NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

NORTH CAROLINA DEPARTMENT OF PUBLIC SAFETY

OFFICE OF RECOVERY AND RESILIENCY

Substantial Action Plan Amendment 4
December 9, 2022

CDBG-MIT Action Plan

State of North Carolina

For U.S. Department of Housing and Development CDBG-DR Funds.
(Public Law 115-254 and 116-20)

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Revision History

Version	Date	Description
1.0	November 07, 2019	Initial Action Plan
1.1	March 5, 2020	Public comment period closed and edits from public comments incorporated.
2.0	January 11, 2021	Substantial Action Plan Amendment 1 – Program reallocations, change to current fair market value, introduction of the phased approach, and reallocation of the Resilient Affordable Housing Program.
3.0	June 30, 2021	Substantial Action Plan Amendment 2 – provide budget for allocation of additional $34,619,000 in CDBG-MIT funds, funds added to Strategic Buyout Program, and admin and planning budgets; update data and overall document to align with CDBG-MIT-funded activities; public comments made at public hearing and submitted after draft was published for public comment.
4.0	January 18, 2022	Substantial Action Plan Amendment 3 – clarifies the payment of incentives to households that did not maintain flood insurance; clarifies the eligibility of certain properties; clarifies that housing counseling may be provided as a public service in alignment with the Hurricane Florence CDBG-DR Action Plan; establishes that planning projects may be identified by NCORR staff.
5.0	December 9, 2022	Substantial Action Plan Amendment 4 – Program reallocations to diversify mitigation activities including addition of the Public Housing Restoration Fund and Infrastructure Recovery programs; updates to one-for-one replacement waiver; updated data added to Mitigation Needs Assessment.

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1.0 Summary of Action Plan Changes – Amendment 4

1.1 Addition of the Public Housing Restoration Fund Program

In SAPA 4, the Public Housing Restoration Fund Program was added as a mitigation activity. This program contributes to the reconstruction, rehabilitation, and repair of public housing units. Following a 2018 HUD waiver on one-for-one replacement, the program allows for even greater mitigation of risk to public housing located in flood-prone areas that is not suitable for rehabilitation. Section 6.2 defines how the Public Housing Restoration Fund meets the definition of a mitigation activity and addresses long term mitigation needs, and Section 10.9 describes additional program details including CDBG eligibility, connection to National Objectives, LMI prioritization, and links to the State Hazard Mitigation Plan goals as well as Community Lifelines.

1.2 Addition of the Infrastructure Recovery Program

SAPA 4 includes the addition of the Infrastructure Recovery Program. This program was established after Hurricane Matthew to address damages to public infrastructure including impacts to Community Lifelines. Section 6.3 defines how the program meets the definition of a mitigation activity and addresses mitigation needs. Section 10.8 provides program details such as CDBG eligibility, links to National Objectives, LMI prioritization, and links to Community Lifelines and the State Hazard Mitigation Plan.

1.3 Strategic Revisions to Buyout Program

This amendment indicates that Phase I and Phase II of the Strategic Buyout Program may be administered concurrently in some cases. Vacant land and lots have been added to Phase I eligible properties. New regulations issued in June 2022 removed the requirement that buyout properties that are bought with CDBG-MIT funds be storm damaged. Instead, in accordance with the new regulations, this amendment states that buyout properties bought with CDBG-MIT must be located in an area at risk of future storm damage. By purchasing properties in designated Disaster Risk Reduction Areas (DRRA) and allowing for the relocation of households to non-flood prone areas, SBP is mitigating against the loss of life and property in the future. Therefore, applicants to SBP are not required to prove existing storm damage but their property must be located in a DRRA. Further details on updates to the Strategic Buyout Program can be found in Section 6.1 and Section 10.7.

1.4 Allocation Changes

Program	Total	% of Total Allocation	$ to LMI	% to LMI	$ to HUD-defined MID areas	% to HUD-defined MID areas
Administrative Costs	$10,134,300	5%	$0	0%	$5,067,150	50%
Planning Costs	$15,201,450	8%	$0	0%	$7,600,725	50%
Strategic Buyout	$123,103,334	61%	$68,937,867	56%	$119,410,234	97%
Public Housing Restoration	$36,246,916	18%	$36,246,916	100%	$33,534,011	92%
Infrastructure Recovery	$18,000,000	9%	$16,684,200	93%	$16,317,457	91%
Total	**$202,686,000**	**100%**	**$121,868,983**	**60%**	**$181,929,577**	**89%**

In Substantial Action Plan Amendment 4 (SAPA 4), there are several changes to allocations. Planning costs were increased by $5,067,150 to allow for additional activities that will support resilience planning across the state. More details on these activities are available at www.rebuild.nc.gov/about-us/mitigation. Funds were reallocated in the amount of $36,246,916 to include the Public Housing Restoration Fund as a mitigation activity. An additional $18,000,000 reallocation added the Infrastructure Recovery Program as a mitigation activity. The addition of these programs augments the mitigation strategies being employed by NCORR and supplements the efforts of the Strategic Buyout Program. To account for this strategic revision, the total allocation to the Buyout program was reduced by $59,314,066.

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2.0 Authority, Provision of Funds, and Waivers

On February 9, 2018, Public Law (PL) 115-123, the "Bipartisan Budget Act of 2018", made available $28 billion in Community Development Block Grant disaster recovery (CDBG–DR) funds, and directed HUD to allocate not less than $12 billion for mitigation activities proportional to the amounts that CDBG–DR grantees received for qualifying disasters in 2015, 2016, and 2017. Of this mitigation allocation, the State of North Carolina has received $168,067,000 by formula announced in the August 30, 2019, Federal Register Notice, 84 FR 45838. On January 6, 2021, an additional allocation of $34,619,000 in CDBG-Mitigation funding was made to the state under Public Law 116-20 for qualifying disasters in 2018 (announced in 86 FR 561).

North Carolina Session Law 2018-136 established the North Carolina Office of Recovery and Resiliency (NCORR), as the administering agency for CDBG-DR funds. NCORR is an office within the NC Department of Public Safety. As the implementing agency for CDBG-DR funds, NCORR assumes responsibility for the planning, administration, and implementation of CDBG-MIT funds.

PL 116-20, the "Additional Supplemental Appropriations for Disaster Relief Act, 2019" was enacted on June 6, 2019. In this law, grantees that received an allocation for mitigation funding provided by PL 115–123 in response to Hurricane Matthew may use the CDBG–MIT funds for the same activities, consistent with the requirements of the CDBG–MIT grant, in the most impacted and distressed (MID) areas related to Hurricane Florence. Therefore, the previous Action Plan contained activities that addressed the impact of both Hurricane Matthew and Hurricane Florence. On January 6, 2021, in 86 FR 561, the additional CDBG-MIT funds allocated to NCORR under PL 116-20 indicated that these funds may also be utilized for the same activities, consistent with the requirements of the CDBG-MIT grant, in the MID areas impacted by Hurricanes Matthew and Florence.

To fulfill the requirements of this new allocation, NCORR must submit a Substantial Amendment to the Action Plan for CDBG-MIT activities that identifies mitigation needs. This SAPA provides a summary of the actions, activities, and resources used to address the State's priority mitigation needs and goals. It is designed to help the State, local units of government, and other partners assess current and future needs, and will be updated as new information or changing conditions warrant a change in approach. Section 11.0 outlines the requirements for the CDBG-MIT Substantial Amendment process.

Additionally, a Federal Register notice in June 2022 described a modification to the "one-for-one" housing replacement waiver under Public Law 115-123 and 116-20 Waivers and Alternative Requirements. CDBG-MIT grantees are not required to demonstrate storm tie-back, and therefore CDBG-MIT funds may be used to remove lower-income dwellings in a hazardous zone as long as it meets the grantee's definition of "not suitable for replacement" due to the need to mitigate future risk.

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3.0 Executive Summary

The State of North Carolina is in the unfortunate position of having to respond to two major disaster declarations in quick succession. Hurricane Matthew made landfall in the Carolinas on October 8, 2016. Less than two years later, Hurricane Florence dealt incredible damage to the recovering state when it made landfall on September 14, 2018. The ongoing recovery from Hurricane Matthew was greatly affected, as many areas impacted by Matthew were also impacted by Florence. The Unmet Recovery Needs Assessments and corresponding Action Plans for the Hurricane Matthew and Hurricane Florence recovery delve into the ongoing recovery effort specific to the CDBG-DR allocations for those disasters. Individuals seeking to familiarize themselves with the recovery efforts from those disasters should begin with those reports to understand the full breadth of the ongoing recovery. Topics relevant to CDBG-MIT funding are included in this Mitigation Needs Assessment and Action Plan, although they oftentimes intersect the storm recovery needs.

In Public Law 115-123, the State of North Carolina was allocated $168,067,000 in Community Development Block Grant – Mitigation (CDBG-MIT) funds. In Public Law 116-20, the state was allocated an additional $34,619,000 in CDBG-MIT funds for a total of $202,686,000 in CDBG-MIT funds. CDBG-MIT is a new funding approach from HUD intended to relieve the repetitive cycle of disaster relief allocations to often-impacted areas of the country. There are three Federal Register Notices that outline the requirements and expectations that HUD places on its grantees related to CDBG-MIT funds:

- 84 FR 45838, August 30, 2019 (the Main Notice);
- 85 FR 60821, September 28, 2020 (the Omni Notice); and
- 86 FR 561, January 6, 2021.

This Action Plan as amended is the State of North Carolina's plan to use the $202.68 million allocation in accordance with the Notices. The administering agency, the North Carolina Office of Recovery and Resiliency (NCORR), an office of the North Carolina Department of Public Safety (NCDPS), will be administering the grant on behalf of the State of North Carolina. References to the HUD grantee and to the State as a decision-making entity are construed to mean NCORR in all instances.

The Action Plan consists primarily of the Mitigation Needs Assessment, an analysis of the specific conditions in the State which present a weakness in the disaster recovery cycle. These mitigation needs are placed in context with "Community Lifelines," those critical service systems that when damaged present a major obstacle to full recovery. The Mitigation Needs Assessment explains what risks are present in MID areas affected by Hurricanes Matthew and Florence, which Community Lifeline(s) face the greatest risks, and further develops a foundation to determine which programs would be most effective in mitigating that risk.
The Mitigation Needs Assessment is followed by a review of the long-term planning and risk mitigation considerations, to ensure that the forward-looking aspect of the CDBG-MIT

allocation is not lost on temporary solutions to permanent problems. A review of how CDBG-MIT funds may be leveraged with other funds, how the natural infrastructure plays a role in the mitigation plan, how costs will be controlled, and NCORR's plans to minimize displacement and ensure accessibility are then reviewed in context with the Assessment.

NCORR's description of programs supported by CDBG-MIT funds is included in Section 10.0, including a description of the Strategic Buyout Program, the Public Housing Restoration Fund, and the Infrastructure Recovery Program. NCORR's approach to ensure that its proposed programs equitably treat protected classes and historically underserved groups is included in Section 10.6. In this part, NCORR reviews the historical context for discriminatory behavior in federally funded programs and assesses the demographic data and unique characteristics of storm-impacted counties. This data is also provided for those Disaster Risk Reduction Areas (DRRA) that have been formally identified and approved by the counties as the locations for NCORR's Strategic Buyout Program.

The result of the analysis is that NCORR's DRRAs are representative of the vulnerable populations of the recovering communities, significantly more diverse than state demographics, and more likely to serve LMI and protected groups. Providing the buyout program in these areas will work to counter the systemic issues identified in the historical context review. Furthermore, during the process of amending this action plan, NCORR found that an ongoing need to address impacts to affordable housing for renters and critical infrastructure after Hurricane Matthew and Florence presented an opportunity to diversify strategic investment of mitigation funds to support long term recovery and mitigation of current and future risks by adding the Public Housing Restoration Fund and the Infrastructure Recovery Program.

After completing the Mitigation Needs Assessment in 2019 and updating it in 2021 and 2022, NCORR plans to engage the public and community stakeholders to share a preliminary approach to the use of funds during a public hearing held during the public comment period of SAPA 4. A 2022 public meeting will build upon the outreach efforts made in 2019 when five separate public engagements were held in Robeson, Edgecombe, Craven, Carteret, and Wayne Counties. As in 2019, NCORR sought feedback on the use of funds allocated in 2021. After submitting the Action Plan for public comment in early November 2019, NCORR again held public hearings in Wayne County and Carteret County to review the draft plan. Separately, impacted jurisdictions were provided a stakeholder survey and asked for similar feedback about the community's mitigation needs. The Community Advisory Committee (CAC) plans to meet to review amendments to this plan and the public comment period will run from December 9, 2022 until January 23, 2023.

