslimited.com

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**From:** Lee, Christopher D <cdlee@ncdot.gov>
**Sent:** Monday, December 5, 2022 3:32 PM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Zach,
Thank you for this information. We are evaluating this site for traffic impacts now and will have more information very soon. Thanks for your patience.

Regards,

**Chris Lee, PE**
District Engineer
North Carolina Department of Transportation
Division 14: District II – Haywood, Jackson, & Swain Counties

828 497 7333 office
cdlee@ncdot.gov

178 Henry Bird Rd.

DRAFT

Whittier, NC 28789

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Thursday, November 17, 2022 10:25 AM
**To:** Lee, Christopher D <cdlee@ncdot.gov>
**Cc:** Bishop, Joseph M <jmbishop@ncdot.gov>; Austin, Wanda H <whaustin@ncdot.gov>
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

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Hi Chris,

I have attached the preliminary site plans for the property. The property is proposed to have three multi-family apartment buildings and a community center with 126 parking spaces and 14 handicapped spaces. I am unsure of the anticipated traffic generated, but I can ask the client if that is something you need. Please let me know if you have any questions.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**T** 864.987.1610 | **D** 864.987.1818 | **C** 404.985.9014
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

**ECS SOUTHEAST, LLP**
www.ecslimited.com
**THE NEW ASTM PHASE I STANDARD IS HERE** - Contact us to find out more.

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**From:** Lee, Christopher D <cdlee@ncdot.gov>
**Sent:** Monday, November 14, 2022 12:18 PM
**To:** Zach Windham <ZWindham@ecslimited.com>
**Cc:** Bishop, Joseph M <jmbishop@ncdot.gov>; Austin, Wanda H <whaustin@ncdot.gov>
**Subject:** RE: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Mr. Windham,
I will be glad to assist with this information but I am unfamiliar with the proposed apartment complex. We typically review and issue driveway permits for developments such as this. If you could provide a site plan with the proposed number of dwelling units and anticipated traffic generated then I could provide answers for your review.

Please let me know if you have any questions.

DRAFT

Regards,

**Chris Lee, PE**
District Engineer
North Carolina Department of Transportation
Division 14: District II – Haywood, Jackson, & Swain Counties

828 497 7333 office
cdlee@ncdot.gov

178 Henry Bird Rd.
Whittier, NC 28789

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**From:** Austin, Wanda H <whaustin@ncdot.gov>
**Sent:** Monday, November 14, 2022 10:56 AM
**To:** Lee, Christopher D <cdlee@ncdot.gov>
**Cc:** Zach Windham <ZWindham@ecslimited.com>; Bishop, Joseph M <jmbishop@ncdot.gov>
**Subject:** FW: [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

Chris,
Please complete the attached documentation for the proposed development.

**Wanda H. Austin, PE CPM**
Division 14 Engineer

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**From:** Zach Windham <ZWindham@ecslimited.com>
**Sent:** Friday, November 11, 2022 5:20 PM
**To:** Austin, Wanda H <whaustin@ncdot.gov>; ADCody@gmail.com
**Cc:** Thomas S Hawkins Jr., PWS <THawkins@ecslimited.com>
**Subject:** [External] Transportation Services - Balsam Edge Apartments - Waynesville, Haywood County, NC

DRAFT

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Good afternoon,

We're assisting with a proposed multi-family housing and urban development (HUD) project located at 271 Howell Mill Road in Waynesville, Haywood County, North Carolina that has a parcel identification number of 8616-42-5402. This inquiry is necessary to satisfy HUD Part 58 environmental review requirements for federal funding of the proposed project. Could you please complete the attached certification letter regarding the availability of Transportation Services at the subject property? I've attached a KMZ of the project site boundary and a PDF map depicting the project site. Please let me know if any additional information is needed, and if I should forward this request elsewhere, please provide the contact information for the appropriate parties.

Thank you,

**ZACH WINDHAM** | Environmental Scientist
**T** 864.987.1610 | **D** 864.987.1818 | **C** 404.985.9014
1200 Woodruff Road, Suite H-12 | Greenville | SC | 29607

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DRAFT

# ATTACHMENT 28:

# State Environmental Clearinghouse Comments

# NCORR Submission Adopted EA

## Gievers, Andrea

**From:** Gievers, Andrea
**Sent:** Friday, December 13, 2024 1:59 PM
**To:** State Clearinghouse
**Cc:** Molyneaux, Kadisha
**Subject:** RE: NEPA HUD Part 58 EA NCORR Adoption - Balsam Edge
**Attachments:** NCORR SHPO Balsam Edge Package.pdf

Thank you. I have uploaded and attached a separate SHPO Package to streamline their review. Please let me know if you need anything else.

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

---

**From:** State Clearinghouse <State.Clearinghouse@doa.nc.gov>
**Sent:** Friday, December 13, 2024 1:47 PM
**To:** Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
**Subject:** RE: NEPA HUD Part 58 EA NCORR Adoption - Balsam Edge

The N.C. State Environmental Review Clearinghouse received the request for review of the **NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge project in Waynesville, NC.** This project has been assigned State Clearinghouse **# 25-E-0000-0109** and this number should be used in all inquiries or correspondence with this office.

The document(s) has been forwarded to various governmental organizations for review and comment. In addition, notification of the availability of the document will appear on the North Carolina Environmental Bulletin at Environmental Bulletin - State Clearinghouse (nc.gov).

The review of this project should be completed on **January 13, 2025**. After the review has concluded, the comments and signoff letter will be emailed to the email address used for the message.

Should you have any questions, please email State.Clearinghouse@doa.nc.gov.

Thank you,

**Kadisha Molyneaux** (She/Her)
Administrative Specialist
Office of the Secretary

984-236-0000(Main)
984-236-0023(D)
kadisha.molyneaux@doa.nc.gov
Albemarle Building Room Request

NC State Environmental Review Clearinghouse
state.clearinghouse@doa.nc.gov

1301 Mail Service Center, Raleigh, NC 27699-1301
ncadmin.nc.gov

DOA Customer Service Survey

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**From:** Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
**Sent:** Thursday, December 12, 2024 1:15 PM
**To:** State Clearinghouse <State.Clearinghouse@doa.nc.gov>
**Cc:** Molyneaux, Kadisha <kadisha.molyneaux@doa.nc.gov>
**Subject:** NEPA HUD Part 58 EA NCORR Adoption - Balsam Edge

Dear Ms. Molyneaux:

Please accept for review the NEPA HUD Part 58 EA Adoption for the proposed **Balsam Edge**, 333 Howell Mill Road, Waynesville, Haywood County, NC 28786. The North Carolina Office of Recovery and Resiliency (NCORR) as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed affordable housing project. ***NCORR is proposing to update and adopt the Environmental Assessment (EA) completed by the North Carolina Housing Finance Agency (NCHFA) for the Balsam Edge project on November 27, 2023***. The ***NCHFA EA*** and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc. Balsam Edge is a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Required EA updates include addressing the HUD Radon Policy and FFRMS compliance. Additionally, an UST Closure and Initial Abatement Action Plan (Plan) dated March 5, 2024 was prepared for the removal of a heating oil UST and remediation of associated petroleum-impacted soil at the Subject Property (*included in uploaded Balsam Edge NCHFA EA*). Thank you so much for distributing this project to the State Environmental Clearinghouse's project review team and participating agencies. If you have any questions or require additional information regarding this project review request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance!

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM

Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

---

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NC DOA
Department of Administration

**Josh Stein**
**Governor**

**Gabriel J. Esparza**
**Secretary**

January 14, 2025

Andrea Gievers
NC Housing Finance Agency
c/o NC Department of Public Safety
Office of Recovery and Resiliency
Durham, NC 27709-

**Re: SCH File # 25-E-0000-0109 NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastruc**

Dear Andrea Gievers:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act.

Attached to this letter are comments made by the agencies in the review of this document. If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

If you have any questions, please do not hesitate to contact me at (984) 236-0000.

Sincerely,

KADISHA MOLYNEAUX
State Environmental Review Clearinghouse

Attachments

**Mailing**
**1301 Mail Service Center | Raleigh, NC 27699-1301**

**Location**
**325 N. Salisbury St. | Raleigh, NC 27603**
**984-236-0000**

**ncadmin.nc.gov**

Control No.: 25-E-0000-0109

County.: HAYWOOD

Date Received: 12/13/2024

Agency Response: 1/13/2025

Review Closed: 1/13/2025

DEVON BORGARDT

CLEARINGHOUSE COORDINATOR

DEPT OF NATURAL & CULTURAL RESOURCE

Project Information

Type: National Environmental Policy Act ironmental Assessment/Finding of No Significant Impact

Applicant: NC Housing Finance Agency

Project Desc.: NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.

The NCHFA EA and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☑ Documents Attached

Reviewed By: DEVON BORGARDT Date: 12/27/2024

**North Carolina Department of Natural and Cultural Resources**
**State Historic Preservation Office**
Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

December 24, 2024

MEMORANDUM

TO: Andrea Gievers andrea.l.gievers@rebuild.nc.gov
Office of Resiliency and Recovery
NC Department of Public Safety

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer
RMB for Ramona M. Bartos

SUBJECT: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, 25-E-0000-0109, ER 22-3051

Thank you for your email of December 13, 2024, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We concur with NCORR's determination for the above-referenced project. We have determined that the project as proposed will not have an effect on any historic structures.

Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Control No.: 25-E-0000-0109

County.: HAYWOOD

Date Received: 12/13/2024

Agency Response: 1/13/2025

Review Closed: 1/13/2025

LYN BILES

CLEARINGHOUSE COORDINATOR

DEPT OF ENVIRONMENTAL QUALITY

Project Information

Type: National Environmental Policy Act ironmental Assessment/Finding of No Significant Impact

Applicant: NC Housing Finance Agency

Project Desc.: NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.

The NCHFA EA and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☑ Documents Attached

Reviewed By: LYN BILES Date: 1/13/2025

JOSH STEIN
*Governor*
D. REID WILSON
*Secretary*

NORTH CAROLINA
***Environmental Quality***

To: Kadisha Molyneaux
State Clearinghouse
NC Department of Administration

From: Lyn Biles
Division of Environmental Assistance and Customer Service
NC Department of Environmental Quality

Re: 25-0109
Environmental Assessment/Finding of No Significant Impact - Proposed adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area and stormwater retention pond.
Haywood County

Date: January 13, 2025

The Department of Environmental Quality has reviewed the proposal for the referenced project. Several of our agencies have identified potential permits that may be required and provided recommendations to help minimize negative impacts in and around the project site.

I have attached the comments for the applicant's consideration.

Thank you for the opportunity to respond.

Attachments

North Carolina Department of Environmental Quality
217 West Jones Street | 1601 Mail Service Center | Raleigh, North Carolina 27699-1601
919.707.8661

# Department of Environmental Quality
# Project Review

**Project Number: 25-0109** **County: Haywood** **Date Received: 12-13-2024**

**Due Date:1-13-2025**

**Project Description:** *Environmental Assessment/Finding of No Significant Impact - NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.*
*The NCHFA EA and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc.*

This Project is being reviewed as indicated below:

| Regional Office | Regional Office Area | In-House Review | |
|---|---|---|---|
| ☑ Asheville | ☑ Air | ☐ Air Quality | ☐ Coastal Management |
| ☐ Fayetteville | ☑ DWR | ☑ Waste Mgmt | ☐ Marine Fisheries |
| ☐ Mooresville | ☑ DWR - Public Water | ☑ Water Resources Mgmt (Public Water, Planning & Water Quality Program) | ☐ CC & PS Div. of Emergency Mgmt |
| ☐ Raleigh | ☑ DEMLR (LQ & SW) | ☐ DWR-Transportation Unit | ☐ DMF-Shellfish Sanitation |
| ☐ Washington | ☑ DWM | | ☑ Wildlife Andrea |
| ☐ Wilmington | | | ☐ Wildlife/DOT |
| ☐ Winston Salem | | | |

| Manager Sign-Off/Region: | Date: | In-House Reviewer/Agency: |
|---|---|---|
| | 1/2/2025 | A Leslie/NCWRC |

Response (check all applicable)

____ No objection to project as proposed. ____ No Comment

____ Insufficient information to complete review ___x Other (specify or attach comments)

Comments from past review in 2023 are attached and still apply.

# North Carolina Wildlife Resources Commission

Cameron Ingram, Executive Director

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance and SEPA Coordinator
NCDEQ Division of Environmental Assistance and Customer Services

FROM: Andrea Leslie, Mountain Region Coordinator
Habitat Conservation

DATE: 24 April 2023

SUBJECT: Balsam Edge Apartments
Haywood County
DEQ Project No. 23-0209

Biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the scoping document for Balsam Edge Apartments in Haywood County. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667e) and the North Carolina General Statutes (G.S. 113-131 et seq.).

The project involves constructing 84 apartment units, parking, and associated utilities on 5.3 acres. An unnamed tributary to Richland Creek runs through the site. We have no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site.

We recommend the following:

1. Wetlands and streams within the project boundaries should be identified through on-site surveys prior to construction. If wetlands and/or streams will be impacted (including tree clearing within the wetland) by construction, then the project should be coordinated with the U.S. Army Corps of Engineers and the NC Division of Water Resources.
2. Plant and maintain a minimum 100-foot undisturbed, native, forested buffer along all perennial streams, and a minimum 50-foot buffer along intermittent streams and wetlands. Maintaining undisturbed, forested buffers along these areas will minimize impacts to aquatic and terrestrial wildlife resources, water quality, and aquatic habitat both within and downstream of the project area. Also, wide riparian buffers are helpful in maintaining stability of stream banks and for treatment of pollutants associated with

**Mailing Address:** Habitat Conservation • 1721 Mail Service Center • Raleigh, NC 27699-1721
**Telephone:** (919) 707-0220 • **Fax:** (919) 707-0028

urban stormwater. In addition, these buffers will provide an adequate travel corridor for wildlife species.

3. Limit impervious surface to less than 10% or use stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%.
4. Use non-invasive native species and Low Impact Development (LID) technology in landscaping. Using native species instead of ornamentals should reduce the need for water, fertilizers and pesticides. Using LID technology in landscaping will not only help maintain the predevelopment hydrologic regime, but also enhance the aesthetic and habitat value of the site.
5. Limit native vegetation clearing as much as possible. Maintain open space areas with native vegetation and maintain the undeveloped area to the north as a forested green space.
6. Sediment and erosion control measures should be installed prior to any land clearing or construction. These measures should be routinely inspected and properly maintained. Excessive silt and sediment loads can have numerous detrimental effects on aquatic resources including destruction of spawning habitat, suffocation of eggs, and clogging of gills of aquatic species.

Thank you for the opportunity to review and comment on this project. Please contact me at (828) 400-4223 if you have any questions about these comments or need further assistance.