In final consideration of the data available from the Mitigation Needs Assessment, ongoing disaster recovery needs, community and stakeholder input, regulatory requirements, and an analysis of its programs and funding sources, NCORR has determined that a strategic revision to the use of CDBG-MIT funds to add mitigation program activities was warranted for meaningful investment in long-term hazard mitigation. By weaving in the Public Housing Restoration Fund and the Infrastructure Recovery Program, NCORR is taking a more comprehensive approach to

mitigation and committing to addressing the risks associated with long term recovery in a holistic way. An additional small allocation of CDBG-MIT funds for planning activities will allow for excellent plan design, coordination with local and regional entities in plan development, and sufficient public outreach and engagement to drive a plan responsive to the needs of impacted communities.

A summary of proposed allocations is found below:

Table 1 - CDBG-MIT Allocations (SAPA4)

Program	SAPA 2 Total	SAPA 4 Total	% of Total Alloca-tion	$ to LMI	% to LMI	$ to HUD-defined MID areas	% to HUD-defined MID areas
Administrative Costs	$10,134,300	$10,134,300	5%	$0	0%	$5,067,150	50%
Planning Costs	$10,134,300	$15,201,450	8%	$0	0%	$7,600,725	50%
Strategic Buyout	$182,417,400	$123,103,334	60%	$68,937,867	56%	$119,410,234	97%
Public Housing Restoration Fund	N/A	$36,246,916	18%	$36,246,916	100%	$33,534,011	92%
Infrastructure Recovery Program	N/A	$18,000,000	9%	$16,684,200	93%	$16,317,457	91%
Total	$202,686,000	$202,686,000	100%	$121,868,983	60%	$181,929,577	89%

Table 1 shows the allocation of an additional $5,067,150 for resilience planning activities, as well as a reduction in the overall allocation for the Strategic Buyout Program from $182,417,400 to $123,103,334. This allows for the diversification of NCORR's mitigation strategies by adding programming in the affordable housing and infrastructure categories. A proposed allocation of $36,249,916 is included for the Public Housing Restoration Fund, and $18,000,000 for the Infrastructure Recovery Program. NCORR plans that over fifty percent of the funds for the buyout program and the additional housing and infrastructure mitigation programs will be expended to assist low- and moderate-income households and that 85% of overall CDBG-MIT funds will be expended in HUD MID areas.

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4.0 Mitigation Needs Assessment

4.1 Background

According to HUD guidance in the Notices, CDBG-MIT funds represent a unique and significant opportunity for grantees to use this assistance in areas impacted by recent disasters to carry out strategic and high-impact activities to mitigate disaster risks and reduce future losses. HUD guidance further specifies that CDBG-MIT funds are closely aligned with FEMA funds for a similar purpose, such as the Hazard Mitigation Grant Program (HMGP). To align closely with FEMA guidance and best practices, as well as the CDBG-MIT specific requirements, the State has reviewed the resources required by HUD in the Notice:

- The Federal Emergency Management Agency Local Mitigation Planning Handbook
    - https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-planning-handbook_03-2013.pdf
- The Department of Homeland Security Office of Infrastructure Protection Fact Sheet
    - https://www.cisa.gov/sites/default/files/publications/ip-fact-sheet-508.pdf
- The National Association of Counties, Improving Lifelines: Protecting Critical Infrastructure for Resilient Communities
    - https://www.naco.org/sites/default/files/documents/NACo_ResilientCounties_Lifelines_Nov2014.pdf
- The U.S. Department of Housing and Urban Development CPD Mapping Tool
    - https://www.hudexchange.info/resource/2129/cpd-maps-consolidated-plan-and-continuum-of-care-planning-tool/

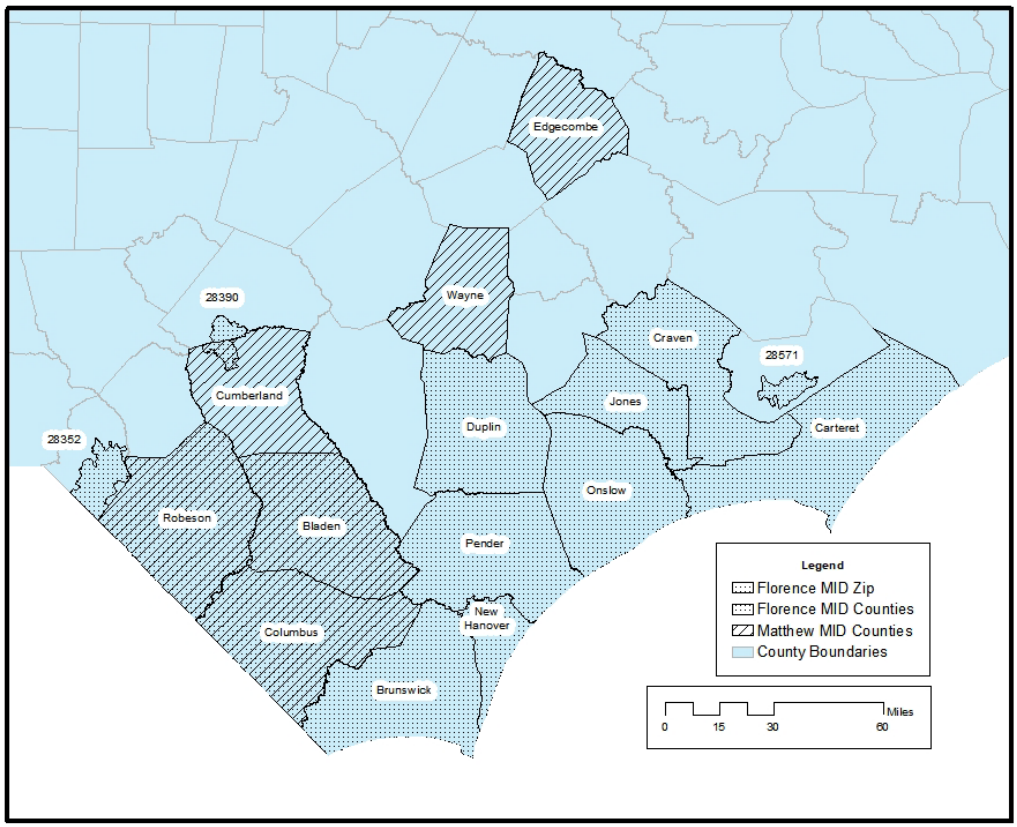
Other resources were supplied by HUD, such as the National Interagency Coordination Center (NICC) for coordinating the mobilization of resources for wildland fire and the U.S. Forest Service's resources around wildland fire. An analysis of wildfire risk was conducted as a part of the Mitigation Needs Assessment (see Part 2 and subsections, below), and these resources were also reviewed in so far as they were applicable to the most urgent mitigation needs facing the MID areas.

The $202.68 million in CDBG-MIT funds allocated in the Main Notice and the 2021 MIT Notice permit the State of North Carolina to use the CDBG–MIT funds for the same activities, consistent with the requirements of the CDBG–MIT grant, in the most impacted and distressed areas related to both Hurricanes Matthew and Florence. The HUD-identified MID areas are listed and mapped below:

Table 2 - MID Areas, Hurricanes Matthew and Florence

Hurricane Matthew (DR-4285)	Hurricane Florence (DR-4393)	
Bladen*	Robeson*	New Hanover
Columbus*	Brunswick	Onslow
Cumberland*	Carteret	Pender
Edgecombe	Columbus*	Bladen (Zip Code 28433) *
Robeson*	Craven	Pamlico (Zip Code 28571)
Wayne	Duplin	Scotland (Zip Code 28352)
	Jones	Cumberland (Zip Code 28390) *
*Indicates a county declared a MID area for both disasters. Note that Zip Code 28390 is partially shared between both disasters.		

Figure 1 - Map of MID Areas, Hurricanes Matthew and Florence



Where data was not available at the zip code level, the county level data for that zip code (28433 in Bladen County, 28571 in Pamlico County, 28352 in Scotland County, and 28390 in

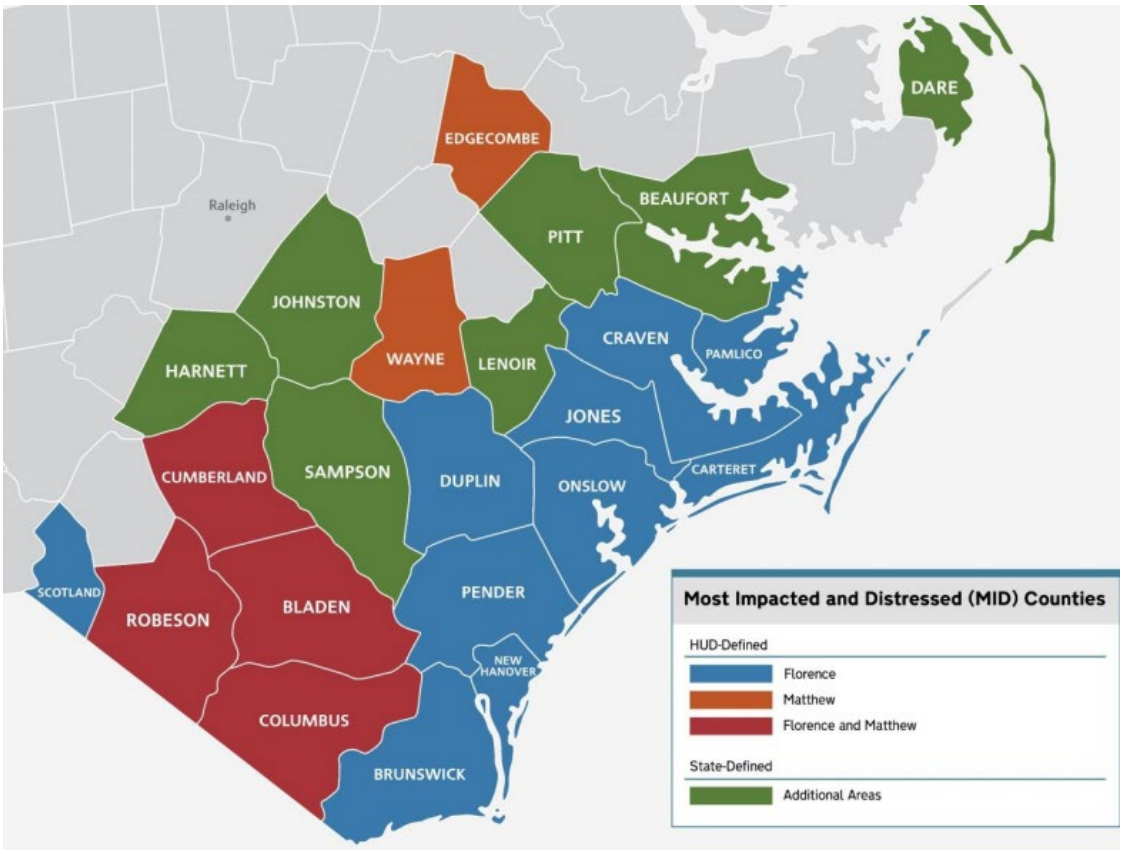
Cumberland County) was used instead. In accordance with HUD guidance, NCORR considers expenditures within the county where the MID zip code is located to comply with the MID expenditure requirement.

Although the allocation is specific to hurricane recovery, the Notice requires that the application of CDBG-MIT funding assess many types of risks, based on a risk-based Mitigation Needs Assessment. The foundation of the Mitigation Needs Assessment is the State of North Carolina's Hazard Mitigation Plan (HMP) drafted by North Carolina Emergency Management (NCEM), a branch of the North Carolina Department of Public Safety (NCDPS). The HMP is a federally mandated plan that identifies hazards that could potentially affect North Carolina and identifies actions to reduce the loss of life and property from a disaster across the state. The plan is required to have the following components as mandated in the Disaster Mitigation Act of 2000: Planning Process, Risk Assessment, Mitigation Strategies, Coordination of Local Plans; Plan Maintenance; and Plan Adoption and Assurances. All of the requirements for each section are further defined in the 44 CFR §201.4[1], the Federal Emergency Management Agency (FEMA) State Plan Review Guide, and the FEMA State Plan Review Tool.

The State of North Carolina benefits from an Enhanced Hazard Mitigation Plan. An enhanced status is a designation from FEMA given to State or Tribal governments that demonstrate that they have developed a comprehensive mitigation program and can manage increased funding to achieve its mitigation goals. The amount of HMGP funding available to the Grantee is based on the estimated total Federal assistance, subject to the formula that FEMA provides for disaster recovery under Presidential major disaster declarations. The formula provides for up to 15 percent for HMGP for states with Standard Mitigation Plans and up to 20 percent for HMGP to states with an Enhanced Mitigation Plan. As of December 31, 2020, North Carolina was one of only 14 States that have a designated Enhanced Plan.[2]

The Mitigation Needs Assessment will therefore consider the State's Enhanced HMP as it relates to the Most Impacted and Distressed (MID) areas affected by both Hurricane's Matthew and Florence. While the Mitigation Needs Assessment acknowledges the many hazards faced by the people and property in the State of North Carolina, the focus will remain on risks which can be mitigated with the resources available and only in those areas determined by HUD or by the State to be MID areas.