Sincerely,

Andrea Leslie
Mountain Region Coordinator, Habitat Conservation Program

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Asheville
Project Number: 25-0109 Due Date: 01/13/2024
County: Haywood

After review of this project, it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

| | PERMITS | SPECIAL APPLICATION PROCEDURES or REQUIREMENTS | Normal Process Time (Statutory time limit) |
|---|---|---|---|
| ☐ | Permit to construct & operate wastewater treatment facilities, non-standard sewer system extensions & sewer systems that do not discharge into state surface waters. | Application 90 days before begins construction or award of construction contracts. On-site inspection may be required. Post-application technical conference usual. | 30 days (90 days) |
| ☒ | Permit to construct & operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system | Fast-Track Permitting program consists of the submittal of an application and an engineer's certification that the project meets all applicable State rules and Division Minimum Design Criteria. | 30 days (N/A) |
| ☐ | NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters. | Application 180 days before begins activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later. | 90-120 days (N/A) |
| ☐ | Water Use Permit | Pre-application technical conference usually necessary. | 30 days (N/A) |
| ☐ | Well Construction Permit | Complete application must be received, and permit issued prior to the installation of a groundwater monitoring well located on property not owned by the applicant, and for a large capacity (>100,000 gallons per day) water supply well. | 7 days (15 days) |
| ☐ | Dredge and Fill Permit | Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit. | 55 days (90 days) |
| ☐ | Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.O100 thru 2Q.0300) | Application must be submitted, and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113). | 90 days |
| ☒ | Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900 | N/A | 60 days (90 days) |
| ☐ | Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950 | Please Note - The Health Hazards Control Unit (HHCU) of the N.C. Department of Health and Human Services, must be notified of plans to demolish a building, including residences for commercial or industrial expansion, even if no asbestos is present in the building. | 60 days (90 days) |
| ☒ | The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of $100 for the first acre or any part of an acre. An express review option is available with additional fees. | | 20 days (30 days) |
| ☐ | Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets. | | (30 days) |
| ☒ | Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets. | | Based on Local Program |
| ☐ | Compliance with 15A NCAC 04B .0125 – Buffers Zones for Trout Waters shall have an undisturbed buffer zone 25 feet wide or of sufficient width to confine visible siltation within the twenty-five percent (25%) of the buffer zone nearest the land-disturbing activity, whichever is greater. | | |
| ☒ | Compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre. | | 30-60 days (90 days) |
| ☒ | Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs regulate site development and post-construction stormwater runoff control. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state. | | 45 days (90 days) |

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Asheville
Project Number: 25-0109 Due Date: 01/13/2024
County: Haywood

| | PERMITS | SPECIAL APPLICATION PROCEDURES or REQUIREMENTS | Normal Process Time (Statutory time limit) |
|---|---|---|---|
| ☐ | Mining Permit | On-site inspection usual. Surety bond filed with DEQ Bond amount varies with type mine and number of acres of affected land. Affected area greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued. | 30 days (60 days) |
| ☐ | Dam Safety Permit | If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to prepare plans, inspect construction, and certify construction is according to DEQ approved plans. May also require a permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage, or the total project cost will be required upon completion. | 30 days (60 days) |
| ☐ | Oil Refining Facilities | N/A | 90-120 days (N/A) |
| ☐ | Permit to drill exploratory oil or gas well | File surety bond of $5,000 with DEQ running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DEQ rules and regulations. | 10 days N/A |
| ☐ | Geophysical Exploration Permit | Application filed with DEQ at least 10 days prior to issue of permit. Application by letter. No standard application forms. | 10 days N/A |
| ☐ | State Lakes Construction Permit | Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property | 15-20 days N/A |
| ☒ | 401 Water Quality Certification | Compliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323. | 60 days (130 days) |
| ☐ | Compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse Riparian Buffer Rules is required. Buffer requirements: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-riparian-buffer-protection-program | | |
| ☐ | Nutrient Offset: Loading requirements for nitrogen and phosphorus in the Neuse and Tar-Pamlico River basins, and in the Jordan and Falls Lake watersheds, as part of the nutrient-management strategies in these areas. DWR nutrient offset information: http://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information | | |
| ☐ | CAMA Permit for MAJOR development | $250.00 - $475.00 fee must accompany application | 75 days (150 days) |
| ☐ | CAMA Permit for MINOR development | $100.00 fee must accompany application | 22 days (25 days) |
| ☐ | Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100. | | |
| ☒ | Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation. | | |
| ☐ | Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq., Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100. | | 30 days |
| ☐ | If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100. | | 30 days |
| ☐ | Plans and specifications for the construction, expansion, or alteration of the _____ water system must be approved through the _____ delegated plan approval authority. Please contact them at _____ for further information. | | |

Reviewing Regional Office: Asheville
Project Number: 25-0109 Due Date: 01/13/2024
County: Haywood

Other Comments (attach additional pages as necessary, being certain to comment authority)

| Division | Initials | No comment | Comments | Date Review |
|---|---|---|---|---|
| DAQ | PVB | ☐ | Any open burning as part of this project must be conducted in compliance with NC open buring regulations. | 12/16/2024 |
| DWR-WQROS (Aquifer & Surface) | AWM & | ☐ | Any impacts to jurisdictional streams or wetlands may require a permit from the US Army Corps of Engineers and corresponding Water Quality Certification from the Division of Water Resources. Regardless of permitting requirements, all activities must be conducted in compliance with North Carolina Surface Water Standards found in 15A NCAC 02B .0200, including adherence to turbidity standards. Appropriate best management practices should be employed when working around streams and wetlands to ensure compliance with the standards.<br><br>A sewer extension permit will be required. The project may qualify for the Fast-Track permitting program. & | 12/20/2024 |
| DWR-PWS | | ☐ | | / / |
| DEMLR (LQ & SW) | MMS | ☐ | The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan may be required if one or more acres are to be disturbed or is part of a common plan of development. Particular attention should be given the design and installation of appropriate perimeter and sediment trapping devices as well as stable stormwater conveyances and outlets.<br><br>For this site compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program may be required. This program regulates three types of activities: Industrial, Municipal Separate Storm Sewer System (MS4), and Construction activities that disturb greater than or equal to 1.0 acre. This site is located within a Phase II MS4 area.<br><br>Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs which regulate site development and post-construction stormwater runoff control may be required for this site. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state. | 12/17/2024 |
| DWM – UST | CEL | ☐ | I searched the Petroleum Underground Storage Tank (UST) and Non-UST Databases and identified the following petroleum incident on the proposed project area:<br><br>UST Incident: AS-30388, Incident #49398, Howell Mill Road Heating Oil Release, 333 Howell Mill Road, Waynesville. The incident was reported on 8/18/23 and is still an open incident. Files are available upon request.<br><br>The following comments are pertinent to my review:<br><br>The Asheville Regional Office (ARO) UST Section recommends removal of any abandoned or out-of-use petroleum USTs or petroleum ASTs within the project area. The UST Section should be contacted regarding use of any proposed or on-site petroleum USTs or ASTs. We may be reached at (828) 296-4500.<br><br>Any petroleum USTs or ASTs must be installed and maintained in accordance with applicable local, state, and federal regulations. For additional information on petroleum ASTs it is advisable that the North Carolina Department of Insurance at (919) 661-5880 ext. 239, USEPA (404) 562-8761, local fire department, and Local Building Inspectors be | 12/19/24 |

| | | | | |
|---|---|---|---|---|
| | | | contacted.<br><br>Any petroleum spills must be contained and the area of impact must be properly restored. Petroleum spills of significant quantity must be reported to the North Carolina Department of Environmental Quality (NCDEQ) – Division of Waste Management (DWM) UST Section in the ARO.<br><br>Any soils excavated during demolition or construction that show evidence of petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosive or inhalation hazards exist. Also, notify the UST Section of the ARO. Petroleum contaminated soils must be handled in accordance with all applicable regulations.<br><br>Any questions or concerns regarding spills from petroleum USTs, ASTs, or vehicles should be directed to the UST Section at (828) 296-4500. If you have any questions or need additional information, please contact me via email at caroline.lafond@ncdenr.gov or by phone at (828) 296-4644. | |
| Other Comments | | ☐ | | / / |

**REGIONAL OFFICES**

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211
Phone: 828-296-4500
Fax: 828-299-7043

☐ **Fayetteville Regional Office**
225 Green Street, Suite 714,
Fayetteville, NC 28301-5043
Phone: 910-433-3300
Fax: 910-486-0707

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301,
Mooresville, NC 28115
Phone: 704-663-1699
Fax: 704-663-6040

☐ **Raleigh Regional Office**
3800 Barrett Drive,
Raleigh, NC 27609
Phone: 919-791-4200
Fax: 919-571-4718

☐ **Washington Regional Office**
943 Washington Square Mall,
Washington, NC 27889
Phone: 252-946-6481
Fax: 252-975-3716

☐ **Wilmington Regional Office**
127 Cardinal Drive Ext.,
Wilmington, NC 28405
Phone: 910-796-7215
Fax: 910-350-2004

☐ **Winston-Salem Regional Office**
450 Hanes Mill Road, Suite 300,
Winston-Salem, NC 27105
Phone: 336-776-9800
Fax: 336-776-9797

ROY COOPER
*Governor*
ELIZABETH S. BISER
*Secretary*
MICHAEL SCOTT
*Director*

NORTH CAROLINA
***Environmental Quality***

TO: Lyn Hardison, Environmental Coordinator

FROM: Caroline LaFond, Regional UST Supervisor

DATE: December 19, 2024

RE: Environmental Review - Project Number 25-0109 – Haywood County - Environmental Assessment/Finding of No Significant Impact - NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.

I searched the Petroleum Underground Storage Tank (UST) and Non-UST Databases and identified the following petroleum incident on the proposed project area:

UST Incident: AS-30388, Incident #49398, Howell Mill Road Heating Oil Release, 333 Howell Mill Road, Waynesville. The incident was reported on 8/18/23 and is still an open incident. Files are available upon request.

The following comments are pertinent to my review:

The Asheville Regional Office (ARO) UST Section recommends removal of any abandoned or out-of-use petroleum USTs or petroleum ASTs within the project area. The UST Section should be contacted regarding use of any proposed or on-site petroleum USTs or ASTs. We may be reached at (828) 296-4500.

Any petroleum USTs or ASTs must be installed and maintained in accordance with applicable local, state, and federal regulations. For additional information on petroleum ASTs it is advisable that the North Carolina Department of Insurance at (919) 661-5880 ext. 239, USEPA (404) 562-8761, local fire department, and Local Building Inspectors be contacted.

Any petroleum spills must be contained and the area of impact must be properly restored. Petroleum spills of significant quantity must be reported to the North Carolina Department of Environmental Quality (NCDEQ) – Division of Waste Management (DWM) UST Section in the ARO.

Any soils excavated during demolition or construction that show evidence of petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosive or inhalation hazards exist. Also, notify the UST Section of the ARO. Petroleum contaminated soils must be handled in accordance with all applicable regulations.

Any questions or concerns regarding spills from petroleum USTs, ASTs, or vehicles should be directed to the UST Section at (828) 296-4500. If you have any questions or need additional information, please contact me via email at caroline.lafond@ncdenr.gov or by phone at (828) 296-4644.

ROY COOPER
*Governor*
MARY PENNY KELLEY
*Secretary*
MICHAEL SCOTT
*Director*

NORTH CAROLINA
*Environmental Quality*

DATE: December 31, 2024

TO: Michael Scott, Division Director through Sharon Brinkley

FROM: Charles Gerstell, Solid Waste Section Field Operations Branch

RE: NEPA Project 25-0109, Haywood County, NC
NC Housing Finance Agency – Proposed Balsam Edge

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The Solid Waste Section has reviewed the Environmental Assessment/Finding of No Significant Impact for the proposed project Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure located at 333 Howell Mill Road in Waynesville, Haywood County, North Carolina. Any structures proposed to be demolished and/or rehabilitated as part of this project should be evaluated for lead, asbestos or other contaminants which must be managed appropriately. Also, three solid waste management facilities are located within one-half mile of the proposed apartment community, N0593 – Town of Waynesville LCID Landfill, N0660 – Town of Waynesville LCID Landfill, and YWN-44-005 – Town of Waynesville Yard Waste Notification. Otherwise, the review has been completed and has found no adverse impact on the surrounding community and likewise knows of no situations in the community, which would affect this project from a non-hazardous solid waste perspective.

During the project, every feasible effort should be made to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by this project that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility approved to manage the respective waste type. The Section strongly recommends that any contractors are required to provide proof of proper disposal for all waste generated as part of the project. A list of permitted solid waste management facilities is available on the Solid Waste Section portal site at: Solid Waste Facility List.

Please contact Lee Hill, Environmental Senior Specialist, for any questions regarding solid waste management for this project. Mr. Hill can be reached at (828) 296-4700 or by e-mail at lee.hill@deq.nc.gov.

Ec: Lee Hill, Environmental Senior Specialist

ROY COOPER
*Governor*
MARY PENNY KELLEY
*Secretary*
MICHAEL SCOTT
*Director*

NORTH CAROLINA
***Environmental Quality***

Date: December 16, 2024

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch

From: Katie C Tatum
Inactive Hazardous Sites Branch

Subject: NEPA Project # 25-0109 NC Housing Finance Agency, Haywood County, North Carolina

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the NC Housing Finance Agency project. The proposed project is for: Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.

Four (4) Superfund Section sites and one (1) Brownfields Program Sites were identified within one mile of the project as shown on the attached report. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: http://deq.nc.gov/waste-management-laserfiche.

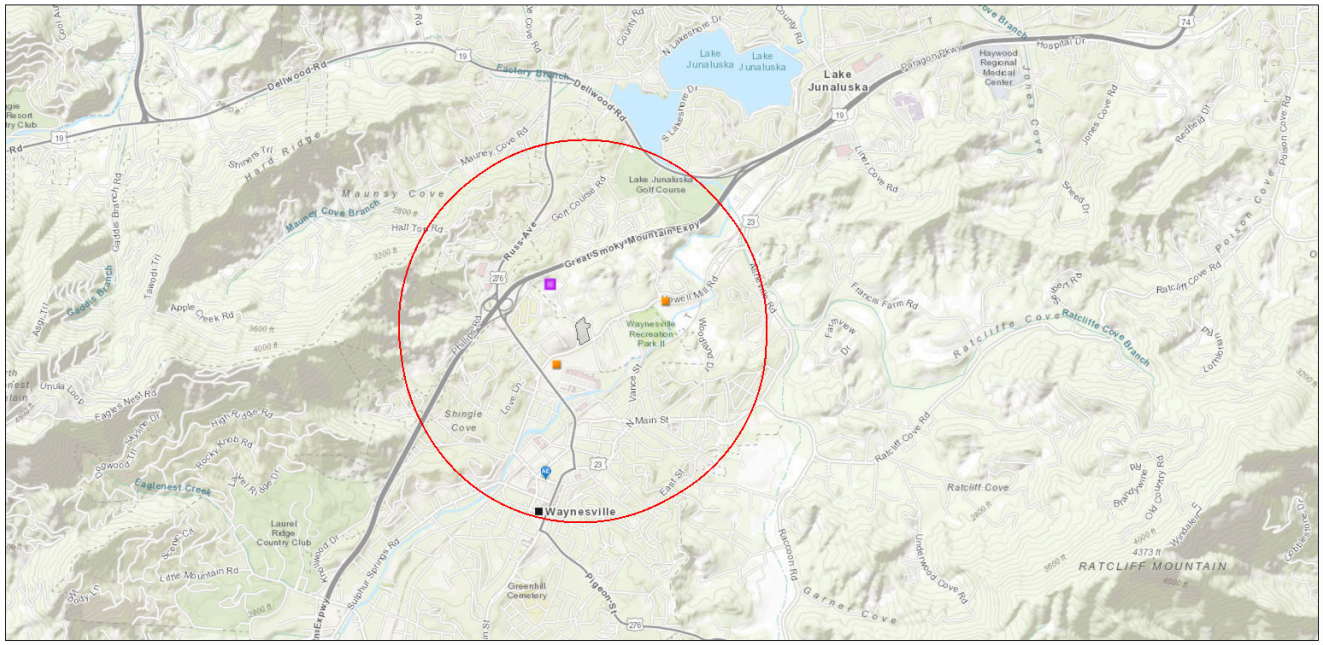
Please contact Janet Macdonald at 919.707.8349 if you have any questions concerning the Superfund Section review portion of this SEPA/NEPA inquiry.