Figure 2 - Map of Both HUD-Defined and State-Defined MID Areas, Hurricanes Matthew and Florence



In the Mitigation Needs Assessment, the terms disaster, hazard, and risk are used commonly and frequently interchangeably. For the purpose of this Assessment, FEMA defines a hazard as something that is potentially dangerous or harmful, often the root cause of an unwanted outcome. Natural hazards are defined as those which are related to weather patterns and/or physical characteristics of an area, and finally, risk is defined as the potential for an unwanted outcome resulting from an incident, event, or occurrence, as determined by its likelihood and the associated consequences.[3]

Generally, a hazard cannot be removed from the environment – floods and hurricanes will continue to happen regardless of human intervention and planning – however, the risk posed by the hazard is addressed by limiting the exposure of human value by either reducing the probability of loss or the magnitude of the loss. Mitigation in this context therefore refers to any action taken to reduce risk.

NCORR sought the input of all stakeholders in the MID counties in the generation of this assessment and its update. Stakeholders included the representative group of local governments, councils of government, and citizens. Public hearings were held at venues spread throughout the MID counties in 2019 and held virtually in 2021 in consideration of additional funding received by NCORR. A public meeting of the Citizens Advisory Committee to discuss

proposed changes is also a part of the substantial amendment process. Public hearing notifications are widely publicized and also through reaching out to local houses of worship and civic groups. Meetings with local officials and citizens is an ongoing activity. Each proposed CDBG-MIT activity is vetted through the lens of fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies that will be promulgated through the implementation of MIT funded projects.

Climate disasters are becoming the new norm and studies indicate that the poorest one-third of the counties in the United States are the most vulnerable to socioeconomic threats from natural catastrophes and climate change. [4] Best practices and formative guidance were derived from the Environmental Protection Agency (EPA) *Regional Resilience Toolkit.*[5]

4.2 Method

Guidance issued in the Main Notice specifies how to approach the Mitigation Needs Assessment. In addition to the mitigation needs identified in the State's Enhanced HMP, the characteristics and impacts of current and future hazards identified through the recovery of Hurricane Matthew and Hurricane Florence are also a major factor in assessing the mitigation need. However, focusing on past events alone provides an incomplete understanding of the true risk to the State of North Carolina and its people created by hazard conditions.

The Mitigation Needs Assessment seeks to combine the institutional knowledge contained in the HMP, lessons learned from previous disaster recovery (specifically Hurricane Matthew and Florence recovery efforts), and the local knowledge from citizens and stakeholders in disaster-impacted areas. These three sources are the primary source of hazard, risk, and mitigation information for the Mitigation Needs Assessment.

For each of the three primary sources contributing to the Mitigation Needs Assessment, the risks are quantitatively assessed according to their potential impacts on seven critical service areas, also known as the Community Lifelines, identified in V.A.2.a.(1). of the Main Notice:

1. Safety and Security
2. Communications
3. Food, Water, Sheltering
4. Transportation
5. Health and Medical
6. Hazardous Material (Management)
7. Energy (Power and Fuel)

The outcome of the process is the comparison of relative risk to the seven critical service areas by hazard type to inform a mitigation approach using CDBG-MIT funds in the most effective way

possible. An important product of this exercise is a risk assessment that assigns values to risks for the purpose informing priorities, developing, or comparing courses of action, and informing decision making in the CDBG-MIT context. After assessing the risks to the Community Lifelines, appropriate mitigation approaches are reviewed.

The Mitigation Needs Assessment is a snapshot in time of the current mitigation needs, and subject to change as shifting priorities and risks are discovered by the State. As new risks are identified, or as previously identified risks are sufficiently mitigated, the State will update the Assessment as needed. Changes to the Mitigation Needs Assessment which result in the addition of a CDBG-MIT defined Covered Project, a change in program benefit or eligibility criteria, the addition or deletion of an activity, or the allocation or reallocation of $15 million or more will result in a substantial amendment to the Action Plan. Substantial Amendment 4 includes the addition of program activities including the Public Housing Restoration Fund and Infrastructure Recovery Program that amount to reallocations amounting to more than $15 million.

If NCORR does add a Covered Project, the amendment will include the following:

- **Project Description and Eligibility**: How the project meets criteria for a mitigation activity, a description of total project costs above $100 million with at least $50 million coming from CDBG funds (and any other funding sources); and eligible CDBG activity.
- **Mitigation Needs Assessment**: Description of how the project aligns with needs identified in the Mitigation Needs Assessment.
- **National Objective and Additional Mitigation-Specific Criteria**: The amendment will describe how NCORR will monitor long term efficacy of the project, including operation and maintenance costs, maintaining documentation of impact/outcomes related to risk reduction, and how the project will reflect changing environmental conditions by using different risk management tools or other sources of funding.
- **Benefit Cost Analysis:** Description of Benefit Cost Analysis with a BCA that is more than 1.0.

4.3 State Enhanced Hazard Mitigation Plan

The HMP identifies many hazards for the State of North Carolina. The HMP categorizes the identified hazards between natural hazards and technological hazards. Further sub classifications include manmade hazards, public health hazards, and agricultural hazards.

The hazards in the HMP were identified by a working group of subject matter experts (SME) from across state agencies, academia, and the private sector. For the 2018 update of the HMP, previous versions of the list of potential hazards were reviewed and discussed in detail in coordination with the Emergency Management Accreditation Program (EMAP) working group which is made up of representatives from each branch of NCEM. It was then presented to the Risk Management Coordinating Council as the official list of hazards pending any additional input and/or comments. There was not any additional input or comments received, therefore it was deemed to be the official list to include in the HMP.[6]

Table 3 - HMP Identified Hazards

Natural Hazards	Technological Hazards
Flooding	Hazardous Substances
Hurricanes and Costal Hazards	Hazardous Materials
Severe Winter Weather	Hazardous Chemicals
Excessive Heat	Oil Spill
Earthquakes	Radiological Emergency - Fixed Nuclear Facilities
Wildfires	Terrorism
Dam Failures	Chemical
Drought	Biological
Tornadoes/Thunderstorms	Radiological
Geological	Nuclear
Landslides/Rock Fall	Explosive
Sinkholes/Coastal Erosion	Cyber
Infectious Disease	Electromagnetic Pulse

These identified hazards are applicable to the entire state. NCORR understands that the hazards present in non-impacted areas of the state, such as earthquakes and geological hazards, pose significant threat to life and property where they are more commonplace. However, with the limited funds available, and consistent with HUD guidance, the analysis of risks in the Mitigation Needs Assessment will primarily focus on the geographic extent of the MID areas for Hurricane Matthew and Florence and even further focus on mitigating the principal hazards present or worsened by the disaster events.

The HMP goes on to catalog each hazard to include a description, extent (as defined by FEMA), location, hazard history, changing future conditions, impact, future probability, and Emergency Operation Plan reference. The Mitigation Needs Assessment will not reiterate all sections of the HMP for all hazards, but the full Plan is available at https://files.nc.gov/ncdps/documents/files/State%20of%20North%20Carolina%20Hazard%20Mitigation%20Plan%20Final%20As%20Adopted.pdf.

The HMP is informed by 29 regional plans. The MID areas account for eight of these plans. The breakdown of regional HMPs, their approval dates, expiration dates, and participating MID area are below. These dates were last revised in 2021, during Substantial Action Plan Amendment 3.

Table 4 - Regional HMP and MID Areas

Plan	Plan Approved	Plan Expiration	Participating MID
Pamlico Sound Regional HMP	06/16/2020	06/15/2025	Carteret
			Craven
			Pamlico
Southeastern NC Regional HMP	04/26/2016	4/18/2026	Brunswick
			New Hanover
			Onslow
			Pender
Bladen-Columbus-Robeson Regional HMP	10/7/2020	10/06/2025	Bladen
			Columbus
			Robeson
Neuse River Basin Regional Multi-Jurisdictional HMP	09/18/2020	09/17/2025	Jones
			Wayne
Cumberland-Hoke Regional HMP	06/28/2016	06/27/2026	Cumberland
Nash-Edgecombe-Wilson Regional HMP	11/6/2020	11/05/2025	Edgecombe
Pee Dee Lumber Regional HMP	03/23/2018	03/22/2023	Scotland
Sampson-Duplin Regional HMP	04/12/2016	04/11/2021	Duplin

The regional plans for MID areas are currently up to date. A final draft of the latest version of the Sampson-Duplin Regional HMP was published in November 2020 and is pending approval. The regional plans were reviewed for applicability and to fill knowledge gaps in the State HMP.

To first determine the applicability of the hazard to the Mitigation Needs Assessment, the risk is assessed using the probability method reviewed at the end of Section 4.2 above and the severity method in section 4.3.5.

4.3.1 Definitions

To align with the HMP, this Mitigation Needs Assessment will adopt the definitions found in the HMP for the disasters specified in Part 4.3 above.

4.3.1.1 Flooding

The HMP defines flooding as a localized hazard that generally results from excessive precipitation. Floods are generally considered to fall in one of two categories: flash floods, which are the product of heavy localized precipitation that occurs within a short period of time at a given location; and general floods, caused by precipitation that occurs during a longer period of time over a particular river basin.

In addition to the two flood categories, there are three types of flooding based on the flood conditions and environment. Riverine flooding is a function of precipitation levels and water runoff volumes within the watershed of the stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall. These conditions are produced by tropical systems during the summer and fall, and nor'easters and other large coastal storms during the winter and spring. Generally, it is difficult to discuss coastal flooding separate from coastal hazards, such as hurricanes, and so often these hazards are discussed together. Finally, urban flooding occurs where there has been development within stream floodplains or in coastal areas where there are high levels of development. Urban flooding is worsened by the development of impermeable surfaces such as roadways, pavement, and buildings.

Flooding is the most common environmental hazard to affect the United Sates, due to the widespread geographical distribution of river valleys and coastal areas, and the attraction of human settlements in these areas. Most recent presidential declarations concerning major disaster have been associated with flash floods and general flooding.[7] Both the Hurricane Matthew and Hurricane Florence allocations are associated with flooding, as well as Hurricanes and Coastal Storms (to be discussed later).

According to the North Carolina Floodplain Mapping Program, the amount of land in the floodplain in North Carolina accounts for about 18.2 percent of the total land area in the state. The North Carolina Floodplain Mapping Program is currently in the process of developing and updating digital flood hazard data for the State's 100 counties.

4.3.1.2 Hurricanes and Coastal Hazards

Hurricanes are cyclonic storms that originate in tropical ocean waters poleward of about 5 degrees latitude. Hurricanes are heat engines, fueled by the release of latent heat that results from the condensation of warm water. Their formation requires several elements, including: a low-pressure disturbance; sufficiently warm sea surface temperature; rotational force caused by the spinning of the earth; and the absence of wind shear in the lowest 50,000 feet of the atmosphere. Hurricanes can produce an array of hazardous weather conditions, including storm surge, high winds, torrential rain, and tornadoes.

Hurricanes have the greatest potential to inflict damage as they move from the ocean and cross the coastline. The crossing of the center of the storm's eye is called landfall. Because hurricanes derive their strength from warm ocean waters, hurricanes are generally subject to deterioration once they make landfall. The forward momentum of a hurricane can vary from just a few miles

per hour to up to 40 mph. This forward motion (combined with a counterclockwise surface flow) makes the hurricane's right-front quadrant the location of its most potentially damaging winds.[8]

4.3.1.3 Severe Winter Weather

The winter storms that typically impact North Carolina generally form in the Gulf of Mexico or off the southeast Atlantic Coast. The entire state has a likelihood of experiencing severe winter weather. The threat varies by location and by type of storm. Coastal areas typically face their greatest weather threat from nor'easters and other severe winter coastal storms. These storms can contain strong waves and result in extensive beach erosion and flooding. Freezing rain and ice storms typically occur once every several years at coastal locations and severe snowstorms have been recorded occasionally in coastal areas.[9]

4.3.1.4 Excessive Heat

Excessive heat is a dangerous and deadly occurrence in North Carolina. According to the National Weather Service, heat is one of the leading weather-related causes of loss of life in the United States.[10] The Centers for Disease Control and Prevention indicates that 618 people in the United States are killed by extreme heat every year.[11] Also, according to the CDC, that number represents more deaths than hurricanes, lightning, tornadoes, earthquakes and floods combined.[12] The CDC defines extreme heat as "summertime temperatures that are much hotter and/or humid than average." [13]

4.3.1.5 Earthquakes

An earthquake is a vibration or shaking of Earth's surface due to an underground release of energy. They can be caused by various conditions, such as sudden movements along geological faults or volcanic activity. Earthquake magnitudes, or severity, are recorded on the Richter scale with seismographs. Some may be so small that they are virtually unnoticed, while others can destroy entire cities. Seismology, the study of earthquakes, helps scientists understand what areas are more prone to experiencing earthquakes, such as along the Ring of Fire; however, earthquakes are generally unpredictable.