# Superfund & Brownfield Sites SEPA/NEPA Review Report

**Area of Interest (AOI) Information** **Haywood County** **NEPA 25-0109**

Area : 2,263.28 acres

Dec 16 2024 10:12:11 Eastern Standard Time



Superfund and Brownfield Sites
Haywood County NEPA project 25-0109

## Summary

| Name | Count | Area(acres) | Length(mi) |
|---|---|---|---|
| Certified DSCA Sites | 1 | N/A | N/A |
| Federal Remediation Branch Sites | 0 | N/A | N/A |
| Inactive Hazardous Sites | 2 | N/A | N/A |
| Pre-Regulatory Landfill Sites | 1 | N/A | N/A |
| Brownfields Program Sites | 1 | N/A | N/A |

## Certified DSCA Sites

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | DC440001 | Central Cleaners | 1 |

## Inactive Hazardous Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NCD024852675 | SCHULHOFER JUNKYARD | 1 |
| 2 | NONCD0002469 | WR BOYD INVESTMENTS | 1 |

## Pre-Regulatory Landfill Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NONCD0000356 | Town of Waynesville Dump | 1 |

## Brownfields Program Sites

| # | BF_ID | BF_Name | Count |
|---|---|---|---|
| 1 | 2603322044 | Depot Street (RN) | 1 |

# Department of Environmental Quality
# Project Review

**Project Number: 25-0109** **County: Haywood** **Date Received: 12-13-2024**

**Due Date:1-13-2025**

**Project Description:** *Environmental Assessment/Finding of No Significant Impact - NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.*
*The NCHFA EA and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc.*

This Project is being reviewed as indicated below:

| Regional Office | Regional Office Area | In-House Review | |
|---|---|---|---|
| ☑ Asheville | ☑ Air | ☐ Air Quality | ☐ Coastal Management |
| ☐ Fayetteville | ☑ DWR | ☑ Waste Mgmt | ☐ Marine Fisheries |
| ☐ Mooresville | ☑ DWR - Public Water | ☑ Water Resources Mgmt (Public Water, Planning & Water Quality Program) | ☐ CC & PS Div. of Emergency Mgmt |
| ☐ Raleigh | ☑ DEMLR (LQ & SW) | ☐ DWR-Transportation Unit | ☐ DMF-Shellfish Sanitation |
| ☐ Washington | ☑ DWM | | ☑ Wildlife Andrea |
| ☐ Wilmington | | | ☐ Wildlife/DOT |
| ☐ Winston Salem | | | |

| Manager Sign-Off/Region: | Date: | In-House Reviewer/Agency: |
|---|---|---|
| | 1/13/25 | Melodi Deaver, Hazardous Waste Section |

Response (check all applicable)

____ No objection to project as proposed.
X
____ No Comment
____ Insufficient information to complete review
____ Other (specify or attach comments)

# Department of Environmental Quality
# Project Review

**Project Number: 25-0109** **County: Haywood** **Date Received: 12-13-2024**

**Due Date:1-13-2025**

**Project Description:** *Environmental Assessment/Finding of No Significant Impact - NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.*
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This Project is being reviewed as indicated below:

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| ☐ Fayetteville | ☑ DWR | ☑ Waste Mgmt | ☐ Marine Fisheries |
| ☐ Mooresville | ☑ DWR - Public Water | ☑ Water Resources Mgmt (Public Water, Planning & Water Quality Program) | ☐ CC & PS Div. of Emergency Mgmt |
| ☐ Raleigh | ☑ DEMLR (LQ & SW) | ☐ DWR-Transportation Unit | ☐ DMF-Shellfish Sanitation |
| ☐ Washington | ☑ DWM | | ☑ Wildlife Andrea |
| ☐ Wilmington | | | ☐ Wildlife/DOT |
| ☐ Winston Salem | | | |

| Manager Sign-Off/Region: | Date: | In-House Reviewer/Agency: |
|---|---|---|
| | 12/19/2024 | DWR/WRM David Wainwright |

Response (check all applicable)

____ No objection to project as proposed. __X__ No Comment

____ Insufficient information to complete review ____ Other (specify or attach comments)

Control No.: 25-E-0000-0109

County.: HAYWOOD

Date Received: 12/13/2024

Agency Response: 1/13/2025

Review Closed: 1/13/2025

JINTAO WEN

CLEARINGHOUSE COORDINATOR

DPS - DIV OF EMERGENCY MANAGEMENT

Project Information

Type: National Environmental Policy Act ironmental Assessment/Finding of No Significant Impact

Applicant: NC Housing Finance Agency

Project Desc.: NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.

The NCHFA EA and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JINTAO WEN Date: 1/13/2025

Control No.: 25-E-0000-0109

County.: HAYWOOD

Date Received: 12/13/2024

Agency Response: 1/13/2025

Review Closed: 1/13/2025

DIANNE FARRER
CLEARINGHOUSE COORDINATOR
DEPT OF AGRICULTURE

Project Information

Type: National Environmental Policy Act ironmental Assessment/Finding of No Significant Impact

Applicant: NC Housing Finance Agency

Project Desc.: NEPA HUD Part 58 EA Adoption for the proposed Balsam Edge, a new multifamily, affordable housing construction project consisting of three apartment buildings containing 84 units, a community center, playground, picnic pavilion, paved parking area, stormwater retention pond, and associated infrastructure. Location: 333 Howell Mill Road, Waynesville, NC.

The NCHFA EA and new site plans are available at https://ncconnect.sharepoint.com/:f:/r/sites/DPS_RB_PMO/TEST%202/Infrastructure%20ERRs%20for%20Website/Balsam%20Edge/State%20Env%20Clearinghouse?csf=1&web=1&e=9Se6nc.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: DIANNE FARRER Date: 1/9/2025

# NCHFA EA

# Appendix Q

# State Clearinghouse Comments

**Roy Cooper**
**Governor**

**Pamela B. Cashwell**
**Secretary**

June 21, 2023

Claudia Young
NC Housing Finance Agency
Post Office Box 28066
Raleigh, NC 27611-8066

**Re: SCH File # 23-E-4600-0237 Proposed project is for the construction of Balsam Edge. The development will consist of 84-unit apartment community for low to moderate income families located in Waynesville, NC. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer c**

Dear Claudia Young:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act.

Attached to this letter are comments made by the agencies in the review of this document. If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

If you have any questions, please do not hesitate to contact me at (984) 236-0000.

Sincerely,

CRYSTAL BEST
State Environmental Review Clearinghouse

Attachments

# North Carolina Department of Natural and Cultural Resources

**State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

May 24, 2023

MEMORANDUM

TO: Claudia Young
NC Housing Finance Agency
csyoung@nchfa.com

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer
RSE for Ramona M. Bartos

SUBJECT: Construct Balsam Edge Apartments, 333 Howell Mill Road, Waynesville, Haywood County, ER 22-3051

Thank you for your email of May 17, 2023, concerning the above project.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

ROY COOPER
*Governor*
ELIZABETH S. BISER
*Secretary*

NORTH CAROLINA
***Environmental Quality***

To: Crystal Best
State Clearinghouse
NC Department of Administration

From: Lyn Biles
Division of Environmental Assistance and Customer Service
Washington Regional Office

Re: 23-0237
Environmental Assessment - Proposed project is for the construction of Balsam Edge. The development will consist of an 84-unit apartment community for low to moderate income families which will include a stand-alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.
Haywood County

Date: June 20, 2023

The Department of Environment Quality has reviewed the proposal for the referenced project. Based on the information provided, several of our agencies have identified permits that may be required and offered some valuable guidance. The comments are attached for the applicant's review.

The Department will continue to be available to assist the applicant with any questions or concerns.

Thank you for the opportunity to respond.

Attachments

# North Carolina Wildlife Resources Commission

Cameron Ingram, Executive Director

MEMORANDUM

TO: Lyn Hardison, Environmental Assistance and SEPA Coordinator
NCDEQ Division of Environmental Assistance and Customer Services

FROM: Andrea Leslie, Mountain Region Coordinator
Habitat Conservation

DATE: 14 June 2023

SUBJECT: Balsam Edge Apartments Environmental Assessment
Haywood County
DEQ Project No. 23-0237

Biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the environmental assessment document for Balsam Edge Apartments in Haywood County. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667e) and the North Carolina General Statutes (G.S. 113-131 et seq.).

The project involves constructing 84 apartment units, parking, and associated utilities on 5.3 acres. An unnamed tributary to Richland Creek runs through the site. We have no records of any listed or proposed species on or adjacent to the site; however, this does not preclude the presence of such a species on or adjacent to the site.

We recommend the following:

1. Wetlands and streams within the project boundaries were identified through a jurisdictional determination by the U.S. Army Corps of Engineers. Plant and maintain a minimum 100-foot undisturbed, native, forested buffer along all perennial streams, and a minimum 50-foot buffer along intermittent streams and wetlands. Maintaining undisturbed, forested buffers along these areas will minimize impacts to aquatic and terrestrial wildlife resources, water quality, and aquatic habitat both within and downstream of the project area. Also, wide riparian buffers are helpful in maintaining stability of stream banks and for treatment of pollutants associated with urban stormwater. In addition, these buffers will provide an adequate travel corridor for wildlife species.

**Mailing Address:** Habitat Conservation • 1721 Mail Service Center • Raleigh, NC 27699-1721
**Telephone:** (919) 707-0220 • **Fax:** (919) 707-0028

2. Limit impervious surface to less than 10% or use stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%.
3. Use non-invasive native species and Low Impact Development (LID) technology in landscaping. Using native species instead of ornamentals should reduce the need for water, fertilizers and pesticides. Using LID technology in landscaping will not only help maintain the predevelopment hydrologic regime, but also enhance the aesthetic and habitat value of the site.
4. Limit native vegetation clearing as much as possible. Maintain open space areas with native vegetation and maintain the undeveloped area to the north as a forested green space.
5. Sediment and erosion control measures should be installed prior to any land clearing or construction. These measures should be routinely inspected and properly maintained. Excessive silt and sediment loads can have numerous detrimental effects on aquatic resources including destruction of spawning habitat, suffocation of eggs, and clogging of gills of aquatic species.

Thank you for the opportunity to review and comment on this project. Please contact me at (828) 400-4223 if you have any questions about these comments or need further assistance.

Sincerely,

Andrea Leslie
Mountain Region Coordinator, Habitat Conservation Program

ROY COOPER
*Governor*
ELIZABETH S. BISER
*Secretary*
MICHAEL SCOTT
*Director*

NORTH CAROLINA
*Environmental Quality*

Date: May 19, 2023

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch

From: Katie C Tatum
Inactive Hazardous Sites Branch

Subject: NEPA Project # 23-0237 NC Housing Finance Agency, Haywood County, North Carolina

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the NC Housing Finance Agency project. Proposed project is for the construction of Balsam Edge. The development will consist of 84-unit apartment community for low to moderate income families located in Waynesville, NC. Balsam Edge will include a stand-alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.

Four (4) Superfund Section sites and one (1) Brownfields Program Sites were identified within one mile of the project as shown on the attached report. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: http://deq.nc.gov/waste-management-laserfiche.

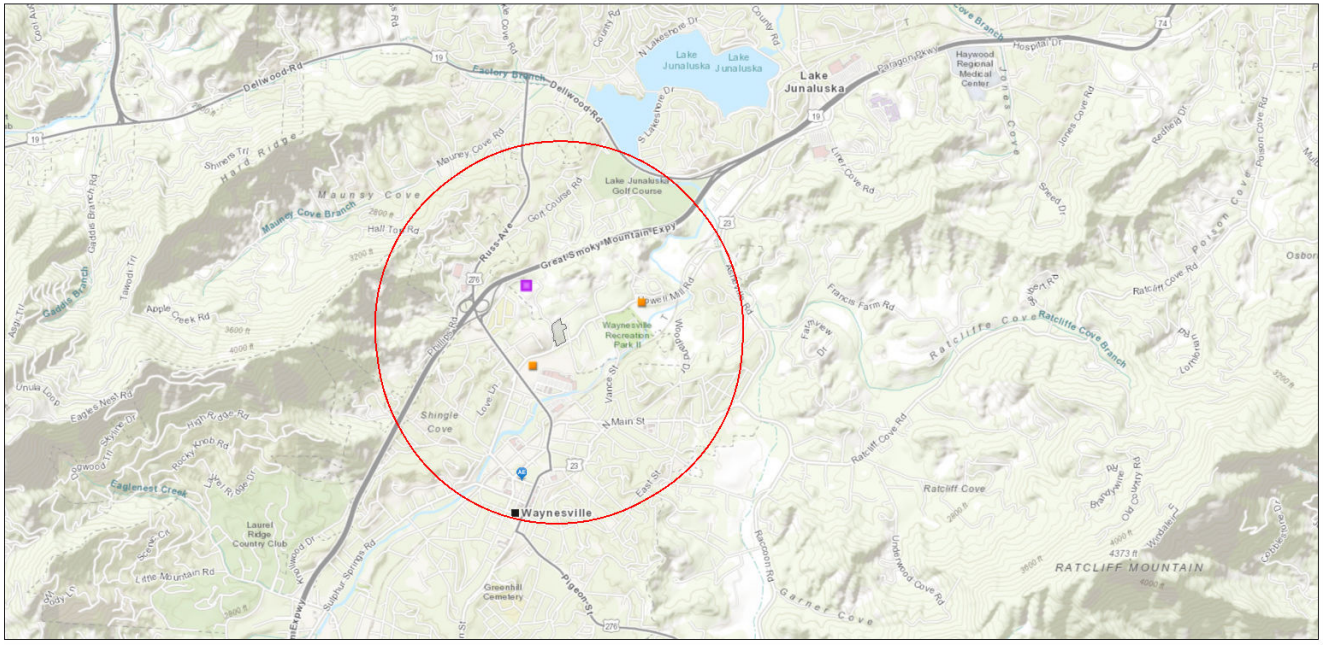
Please contact Janet Macdonald at 919.707.8349 if you have any questions concerning the Superfund Section review portion of this SEPA/NEPA inquiry.