Earthquakes in NC are fairly frequent but large seismic events are rare.[14] Since 1735, North Carolina has experienced 24 earthquakes that caused at least architectural damage. Of these 24 earthquakes, only eight have originated from within NC. From historical data, scientists from the U.S. Geological Survey (USGS) and several university research centers have produced maps that project the expected ground motion for various return periods. Until 2020, the epicenter for the last recorded damaging event that affected the state was in Virginia in 2011.[15] However, on August 9, 2020, a 5.1 magnitude earthquake originated from Sparta, NC. This was the second strongest earthquake since the 5.2 magnitude earthquake in 1926 and the 5.5 in 1916[16] which also originated from within NC.

4.3.1.6 Wildfires

A wildfire is an uncontrolled burning of grasslands, brush or woodlands. The potential for wildfire depends upon surface fuel characteristics, recent climate conditions, current meteorological conditions, and fire behavior. Hot, dry summers and dry vegetation increase susceptibility to fire in the fall—a particularly dangerous time of year for wildfire.

Southern forest landscapes have had a long history of wildfire. Wildfires have taken place as a natural process for many thousands of years, playing an important role in the ecological integrity of our natural environment. Human settlement has significantly influenced changes in the spatial and temporal pattern of wildfire occurrence, as well as the risks associated with them for human life and property.[17]

4.3.1.7 Dam Failures

Dams store water in reservoirs during times of excess flow, so that water can be released from the reservoir during other times, when natural flows are inadequate to meet the needs of water users.[18] Dams can pose risks to communities if not designed, operated, and maintained properly. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing the loss of life and considerable property damage if there are people located downstream from the dam. Many dam failures have resulted because of an inability to safely pass flood flows. Failures caused by hydrologic conditions can range from sudden (with complete breaching or collapse), to gradual (with progressive erosion and partial breaching). The most common modes of failure associated with hydrologic conditions include overtopping, the erosion of earth spillways, and overstressing the dam or its structural components.[19]

Like all built structures, dams deteriorate. Lack of maintenance causes dams to be more susceptible to failure. Often, the corrugated piping used in dam construction has a shorter life span than the dam itself, involving expensive replacement to avoid potential dam weakening. In the United States since 2000, more than 600 dam incidents, (including 70 dam failures) were reported to the National Performance of Dams Program, which collects and archives information on dam performance as reported by state and federal regulatory agencies and dam owners. Dam incidents are events (such as large floods, earthquakes, or inspections) that alert dam safety engineers to deficiencies that threaten the safety of a dam. Due to limited state staff, many incidents are not reported, and therefore the actual number of incidents is likely to be much higher.

Communities continue to develop along the state's rivers, many in potential dam-failure inundation zones. Further exacerbating the potential risk to citizens is the disrepair of many dams and the lack of sound plans to help guide necessary repairs and warning systems to alert the public in the event of a dam failure.[20]

4.3.1.8 Drought

Drought refers to an extended period of deficient rainfall relative to the statistical mean established for a region. Drought can be defined according to meteorological, hydrological, and

agricultural criteria. Meteorological drought uses long-term precipitation data to measure present precipitation levels against departures from normal precipitation levels. Hydrological drought is defined by surface and subsurface water supply deficiencies based on stream flow, lake, reservoir, and ground water levels. Agricultural drought occurs when there is insufficient soil moisture to satisfy the water budget of a specific crop, leading to destroyed or underdeveloped crops with greatly depleted yields.

A drought is a prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality. High temperatures, high winds, and low humidity can worsen drought conditions and make areas more susceptible to wildfire. Human demands and actions have the ability to hasten or mitigate drought-related impacts on local communities.[21]

4.3.1.9 Tornadoes/Thunderstorms

A tornado is a violently rotating column of air in contact with the ground and extending from the base of a thunderstorm. A condensation funnel does not need to reach to the ground for a tornado to be present; a debris cloud beneath a thunderstorm is all that is needed to confirm the presence of a tornado, even in the total absence of a condensation funnel.

It is spawned by a thunderstorm (or sometimes as a result of a hurricane) and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The damage from a tornado is a result of the high wind velocity and wind-blown debris.

Thunderstorms can produce a variety of accompanying hazards including wind, hail, and lightning. Although thunderstorms generally affect a small area, they are very dangerous and may cause substantial property damage.[22]

4.3.1.10 Geological Hazards

The HMP divides Geological Hazards into several subcategories – Landslides, sinkholes, and coastal erosion. A landslide is a downward movement of earth or rock from, driven by gravity. Landslides can be triggered by natural or man-made circumstances, such as heavy rains, earthquakes, rapid snow melt, erosion, or construction.

A sinkhole is an area of ground that has no natural external surface drainage--when it rains, all of the water stays inside the sinkhole and typically drains into the subsurface. Sinkholes can vary from a few feet to hundreds of acres and from less than one to more than 100 feet deep. Some are shaped like shallow bowls or saucers whereas others have vertical walls. Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by groundwater circulating through them. As the rock dissolves, spaces and caverns develop underground. Sinkholes are dramatic because the land usually stays intact for a while until the underground spaces just get too big. If there is not enough support for the land above the spaces, then a sudden collapse of the land surface can occur.

Coastal or beach erosion is the wearing away of the beach and dune sediments due to winds, tidal currents, or wave action. Erosion is typically event-driven and tends to happen during periods of strong winds, high tides and waves, such as a storm; however, continued erosion wears away the coastal profile and can create imbalance on shorelines. An eroding beach may lose feet of sand per year. Erosion clearly affects the environment, but it also is problematic for homes and businesses that are constructed on or near beaches. Severe erosion can cause extreme property loss or damages. Many beaches rely on sandbags to be placed in front of homes and dunes to protect them from falling into the ocean.[23]

4.3.1.11 Hazardous Substance

The HMP defines a hazardous substance as any element, chemical, substance, compound, mixture, agent, solution or substance that an accidental or deliberate release of may cause disease or harm to human health and the environment. Hazardous substances may have one or more of the following intrinsic properties: explosiveness, flammability, ability to oxidize (or accelerate a fire), human toxicity, or corrosiveness. Hazardous materials are found in many different forms and quantities that can potentially cause property damage, injuries, long-lasting health effects, and death. Many of these materials are used and stored on a daily basis in homes and businesses, and transported through major highways, waterways, pipelines, and railways. Each hazard has a different threshold level and can be naturally occurring, which creates many risks in the event of an emergency.

Hazardous material (HAZMAT) incidents consist of solid, liquid and/or gaseous contaminants that can occur at fixed facilities or mobile sources. Many HAZMAT emergencies result from accidents or negligent behavior, but some may be purposefully designed, such as a terror attack. These incidents can be acute or long-lasting and can cause fires or explosions, potentially affecting vast populations of people and wildlife.[24]

4.3.1.12 Radiological Emergency – Fixed Nuclear Facility

A nuclear and radiation accident is defined by the International Atomic Energy Agency as “an event that has led to significant consequences to people, the environment or the facility. Often, this type of incident results from damage to the reactor core of a nuclear power plant, which can release radioactivity into the environment. The degree of exposure from nuclear accidents has varied from serious to catastrophic.[25]

4.3.1.13 Terrorism

Terrorism is defined in the United States by the Code of Federal Regulations is “the unlawful use of force or violence against persons or property to intimidate or coerce a government, civilian population, or any segment thereof, in furtherance of political or social objectives.” Terrorist acts may include assassinations, kidnappings, hijackings, bombings, small arms attacks, vehicle ramming attacks, edged weapon attacks, incendiary attacks, cyber-attacks (computer based), and the use of chemical, biological, nuclear and radiological weapons. Historically the main categories of weapons of mass destruction (WMDs) used in terror attacks are Chemical, Biological, Radiological, Nuclear, and Explosive (collectively referred to as CBRNE).[26]

4.3.1.14 Other Hazards

The HMP includes other hazards, such as cyber hazards, electromagnetic pulses, and infectious diseases. These hazards either indirectly affect the built environment or are not well mitigated using the conventional mitigation techniques used by the HMGP. To greater align with FEMA HMGP, these hazards are not included in the Mitigation Needs Assessment. Greater detail on these hazards remains available in the HMP.

4.3.2 Highly Likely Hazards

The HMP includes maps and analysis of future probability based on past events. The HMP divides hazards into three broad groups of probability – Highly Likely, Likely, and Unlikely to occur. Each of these categories is defined below in context with the MID area. Note that the HMP description of probability is qualitative, primarily based on historical hazard data.

To determine whether the hazard was present in the MID areas, the spatial data included in the HMP was visually reviewed to determine overlap with the impacted areas. In consideration of future changing conditions, the hazard probability is re-assessed based on anticipated changes in climate, sea level rise, and other environmental and social factors. The Mitigation Needs Assessment adopts the three hazard probability categories, but does not necessarily match the categories in the HMP in every instance.

Table 5 - Hazard probability, MID areas

Probability	Hazard
Highly Likely	Flooding
	Hurricanes and Coastal Hazards
	Tornadoes/Thunderstorms
Likely	Hazardous Substances
	Excessive Heat
	Wildfires
	Drought
Unlikely	Severe Winter Weather
	Earthquakes
	Dam Failures
	Geological Hazards
	Radiological Emergencies
	Terrorism

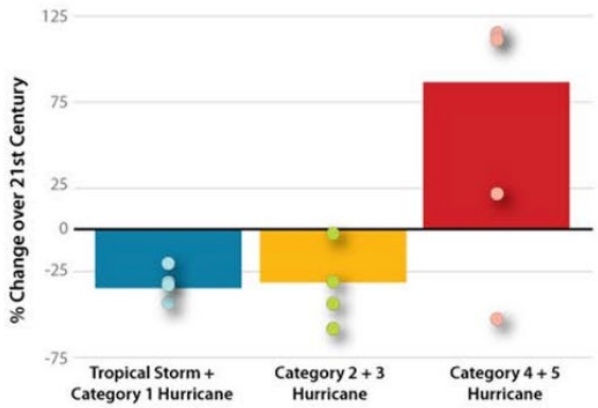
Source: State of North Carolina. *Hazard Mitigation Plan, Section 3. Risk and Vulnerability Assessment*. 2018. https://www.ncdps.gov/documents/enhanced-hazard-mitigation-plan

The first group of hazards are those that are determined to be Highly Likely. Hazards that are determined to be Highly Likely are defined in the HMP as having a 66.7 percent to 100 percent chance of disaster occurrence within a given year. The Highly Likely hazards within the MID areas are flooding, hurricanes and coastal hazards, and tornadoes/thunderstorms. The HMP rates flooding and tornadoes/thunderstorms as Highly Likely events, while hurricanes and coastal hazards are described as Likely.

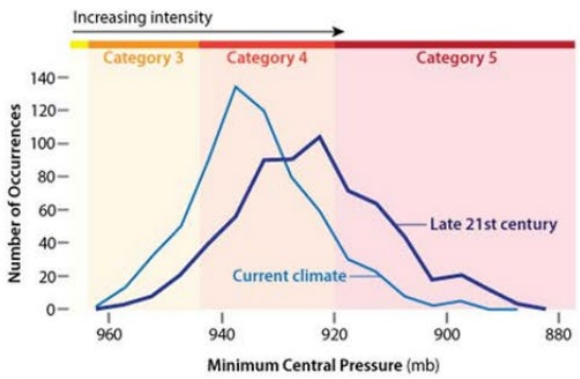
In the Mitigation Needs Assessment, hurricanes and coastal hazards are elevated to Highly Likely for the following reasons. First, at the time of completion of the 2018 HMP, Hurricane Florence had not yet struck North Carolina. With two major storms making landfall in less than two years, and with Hurricane Dorian in 2019, and Hurricane Isaias in 2020, it is evident that hurricanes and coastal hazards warrant additional attention and scrutiny in this Mitigation Needs Assessment.

Additionally, the HMP indicates that changing climate and weather conditions may increase the number and frequency of future hurricane events that impact the State. According to the U.S. Government Accountability Office, national storm losses from changing frequency and intensity of storms are projected to increase anywhere from $4-6 billion in the near future. National Oceanic and Atmospheric Administration (NOAA) reports support that weather extremes will likely cause more frequent, stronger storms in the future due to rising surface temperatures. [27]

Figure 3 - NOAA Climate Models Projection for Future Hurricanes



Climate models project there will be fewer weak to moderate-strength Atlantic hurricanes as surface temperatures rise this century. However, the models predict that a greater number of the hurricanes that do form will tend to strengthen to category 4 and 5 hurricanes. The bars in this graph show the average results from 18 different models. The dots on each bar show a range of results from 4 of the 18 different models. Graph courtesy of Gabriel Vecchi, NOAA GFDL.



Models project there will be an increase in hurricane intensities as the climate warms over the course of this century. Though there will likely be fewer Atlantic hurricanes overall, wind speeds for the ones that do form will be about 4 percent stronger for every 1°C increase in sea surface temperature. Graph courtesy of Tom Knutson, NOAA GFDL.

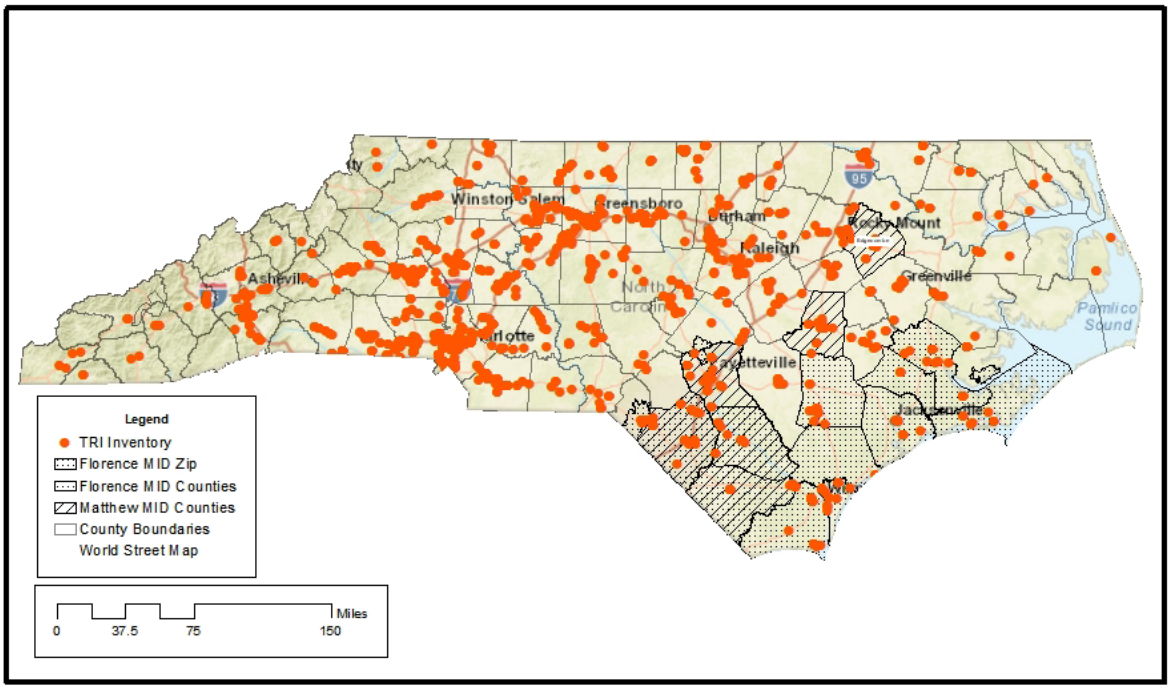
Source: National Oceanic and Atmospheric Administration GFDL

4.3.3 Likely Hazards

Likely hazards are those that have a 33.4 percent to 66.6 percent chance of disaster occurrence in a given year. The Likely hazards in the MID areas are hazardous materials, excessive heat, wildfires, and drought.

The probability of a hazardous material related incident statewide is considered Highly Likely. It's important to note that a hazardous material incident may be minor, but the incidence rate is still comparatively high compared to other more serious disasters. Hazardous Materials disasters are more closely tied with infrastructure development such as roads and bridges where shipments of hazardous materials occur. The majority of fixed HAZMAT locations, cataloged in the Toxic Release Inventory (TRI) maintained by the Environmental Protection Agency (EPA), are located in central and western North Carolina, removed from the MID areas. Therefore, the probability associated with a hazardous materials incident in the MID areas is reduced to Likely rather than Highly Likely.

Figure 4 - Concentration of TRI Sites, NC



Source: United States Environmental Protection Agency. *TRI Factsheet: State - North Carolina*. 2019. TRI Factsheet for North Carolina | TRI Explorer | US EPA

The next three Likely hazards, excessive heat, wildfire, and drought, are related to climate. The HMP includes excessive heat and drought in the Unlikely hazard category. However, as reviewed earlier, the HMP primarily considers past events. Research from NASA suggests that future droughts and heat waves (periods of abnormally hot weather lasting days to weeks) everywhere are projected to become more intense, while cold waves become less intense. Summer temperatures are projected to continue rising, and a reduction of soil moisture, which exacerbates heat waves, is projected for much of the western and central U.S. in summer. By the end of this century, what have been once-in-20-year extreme heat days (one-day events) are projected to occur every two or three years over most of the nation.[28] Therefore, in consideration of changing future conditions, the likelihood of an impact from excessive heat and drought are elevated to Likely.

Wildfires are considered to be Likely in the HMP, and the Mitigation Needs Assessment adopts this classification. This is further corroborated by the number of wildfires during unusual dry periods in the Hurricane Matthew and Florence MID areas. The changing climate conditions leading to increased drought and excessive heat have the same worsening effect on wildfires in the MID areas, which are already more prone to wildfire events.

Figure 5 - Wildfires in NC, 1998-2017

County	Wildfires, 1998 - 2017

Bladen*	2
Brunswick*	4
McDowell	2
New Hanover*	2
Pender*	6
Robeson*	2
Rutherford	2
Swain	2
Other (Statewide)	10
* MID Area	

Source: NOAA: National Centers for Environmental Information. Wildfires by County, Total from 1998 to 2017. https://www.ncdc.noaa.gov/sotc/fire/201713

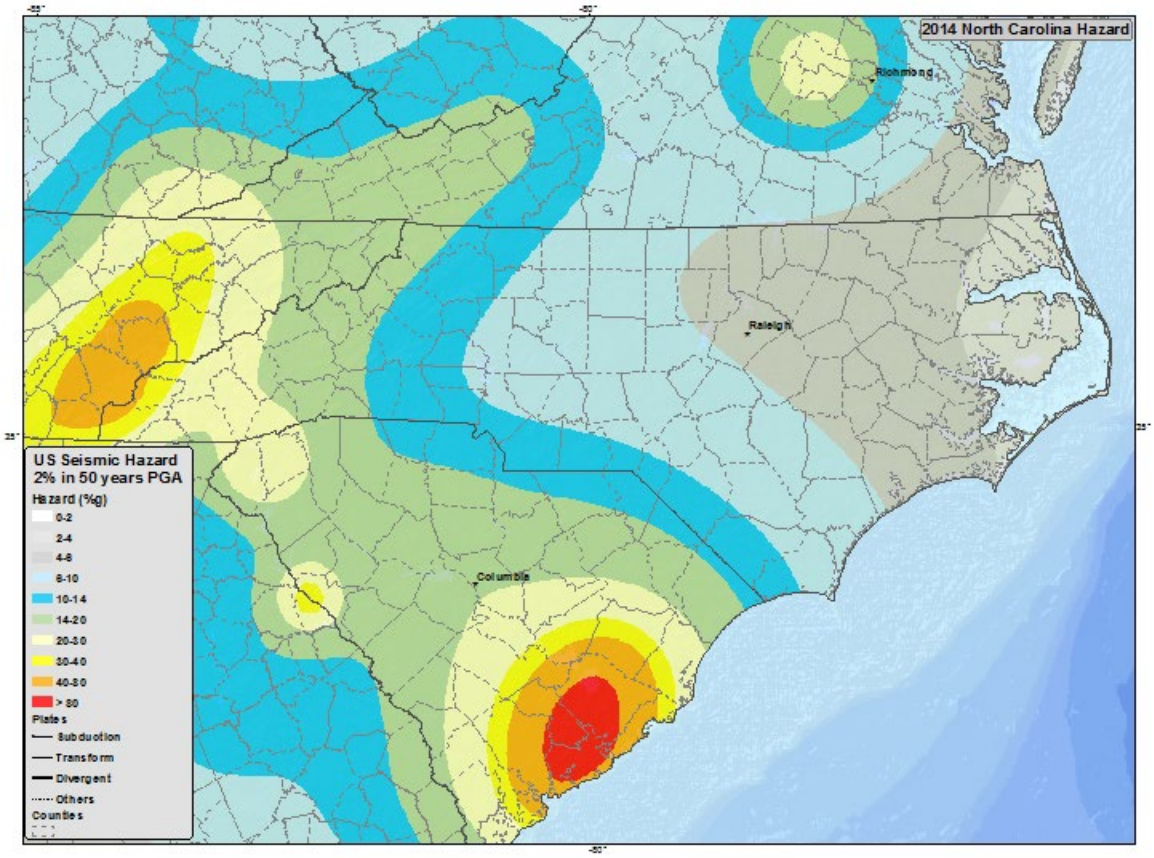
4.3.4 Unlikely Hazards

Many hazards are present statewide that do not manifest regularly in the MID areas. These hazards are determined to be Unlikely for the MID areas, with a chance of a disaster from these hazards between 1 percent and 33.3 percent in a given year. Unlikely hazards include severe winter weather, earthquakes, dam failures, geological hazards, radiological emergencies, and terrorism (including cyber-crime and electromagnetic pulses).

Severe winter weather is categorized by the HMP as a Likely hazard statewide. However, since 1996, many of the MID counties (Brunswick County, Columbus County, Robeson County, New Hanover County, Pender County, and Bladen County) experienced fewer than 10 winter weather events. Severe winter weather is more significant in the western area of the state, such as Avery and Mitchell Counties.[29] Compounded with the climatological considerations discussed for excessive heat, drought, and wildfire in Part 4.3.3 above, continued severe winter weather events in the MID areas is considered Unlikely.

The propensity for earthquakes is concentrated in the western area of the State. A low-risk earthquake hazard exists in the MID areas, and the time horizon for earthquake hazards is extremely long compared to other hazards statewide. In a 50-year time horizon, there is a two percent chance of an earthquake reaching 8-10 percent gravity for a portion of the MID area. An earthquake of that intensity would have moderate to strong perceived shaking and very light to light damage. Adjacent areas are slightly more risk prone, and the more northeastern areas are significantly less risk prone .

Figure 6 - Earthquake hazard, statewide



Source: United States Geologic Survey. *Information by Region – North Carolina*. 2014 Seismic Hazard Map

Dam failure is a complex issue facing the aging dams in place throughout North Carolina. There are more than 5,600 dams in North Carolina. 1,445 of those dams are considered high hazard that could present a risk to public safety and property if a dam failure were to occur. High hazard dams are up from 874 in 1998, indicating that dam failure is a worsening issue for the State.[30] Currently, the greatest number of high hazard dams are found outside of the MID areas in Wake, Mecklenburg, Guilford, Forsyth, and Moore Counties.[31] A total of 103 high hazard dams are located in the MID areas, accounting for 7.12 percent of all high hazard dams in the State.

Table 6 - High Hazard Dams, MID areas

MID Area	# of High Hazard Dams	MID Area	# of High Hazard Dams
Cumberland	54	Edgecombe	2
Wayne	15	New Hanover	2
Duplin	7	Robeson	2
Columbus	5	Carteret	1

Brunswick	4	Craven	1
Bladen	3	Jones	1
Onslow	3	Total	103
Scotland	3	Rest of State	1,342
		Grand Total	**1,445**

Geological hazards are present statewide, but landslides and sinkholes are predominately located outside of the MID areas. Coastal erosion, however, is worth noting in the MID areas as natural processes are exacerbated by sea level rise, potentially worsening or adding unpredictability to the coast of the State. Although the conditions for coastal erosion may be changing, the timescale for a coastal erosion event remains of such significant length that a disaster occurring from coastal erosion remains highly unlikely. According to the HMP, Carteret and New Hanover counties may be most susceptible to coastal erosion compared to other MID areas.[32]

The remaining unlikely hazards, radiological emergencies and terrorism, are more closely tied with population than environmental factors. There is only one nuclear facility within the MID area, the Brunswick Nuclear Plant in Southport, North Carolina, on the Cape Fear River. If there were a nuclear emergency, the areas surrounding this plant would be exposed to potentially dangerous radiation levels. However, the State has no history of major radiological emergencies. While the increasing population near the Brunswick Nuclear Plant may increase the *severity* of a radiological emergency, it does not affect the probability of such an emergency.

Terrorism is most tied to population centers. It is difficult to anticipate a terrorist attack, but there is no particular expectation of increased terrorism in the MID areas, and these areas share the same classification as the rest of the state as a highly unlikely disaster.