# Superfund & Brownfield Sites SEPA/NEPA Review Report

**Area of Interest (AOI) Information** **Haywood County NEPA project 23-0237**

Area : 2,260.88 acres

May 19 2023 10:11:42 Eastern Daylight Time



Superfund and Brownfield Sites
Haywood County NEPA project 23-

## Summary

| Name | Count | Area(acres) | Length(mi) |
|---|---|---|---|
| Certified DSCA Sites | 1 | N/A | N/A |
| Federal Remediation Branch Sites | 0 | N/A | N/A |
| Inactive Hazardous Sites | 2 | N/A | N/A |
| Pre-Regulatory Landfill Sites | 1 | N/A | N/A |
| Brownfields Program Sites | 1 | N/A | N/A |

## Certified DSCA Sites

| # | Site_ID | Site_Name | Count |
|---|---|---|---|
| 1 | DC440001 | Central Cleaners | 1 |

## Inactive Hazardous Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NCD024852675 | SCHULHOFFER JUNKYARD | 1 |
| 2 | NONCD0002469 | WR BOYD INVESTMENTS | 1 |

## Pre-Regulatory Landfill Sites

| # | EPAID | SITENAME | Count |
|---|---|---|---|
| 1 | NONCD0000356 | Town of Waynesville Dump | 1 |

## Brownfields Program Sites

| # | BF_ID | BF_Name | Count |
|---|---|---|---|
| 1 | 2603322044 | Depot Street (RN) | 1 |

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Asheville
Project Number: 23-0237 Due Date: 06/14/2023
County: Haywood

After review of this project, it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

| | PERMITS | SPECIAL APPLICATION PROCEDURES or REQUIREMENTS | Normal Process Time (Statutory time limit) |
|---|---|---|---|
| ☐ | Permit to construct & operate wastewater treatment facilities, non-standard sewer system extensions & sewer systems that do not discharge into state surface waters. | Application 90 days before begins construction or award of construction contracts. On-site inspection may be required. Post-application technical conference usual. | 30 days (90 days) |
| ☐ | Permit to construct & operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system | Fast-Track Permitting program consists of the submittal of an application and an engineer's certification that the project meets all applicable State rules and Division Minimum Design Criteria. | 30 days (N/A) |
| ☐ | NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters. | Application 180 days before begins activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later. | 90-120 days (N/A) |
| ☐ | Water Use Permit | Pre-application technical conference usually necessary. | 30 days (N/A) |
| ☐ | Well Construction Permit | Complete application must be received, and permit issued prior to the installation of a groundwater monitoring well located on property not owned by the applicant, and for a large capacity (>100,000 gallons per day) water supply well. | 7 days (15 days) |
| ☐ | Dredge and Fill Permit | Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit. | 55 days (90 days) |
| ☐ | Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.O100 thru 2Q.0300) | Application must be submitted, and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113). | 90 days |
| ☒ | Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900 | N/A | 60 days (90 days) |
| ☐ | Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950 | Please Note - The Health Hazards Control Unit (HHCU) of the N.C. Department of Health and Human Services, must be notified of plans to demolish a building, including residences for commercial or industrial expansion, even if no asbestos is present in the building. | 60 days (90 days) |
| ☒ | The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of $100 for the first acre or any part of an acre. An express review option is available with additional fees. | | 20 days (30 days) |
| ☐ | Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets. | | (30 days) |
| ☒ | Sedimentation and erosion control must be addressed in accordance with Haywood County's Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets. | | Based on Local Program |
| ☐ | Compliance with 15A NCAC 04B .0125 – Buffers Zones for Trout Waters shall have an undisturbed buffer zone 25 feet wide or of sufficient width to confine visible siltation within the twenty-five percent (25%) of the buffer zone nearest the land-disturbing activity, whichever is greater. | | |
| ☒ | Compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre. | | 30-60 days (90 days) |
| ☒ | Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs regulate site development and post-construction stormwater runoff control. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state. | | 45 days (90 days) |

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Asheville
Project Number: 23-0237 Due Date: 06/14/2023
County: Haywood

| | PERMITS | SPECIAL APPLICATION PROCEDURES or REQUIREMENTS | Normal Process Time (Statutory time limit) |
|---|---|---|---|
| ☐ | Mining Permit | On-site inspection usual. Surety bond filed with DEQ Bond amount varies with type mine and number of acres of affected land. Affected area greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued. | 30 days (60 days) |
| ☐ | Dam Safety Permit | If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to prepare plans, inspect construction, and certify construction is according to DEQ approved plans. May also require a permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage, or the total project cost will be required upon completion. | 30 days (60 days) |
| ☐ | Oil Refining Facilities | N/A | 90-120 days (N/A) |
| ☐ | Permit to drill exploratory oil or gas well | File surety bond of $5,000 with DEQ running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DEQ rules and regulations. | 10 days N/A |
| ☐ | Geophysical Exploration Permit | Application filed with DEQ at least 10 days prior to issue of permit. Application by letter. No standard application forms. | 10 days N/A |
| ☐ | State Lakes Construction Permit | Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property | 15-20 days N/A |
| ☒ | 401 Water Quality Certification | Compliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323. | 60 days (130 days) |
| ☐ | Compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse Riparian Buffer Rules is required. Buffer requirements: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-riparian-buffer-protection-program | | |
| ☐ | Nutrient Offset: Loading requirements for nitrogen and phosphorus in the Neuse and Tar-Pamlico River basins, and in the Jordan and Falls Lake watersheds, as part of the nutrient-management strategies in these areas. DWR nutrient offset information: http://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information | | |
| ☐ | CAMA Permit for MAJOR development | $250.00 - $475.00 fee must accompany application | 75 days (150 days) |
| ☐ | CAMA Permit for MINOR development | $100.00 fee must accompany application | 22 days (25 days) |
| ☐ | Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100. | | |
| ☐ | Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation. | | |
| ☐ | Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq., Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100. | | 30 days |
| ☐ | If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100. | | 30 days |
| ☐ | Plans and specifications for the construction, expansion, or alteration of the _____ water system must be approved through the _____ delegated plan approval authority. Please contact them at _____ for further information. | | |

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Asheville
Project Number: 23-0237 Due Date: 06/14/2023
County: Haywood