4.3.5 Severity

The severity of a potential disaster is the amount of damage dealt to people and property during a potential disaster event. While probability assessments seek to answer “how often”, severity assessments seek to answer “how much.” A Highly Unlikely disaster may cause significant damage, and therefore warrant as much consideration for a mitigation activity as a more frequently occurring, but generally less destructive event.

The assessment of severity divides the hazards identified above into four main categories: Very Severe, Severe, Mild, and Unknown Severity, or Lacking Quantitative Data. The quantitative breaks in severity are defined below.

- **Very Severe.** Very Severe hazards are those that present serious risk to life and property. Very Severe hazards are those that cause greater than $500,000 of damage an occurrence on average and/or have great potential to kill or injure.

- **Severe.** Severe hazards are those that present a risk to life and property. Severe hazards are those that cause between $75,000 and $499,000 an occurrence and/or have potential to injure and possibly kill.
- **Mild Severity.** Mild hazards are those that generally present a lower risk to life and property. These hazards may cause less than $75,000 of damage an occurrence and/or present limited risks to life and property.
- **Unknown Severity or Lacking Quantitative Data.** Hazards of unknown severity may not have occurred in the past (although the probability of occurrence is generally known) or are too varying in intensity to accurately predict damage. These hazards are not dismissed outright, but the historical data and other data available in the HMP is not sufficient to quantify the risk to life and property.

Primarily using the HMP as a reference, the severity rating of each hazard reviewed in Parts 4.3.2 through 0 above is below:

Table 7 - Estimated Hazard Severity

Severity	Hazard
Very Severe	Hurricanes and Coastal Hazards
	Flooding
Severe	Tornadoes/Thunderstorms
	Wildfires
Mild Severity	Severe Winter Weather
	Excessive Heat
Unknown Severity or Lacking Quantitative Data	Drought
	Earthquakes
	Geological Hazards
	Dam Failures
	Hazardous Substances
	Radiological Emergencies
	Terrorism

Source: State of North Carolina. *Hazard Mitigation Plan*. 2018 https://www.ncdps.gov/documents/enhanced-hazard-mitigation-plan

4.3.6 Previous Events

The most reliable measure of severity is the amount of damage (including fatalities and injuries, if applicable) inflicted by previous disaster events. Often severity is conflated with the *intensity* of the event. Intensity is a measure of the strength of a storm, such as the category rating used

for hurricanes, 1 through 5 in the Saffir-Simpson Hurricane Wind Scale. The Mitigation Needs Assessment seeks to reframe severity as impact rather than the natural severity of the disaster. For instance, a Category 1 hurricane may have a greater impact than a Category 5 hurricane, in the appropriate conditions.

The HMP identifies past disasters from 1996 through 2017. Hurricane Florence in 2018 was a presidentially declared disaster that resulted in the allocation of CDBG-DR funds. In addition, some or all of the HUD designated MID counties were also impacted by the following FEMA declared disasters since 2017: Tropical Storm Michael (2018); Hurricane Dorian (2019); Severe Storms, Tornadoes, and Flooding (2020); Hurricane Isaias (2020) and Tropical Storm Eta (2020). The disasters since 2017 are not included in the calculations for flooding or coastal hazards. It is therefore appropriate to assume that flood and coastal disaster events are greatly underestimated in the HMP quantitative assessment of risk based on past events.

4.3.7 Very Severe Impacts

The most severe disaster expected in the MID areas are hurricanes and coastal hazards and flooding.

Hurricanes and coastal hazards present the most severe impacts expressed in past events for the MID areas. The HMP includes coastal hazards from 1993 for a total of 18 hurricanes or tropical storms with impacts to the State. The inclusion of Hurricanes Florence, Dorian, and Isaias and other disasters brings this total to 24. Hurricane Florence (which resulted in CDBG-DR and CDBG-MIT funding), and Hurricanes Dorian and Isaias (that did not receive a CDBG-DR or CDBG-MIT allocation), bring this total to 21 hurricanes impacting HUD MID areas since 1993. Seven of these declared disasters have occurred from 2016-2020.

The total cost of coastal events to North Carolina is catastrophic. The past two major disaster declarations (Hurricane Matthew and Hurricane Florence) combined for nearly $29 billion in damage statewide.[33] The majority of that damage is concentrated in the MID areas identified in this Action Plan. Through 19 storms, the damage has exceeded $32 billion and accounted for 117 fatalities.

Table 8 - Coastal Hazard Impacts, Since 1993

Event	Year	Fatalities	Property and Crop Damage (2017 dollars)
Emily	1993	0	$ 85,400,000
Gordon	1994	0	$ 832,722
Felix	1995	1	$ 1,619,473
Bertha	1996	1	$ 490,700,000

Fran	1996	13	$ 1,927,000,000
Bonnie	1998	1	$ 498,000,000
Dennis	1999	0	$ 4,562,900
Floyd	1999	13	$ 6,600,000,000
Irene	1999	1	$ 45,923
Isabel	2003	2	$ 641,000,000
Alex	2004	0	$ 9,800,000
Charley	2004	3	$ 29,190,000
Ivan	2004	8	$ 17,500,000
Ophelia	2005	0	$ 78,400,000
Earl	2010	0	$ 3,350,000
Irene	2011	6	$ 201,400,000
Arthur	2014	0	$ 698,500
Matthew	2016	28	$ 4,800,000,000
Florence	2018	40	$ 17,000,000,000
Total	**-**	**117**	**$ 32,389,499,518**

Using the table above, the average fatality per event is greater than six and the average expected loss is $1.7 billion, a staggering amount of damage per occurrence. An analysis of both annualized and per-occurrence average where available indicates that hurricanes and coastal hazards are the most potentially devastating hazard facing the MID area and even Statewide.

For flood hazards, the MID areas experienced a total of 663 flood events and subsequently suffered 18 fatalities, 2 injuries, and over $448 million in property and crop damage from flooding.[34] Floods in the MID areas tend to be more costly and more fatal than the rest of the State, as the MID areas account for 27 percent of the total cost of flooding statewide and 25 percent of the fatalities, despite accounting for less than 20 percent of all flood events statewide.

Table 9 - Flood Severity, Fatalities and Damage, MID Areas

County	# of events (1996-	Fatalities	Injuries	Property and Crop Damage (2017 dollars)
New Hanover	136	-	2	$ 5,475,278
Brunswick	75	-	-	$ 4,950,971

County	# of events (1996-	Fatalities	Injuries	Property and Crop Damage (2017 dollars)
Pender	74	-	-	$ 1,311,278
Cumberland	50	2	-	$ 88,434,863
Bladen	41	2	-	$ 19,927,883
Carteret	39	-	-	$ 18,416
Edgecombe	35	8	-	$ 91,659,926
Onslow	35	-	-	$ 9,687,065
Wayne	32	4	-	$ 149,949,487
Columbus	30	1	-	$ 62,234,960
Craven	27	1	-	$ 1,254,914
Duplin	26	-	-	$ 1,340,859
Robeson	19	-	-	$ 4,892,669
Scotland	17	-	-	$ 3,085,147
Jones	15	-	-	$ 4,357,391
Pamlico	12	-	-	$ 11,319
Total in MID	**663**	**18**	**2**	**$ 448,592,426**
Remainder of the State	**2,700**	**54**	**26**	**$ 1,214,872,328**

The average damage per occurrence for a flood event in the MID areas is $676,610. The greatest historical damage has been experienced in Wayne, Edgecombe, and Cumberland County.

The MID areas also have a high concentration of Repetitive Loss (RL) and Severe Repetitive Loss (SRL) property. A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP. There are over 122,000 RL properties nationwide. A Severe Repetitive Loss (SRL) Property is a building which has had flood-related damage resulting in a flood insurance claim four or more times, with the amount of each claim exceeding $5,000 and the cumulative amount is greater than $20,000, or when two separate flood insurance claims have exceeded the reported value of the property.

Approximately 47 percent of all RL property and 41 percent of all SRL property is located within the MID counties. The counties with the highest concentration of RL and SRL properties are

coastal counties such as New Hanover, Carteret, Pamlico, Craven, Brunswick, and Onslow. New Hanover has nearly double the second greatest county's total of RL properties with 1,305 compared to Pamlico County's 733.

Figure 7 - RL/SRL Property in MID Counties

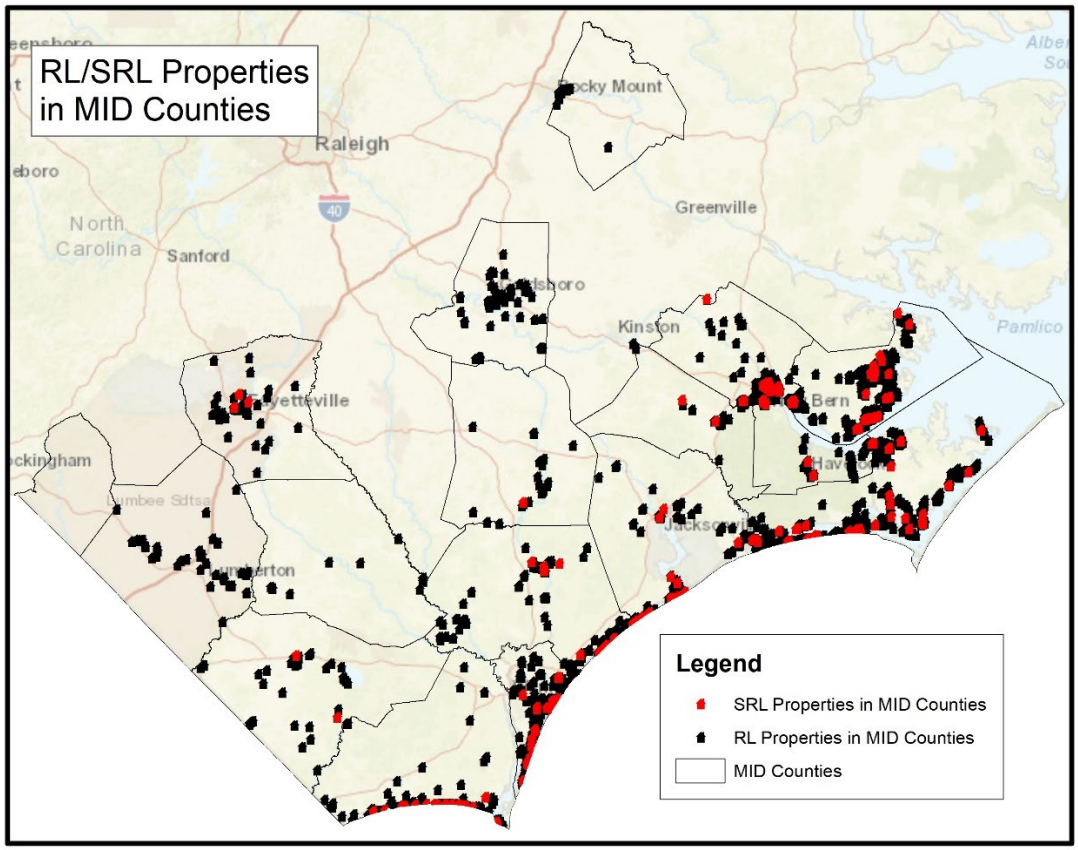


Table 10 - RL/SRL Property in MID Counties, by County

County	RL Property	SRL Property
NEW HANOVER COUNTY	1,305	54
PAMLICO COUNTY	733	25
CARTERET COUNTY	725	45
CRAVEN COUNTY	653	44
ONSLOW COUNTY	574	27
BRUNSWICK COUNTY	557	21
PENDER COUNTY	420	29
WAYNE COUNTY	61	-
ROBESON COUNTY	53	-
COLUMBUS COUNTY	47	2
CUMBERLAND COUNTY	43	3
DUPLIN COUNTY	29	1
JONES COUNTY	17	2
BLADEN COUNTY	15	-
EDGECOMBE COUNTY	15	-
BEAUFORT COUNTY	1	-
Total in MID	**5,248**	**253**
Grand Total	**11,159**	**611**
Total outside of MID	**5,911**	**358**
Percent in MID	**47%**	**41%**

The total risk to properties and buildings in floodplains and floodways is extreme in the MID areas. First, an anlysis of parcel data for the MID counties show that there are over 80,000 parcels located in a 100-year, 500-year floodzone or floodway. Further there are over 52,000 parcels with structures that are at risk of flood damage from being in the floodzone or floodway. It is important to note that, based on this data, the coastal areas of Brunswick and Carteret have the most properties at risk. Further, NCORR recognizes that storm and flood damage is not limited to flood zone and floodway areas so even these figures underestimate the threat of future flood and storm damage to all the MID counties.