Other Comments (attach additional pages as necessary, being certain to comment authority)

| Division | Initials | No comment | Comments | Date Review |
|---|---|---|---|---|
| DAQ | PVB | ☐ | Any open burning as part of this project must be conducted in complaince with NC state open burning regulations. | 5/23/2023 |
| DWR-WQROS (Aquifer & Surface) | GLD & | ☐ | Stream and wetland crossings associated with the project will likely require a 401 Water Quality Certification. Contact Joey Winston at 828-296-4500 for additional information. Construction BMPs and sound erosion control measures shall be utilized to avoid discharging sediment laden water to streams and wetlands, which may result in a water quality violation. Any well, including water supply and monitoring, that is removed from service as a result of the project shall be abandoned in accordance with 15A NCAC 02C .0113 and reported in accordance with 15A NCAC 02C .0114 & A fast-track permit may be required to extend sewer, please contact Dan Boss for more information at 828-296-4500. | 5/22/2023 |
| DWR-PWS | MEG | ☒ | | 5/25/2023 |
| DEMLR (LQ & SW) | MMS | ☐ | The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan may be required if one or more acres are to be disturbed or is part of a common plan of development. Particular attention should be given the design and installation of appropriate perimeter and sediment trapping devices as well as stable stormwater conveyances and outlets. If this site is impacting the riparian buffer zone of a stream classified at trout, prior to submitting an erosion and sediment control plan to the permitting authority, please obtain a trout buffer zone waiver.<br><br>For this site compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program may be required. This program regulates three types of activities: Industrial, Municipal Separate Storm Sewer System (MS4), and Construction activities that disturb greater than or equal to 1.0 acre.<br><br>Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs which regulate site development and post-construction stormwater runoff control may be required for this site. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state. | 5/19/2023 |
| DWM – UST | | ☐ | | / / |
| Other Comments | | ☐ | | / / |

**REGIONAL OFFICES**

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211
Phone: 828-296-4500
Fax: 828-299-7043

☐ **Fayetteville Regional Office**
225 Green Street, Suite 714,
Fayetteville, NC 28301-5043
Phone: 910-433-3300
Fax: 910-486-0707

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301,
Mooresville, NC 28115
Phone: 704-663-1699
Fax: 704-663-6040

☐ **Raleigh Regional Office**
3800 Barrett Drive,
Raleigh, NC 27609
Phone: 919-791-4200
Fax: 919-571-4718

☐ **Washington Regional Office**
943 Washington Square Mall,
Washington, NC 27889
Phone: 252-946-6481
Fax: 252-975-3716

☐ **Wilmington Regional Office**
127 Cardinal Drive Ext.,
Wilmington, NC 28405
Phone: 910-796-7215
Fax: 910-350-2004

☐ **Winston-Salem Regional Office**
450 Hanes Mill Road, Suite 300,
Winston-Salem, NC 27105
Phone: 336-776-9800
Fax: 336-776-9797

ROY COOPER
*Governor*
ELIZABETH S. BISER
*Secretary*
MICHAEL SCOTT
*Director*

NORTH CAROLINA
***Environmental Quality***

DATE: June 14, 2023

TO: Michael Scott, Division Director through Sharon Brinkley

FROM: Deb Aja, Western District Supervisor - Solid Waste Section Field Operations Branch

RE: NEPA Project 23-0237, Haywood County, NC
Balsam Edge Apartments, Family Oriented Affordable Apartment Community

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The Solid Waste Section has reviewed the HUD Environmental Site Assessment document provided by the North Carolina Housing Finance Agency for the proposed construction of an 84-unit family oriented affordable apartment community located at 333 Howell Rd in Waynesville, Haywood County. Due to the age of the structures that are proposed to be demolished, lead, asbestos or other contaminants may be present and must be managed appropriately. Also, three solid waste management facilities are located within one-half mile of the proposed apartment community, N0593, Town of Waynesville LCID Landfill, N0660, Town of Waynesville LCID Landfill (Link to Documents), and YWN-44-005, Town of Waynesville Yard Waste Notification (Link to Documents) Otherwise, the review has been completed and has found no adverse impact on the surrounding community and likewise knows of no situations in the community, which would affect this project from a solid waste perspective.

During the project, every feasible effort should be made to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by this project that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility approved to manage the respective waste type. The Section strongly recommends that any contractors are required to provide proof of proper disposal for all waste generated as part of the project. A list of permitted solid waste management facilities is available on the Solid Waste Section portal site at: https://deq.nc.gov/about/divisions/waste-management/solid-waste-section/solid-waste-permitted-facility-information-and-guidance/solid-waste-facility-lists

Please contact Lee Hill, Environmental Senior Specialist, for any questions regarding solid waste management for this project. Mr. Hill can be reached at (828) 296-4500 or by email at lee.hill@deq.nc.gov.

Ec: Jason Watkins, Field Operations Branch Head
Lee Hill, Environmental Senior Specialist

# Department of Environmental Quality
# Project Internal Review

**Project Number: 23-0237** **County: Haywood** **Date Received: 5-18-2023**

## Due Date: 6-14-2023

**Project Description:** *Environmemtal Assessment - Proposed project is for the construction of Balsam Edge. The development will consist of 84-unit apartment community for low to moderate income families located in Waynesville, NC. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.*

This Project is being reviewed as indicated below:

| Regional Office | Regional Office Area | In-House Review | |
|---|---|---|---|
| ☑ Asheville | ☑ Air | ☐ Air Quality | ☐ Coastal Management |
| ☐ Fayetteville | ☑ DWR | ☑ Waste Mgmt | ☐ Marine Fisheries |
| ☐ Mooresville | ☑ DWR - Public Water | ☑ Water Resources Mgmt (Public Water, Planning & Water Quality Program) | ☐ CC & PS Div. of Emergency Mgmt |
| ☐ Raleigh | ☑ DEMLR (LQ & SW) | ☐ DWR-Transportation Unit | ☐ DMF-Shellfish Sanitation |
| ☐ Washington | ☑ DWM | | ☑ Wildlife Andrea |
| ☐ Wilmington | | | ☐ Wildlife/DOT |
| ☐ Winston Salem | | | |

| Manager Sign-Off/Region: | Date: | In-House Reviewer/Agency: |
|---|---|---|
| | 6/13/23 | Melodi Deaver, DWM Hazardous Waste |

Response (check all applicable)

____ No objection to project as proposed.

x
____ No Comment

____ Insufficient information to complete review

____ Other (specify or attach comments)

Control No.: 23-E-4600-0237

County.: HAYWOOD

Date Received: 5/18/2023

Agency Response: 6/19/2023

Review Closed: 6/19/2023

LYN HARDISON
CLEARINGHOUSE COORDINATOR
DEPT OF ENVIRONMENTAL QUALITY

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: NC Housing Finance Agency

Project Desc.: Proposed project is for the construction of Balsam Edge. The development will consist of 84-unit apartment community for low to moderate income families located in Waynesville, NC. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☑ Documents Attached

Reviewed By: LYN HARDISON Date: 6/20/2023

Control No.: 23-E-4600-0237

County.: HAYWOOD

Date Received: 5/18/2023

Agency Response: 6/19/2023

Review Closed: 6/19/2023

JINTAO WEN

CLEARINGHOUSE COORDINATOR

DPS - DIV OF EMERGENCY MANAGEMENT

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: NC Housing Finance Agency

Project Desc.: Proposed project is for the construction of Balsam Edge. The development will consist of 84-unit apartment community for low to moderate income families located in Waynesville, NC. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JINTAO WEN Date: 6/5/2023

Control No.: 23-E-4600-0237

County.: HAYWOOD

Date Received: 5/18/2023

Agency Response: 6/19/2023

Review Closed: 6/19/2023

DEVON BORGARDT

CLEARINGHOUSE COORDINATOR

DEPT OF NATURAL & CULTURAL RESOURCE

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: NC Housing Finance Agency

Project Desc.: Proposed project is for the construction of Balsam Edge. The development will consist of 84-unit apartment community for low to moderate income families located in Waynesville, NC. Balsam Edge will include a stand alone community building with a fitness room, community room with kitchen, computer center, and laundry facilities. Outdoor amenities on site will include a picnic/grilling area and on-site playground.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: DEVON BORGARDT Date: 6/21/2023

# NCORR FONSI/NOI-RROF