Table 11 - Properties in Flood Zones/Floodways in HUD MID Areas

County	Properties w/ Structures in Flood Zone	Properties w/ Structures in Floodway	Total Parcels with Flood Risk*
Bladen	181	-	429
Brunswick	10,286	14	15,674
Carteret	12,046	-	18,594
Columbus	480	17	1,331
Craven	4,717	6	7,876
Cumberland*	2,385	81	4,071
Duplin	90	3	558
Edgecombe	611	12	1,126
Jones	191	18	435
New Hanover	6,796	18	8,621
Onslow	3,524	2	4,891
Pamlico	2,510	-	4,785
Pender	3,455	284	5,497
Robeson	2,151	107	4,270
Scotland	29	-	115
Wayne	2,085	282	2,538
TOTAL	**51,537**	**844**	**80,811**

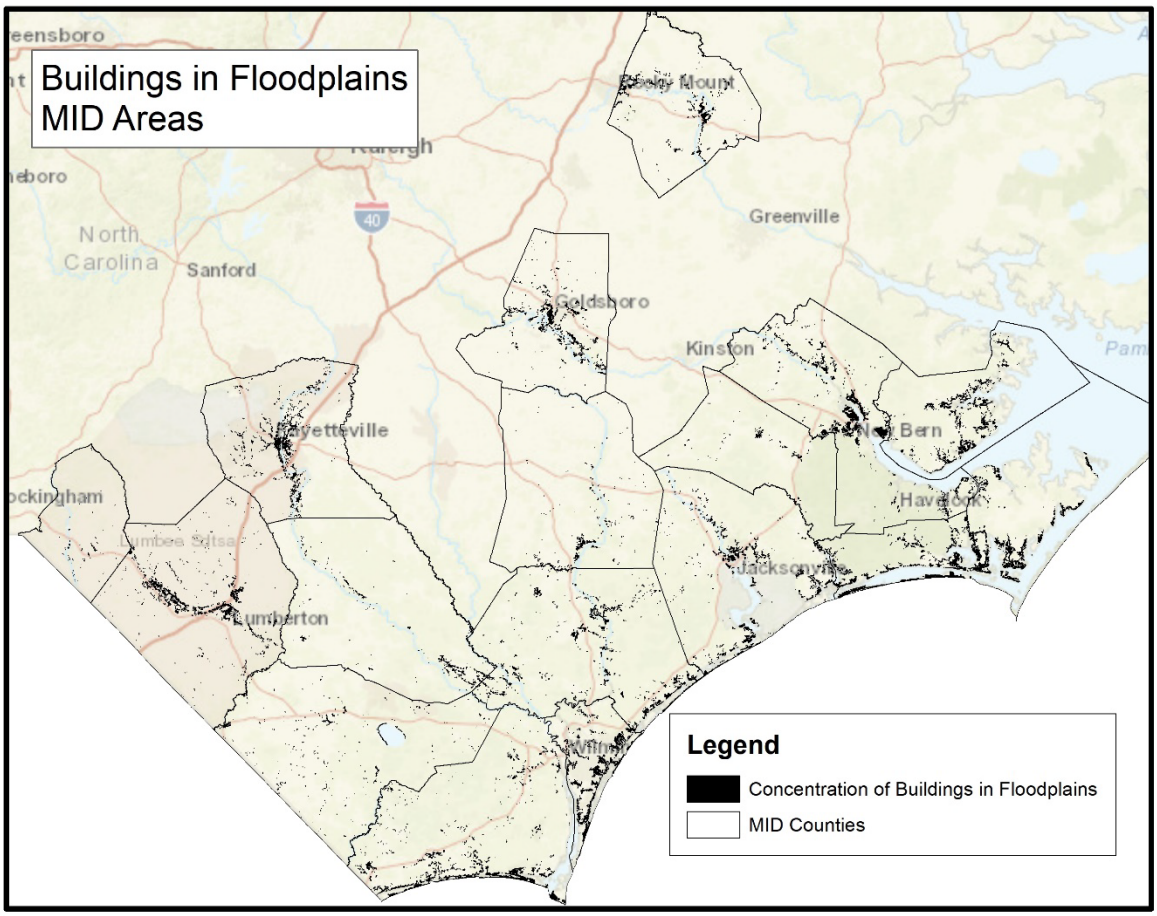
Source: https://fris.nc.gov/fris/Download.aspx?ST=NC# and https://www.nconemap.gov/

According to NCEM data, there are more than 133,000 buildings located within the 100-year or 500-year floodplain within the MID areas. The total value of these structures is nearly $41 billion and is considered at risk of flood losses.

Table 12 - Value of buildings in floodplain, MID areas

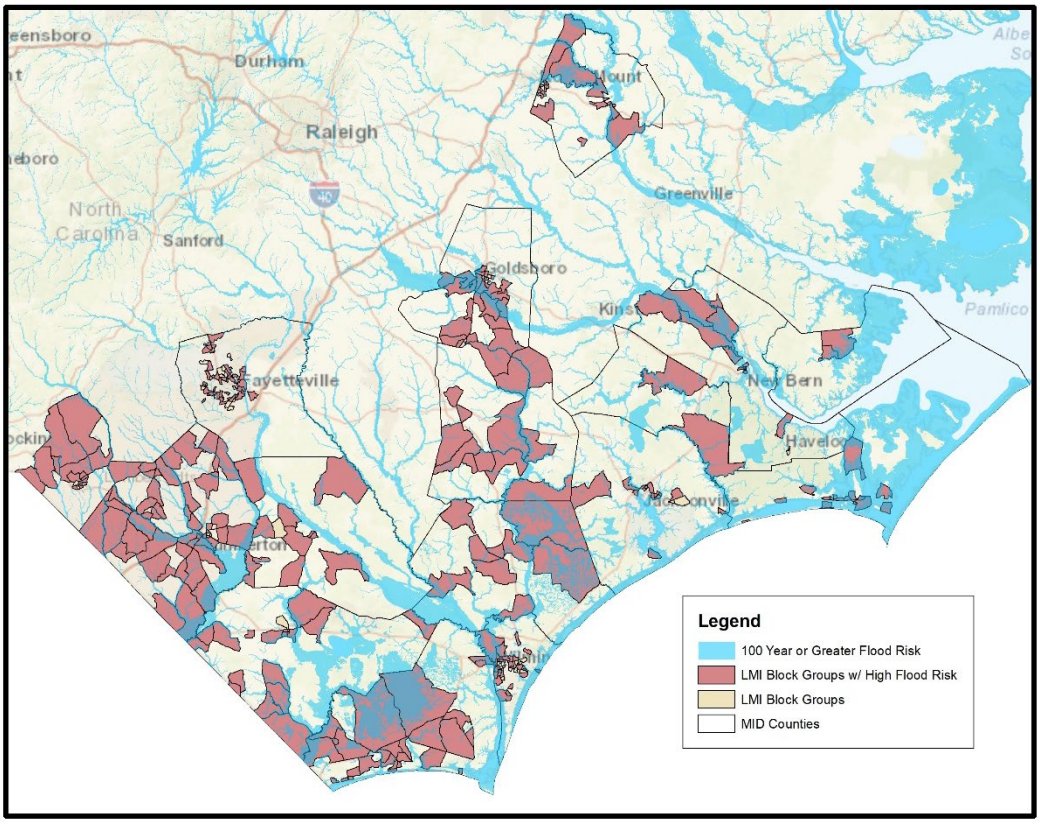
Buildings in Floodplain	Total Value
133,803	$ 40,972,883,854

Figure 8 - Buildings in Floodplains, MID Areas



In addition to at-risk buildings, a significant amount of the population in the MID areas is located in a block group that is intersected by the 100-year floodplain. Of the 1,055 block groups which comprise or border the MID areas, 362 of those block groups have a low- and moderate-income (LMI) population greater than 51 percent of the total population of the block group. This is known as an LMI block group. Of those 362 LMI block groups, 304 of them contain a portion of the 100-year floodplain.

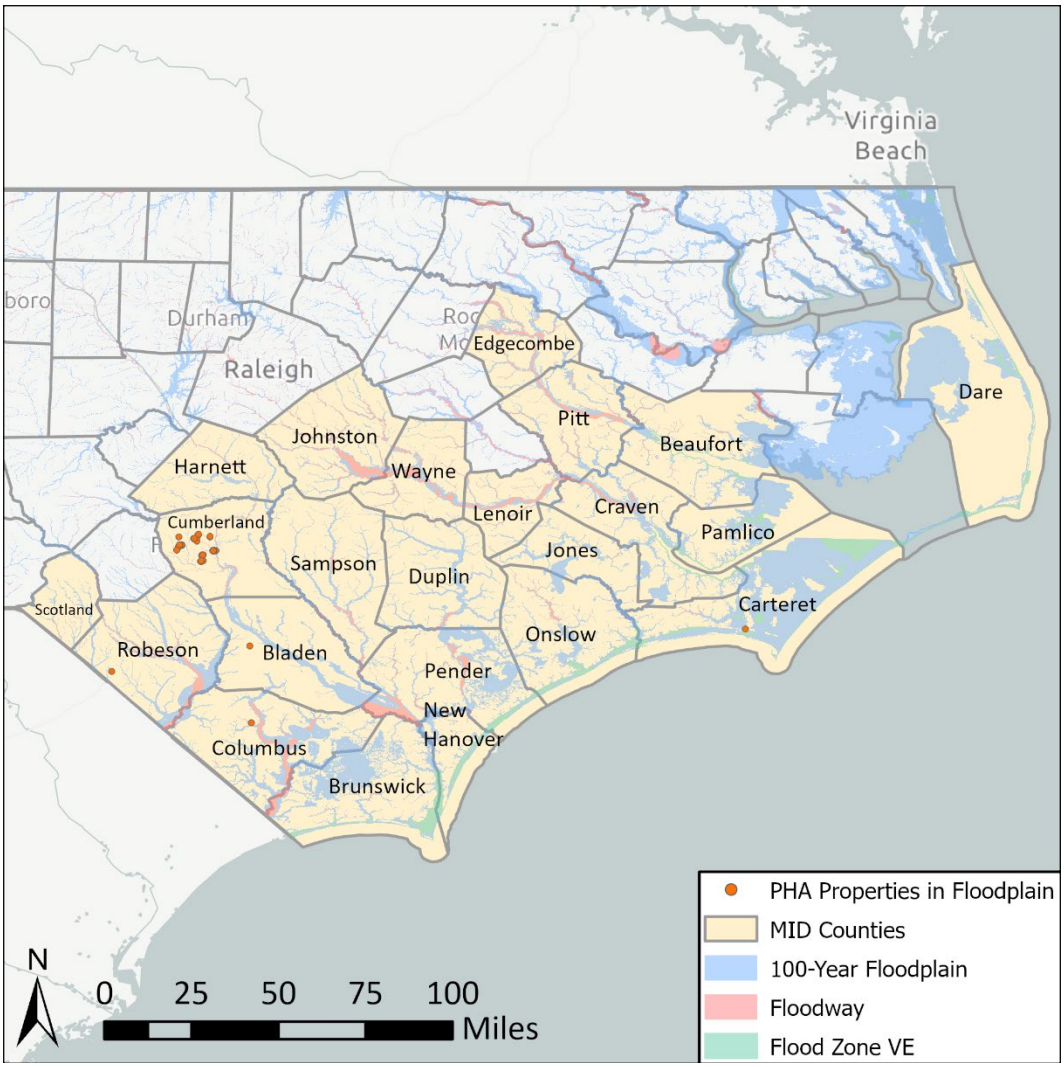
Figure 9 - LMI Block Groups and the 100-year Floodplain



Although it is not clear how the population of the block groups is organized within the block group in relation to the floodplain, 261,035 individuals live within block groups that are intersected by the 100-year floodplain. Based on the spatial distribution of the floodplains and the LMI population of the MID areas, it is evident that a significant portion of the LMI population is located within the 100-year floodplain.

Additionally, there are a number of Public Housing Authority developments located within the 100-year floodplain in MID counties, demonstrating a need for mitigation of flood risk for residents of public housing. A 2022 analysis of HUD's "Public Housing Developments" and data on floodways and 100-year floodplains yielded at least 87 public housing developments (562 units) at risk of flooding in the MID counties, with a noticeable cluster in the Fayetteville area in Cumberland County.

Figure 10– Public Housing Developments located in a 100-year floodplain or floodway, MID areas



4.3.8 Severe Impacts

Two hazard types comprise the Severe category, Tornadoes and Thunderstorms and Wildfires. Tornadoes are extremely damaging statewide and becoming more prevalent. There were total of 1,385 tornados in NC between 1950 -2016[35], and an additional 188 between 2017-2020 (34 in 2017, 41 in 2018, 59 in 2019 and 54 in 2020).[36] For tornadoes, a total of 441 events have been recorded from 1950 - 2017 in the MID areas, while from 1996 through 2017 a total of 2,580 severe thunderstorms have been recorded. The average expected loss per event, expressed in 2017 dollars for tornadoes and thunderstorms combined, is $185,448.

Table 13 - Tornadoes by MID County

County	Events by Fujita Scale (F-Rating), 1950-2017					Total Events	Fatalities	Injuries	Damage
	0	1	2	3	4				
Bladen	8	6	6	1		21	5	8	$ 485,523
Brunswick	16	8	1			25	-	-	$ 2,114,000
Carteret	37	23	6			66	-	11	$ 24,968,233
Columbus	10	9	4	2		25	8	40	$ 15,999,620
Craven	21	7	3	1		32	-	48	$ 28,933,635
Cumberland	7	7	4	3	2	23	5	168	$ 99,079,510
Duplin	9	12	13	2	1	37	-	86	$ 90,248,666
Edgecombe	1	3	-	3		7	-	8	$ 2,844,846
Jones	10	2	4	1		17	1	13	$ 29,474,562
New Hanover	8	10				18	-	7	$ 3,938,265
Onslow	28	11	4	1		44	3	53	$ 23,649,127
Pamlico	9	2	2	1		14	1	45	$ 26,160,194
Pender	17	10	4			31	3	31	$ 6,321,900
Robeson	16	18	7		3	44	6	334	$ 22,278,431
Scotland	2	3	1	2	3	11	-	24	$ 19,342,737
Wayne	13	8	3	1	1	26	4	159	$ 125,913,490
Total in MID	**212**	**139**	**62**	**18**	**10**	**441**	**36**	**1,035**	**$ 521,752,739**
Statewide	**555**	**515**	**232**	**58**	**29**	**1,389**	**127**	**2,577**	**$ 3,000,368,872**
Remainder of the State	**343**	**376**	**170**	**40**	**19**	**948**	**91**	**1,542**	**$ 2,478,616,133**

Source: North Carolina Hazard Mitigation Plan, 2018, Table 3-21, pg. 3-93

The damage losses from Tornadoes in MID areas are 17.4 percent of the total statewide losses, despite the MIDs accounting for 31.75 percent of all tornadoes statewide. While the cause is unclear based on the data, it does indicate that MID areas are not as vulnerable to tornado damage as other areas of the State. In contrast, 40 percent of tornado-related injuries occur in MID counties, indicating that the risk to life is greater than the risk to property in a tornado event in the MID areas.

Table 14 - Severe Thunderstorms by MID County

County	Thunderstorm Events (1996-2017)	Fatalities	Injuries	Damage
Bladen	234	-	6	$ 2,684,680
Brunswick	130	-	1	$ 809,879
Carteret	139	-	1	$ 2,141,410
Columbus	214	-	7	$ 9,609,388
Craven	179	-	2	$ 367,027
Cumberland	229	-	8	$ 1,749,515
Duplin	198	-	6	$ 1,449,497
Edgecombe	118	-	1	$ 1,494,863
Jones	65	-	3	$ 145,531
New Hanover	133	-	5	$ 2,430,684
Onslow	169	-	-	$ 398,613
Pamlico	35	-	-	$ 95,863
Pender	125	-	7	$ 3,584,115
Robeson	309	-	8	$ 5,483,568
Scotland	96	-	4	$ 851,930
Wayne	207	1	9	$ 5,187,599
Total in MID	**2,580**	**1**	**68**	**$ 38,484,162**
Statewide	**14,845**	**31**	**226**	**$ 103,170,357**
Remainder of the State	**12,265**	**30**	**158**	**$ 64,686,195**

Source: NCHMP, 2018, Table 3-22, p. 3-100

Severe thunderstorms are not as pronounced in the MID areas, accounting for only 17.38 percent of storms statewide. However again injuries appear more common in the MID areas from severe storms, as MID areas account for 30 percent of thunderstorm-related injuries. Thunderstorm damage is also disproportionate in the MID counties, with 37.3 percent of statewide damages within the MID areas.

Fifty percent of wildfire incidents in the state occur within the MID counties. Damage as a percent of incidents is approximately in line with the proportion of incidents in the MID areas, at 56.75 percent of damages caused by wildfire in the MID counties. The average cost of a wildfire incident is $200,147 upon review of the 16 wildfire events in the MID areas. The outlier for wildfire incidents is Brunswick County, with a total of 4 major events since 1998 with a property and crop damage total of $2.6 million.

4.3.9 Mild Impacts

Mild hazards are those with minimal past damage or typically pose a lesser threat to life. The mild hazards in the MID areas include Severe Winter Weather and Excessive Heat.

Severe Winter Weather poses little threat to the MID areas, with New Hanover, Craven, Duplin, Scotland, and Jones counties not registering property or crop damage of any kind from winter weather. Only 5.3 percent of all winter weather events in North Carolina occur in the MID areas, accounting for 5.4 percent of total damage from winter weather for the State. Worth noting, and similar to thunderstorms and tornadoes, is that the fatality and injury rate is higher in the MID areas than elsewhere in the state. Despite low damage per occurrence ($53,732 per occurrence, on average), 34 fatalities and 177 injuries are attributed to winter weather in the MID areas since 1996, approximately 26 percent of the State total.

Table 15 - Severe Winter Weather in the MID Counties

County	Severe Winter Weather events, 1996-2017	Fatalities	Injuries	Property and Crop Damage
New Hanover	6	-	-	$ -
Brunswick	9	-	-	$ 201,211
Pender	23	2	-	$ 2,001,571
Cumberland	33	1	-	$ 10,283
Bladen	26	-	-	$ 4,604,380
Carteret	21	4	4	$ 334,011
Edgecombe	41	-	-	$ 23,807
Onslow	26	1	35	$ 222,211
Wayne	31	-	-	$ 10,283
Columbus	18	-	-	$ 7,845,330
Craven	27	-	-	$ -
Duplin	30	1	5	$ -

County	Severe Winter Weather events, 1996-2017	Fatalities	Injuries	Property and Crop Damage
Robeson	27	-	-	$ 5,947,616
Scotland	31	-	-	$ -
Jones	25	-	-	$ -
Pamlico	21	-	2	$ 23,596
Total in MID	**395**	**9**	**46**	**$ 21,224,299**
Statewide	**7,500**	**34**	**177**	**$ 395,455,789**
Remainder of the State	**7,105**	**25**	**131**	**$ 374,231,490**

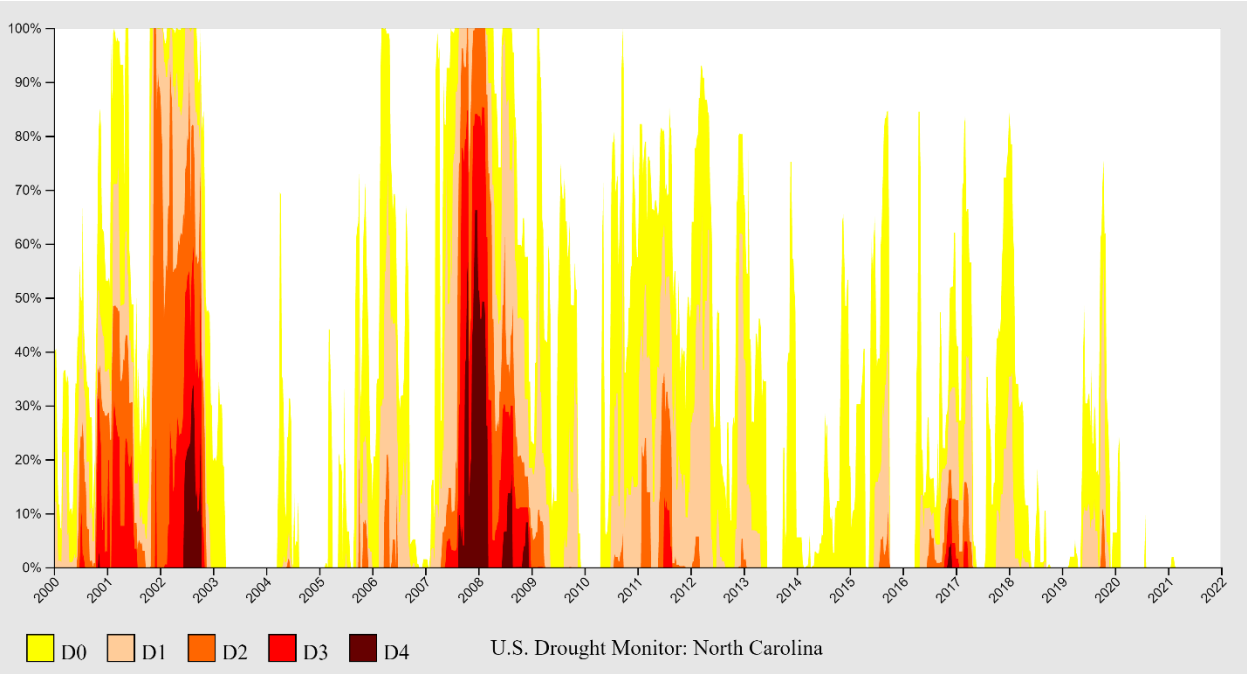
Excessive heat is not associated with direct damage costs but can be deadly. Thirty-four excessive heat events since 1996 have killed 16 people and injured another 15. While 27 percent of excessive heat events have impacted the MID counties, 88 percent of injuries and 31 percent of fatalities statewide have come from the MID areas.

4.3.10 Unknown Severity

Hazards with unknown severity may occur so infrequently to not have a meaningful estimate of average damage caused by an event, may occur over long-time horizons and therefore are difficult to directly tie damage to, or are variable in scope and impact by their nature and therefore cannot be accurately estimated. The hazards with unknown severity include drought, hazardous substances, earthquakes, dam failures, geological hazards, radiological emergencies, and terrorism.

Drought does not directly contribute to property damage but can significantly impact crop production over a long-time horizon. Therefore, it is difficult to measure specific losses attributed to drought. The United States Drought Monitor began measuring drought by duration in 2000 nationwide. Since then, North Carolina has had multiple droughts, with the longest lasting from January 4, 2000 and ending on December 17, 2002. The most intense drought occurred the week of December 25, 2007 where 66.2 percent of the landmass of North Carolina was affected.[37]

Figure 11 - Drought in North Carolina from 2000- Present



Source: *National Integrated Drought Information System,* 2021, https://www.drought.gov/states/north-carolina

Longer droughts affect crop production, may worsen the risk of wildfire, and generally reduce quality of life.

Earthquakes occur infrequently within the MID areas and seldom with enough damage potential to create an average damage per occurrence. However, earthquake losses have been annualized in the HMP.

Table 16 - Annualized Earthquake Losses, MID Areas

County	Annualized Losses
Bladen	$ 178,792
Brunswick	$ 409,578
Carteret	$ 70,584
Columbus	$ 411,353
Craven	$ 93,615
Cumberland	$ 1,409,515
Duplin	$ 257,214
Edgecombe	$ 61,166

County	Annualized Losses
Jones	$ 12,803
New Hanover	$ 831,871
Onslow	$ 231,484
Pamlico	$ 8,172
Pender	$ 98,802
Robeson	$ 1,153,622
Scotland	$ 295,103
Wayne	$ 374,682
Total in MID	**$ 5,898,354**
Statewide	**$ 36,593,359**
Remainder of the State	**$ 30,695,005**

Annualized losses are difficult to use to assess the severity of a single disaster, therefore the severity of earthquakes is not as well defined in this Mitigation Needs Assessment.

Geological hazards vary in severity, and similar to droughts, present hazards over long time horizons with often imperceptible changes, particularly when assessing geological hazards associated with coastal erosion. The threat of sinkholes and coastal erosion, the most pressing geological hazards in the MID areas, is best described by the buildings at risk of loss within coastal erosion zones. The HMP prepared an analysis of buildings within 50 yards of an active sinkhole or within 50 yards of a costal erosion area. The total value of the buildings at risk within 50 yards of an active sinkhole in the MID areas is $946 million. The majority of those buildings and the majority of the value of all buildings at risk of sinkholes is in New Hanover County, with 1,311 buildings worth $617 million alone. The total value of buildings at risk of eroding shoreline is $80 million, generally concentrated in New Hanover, Onslow, and Brunswick counties.

Table 17 - Buildings at Risk of Sinkholes or Coastal Erosion, MID Areas

County	# of Buildings within 50 yards of a sinkhole	Value of buildings at risk	# of buildings within 50 yards of eroding shoreline	Value of buildings at risk
Brunswick	1,693	$ 274,060,857	101	$ 16,954,506
Carteret	-	$ -	23	$ 5,855,243
Jones	4	$ 466,228	-	$ -
New Hanover	1,223	$ 617,106,193	39	$ 30,862,658
Onslow	1,311	$ 50,397,642	130	$ 21,965,739
Pender	97	$ 4,325,222	52	$ 4,569,816
Total	**4,328**	**$ 946,356,142**	**345**	**$ 80,207,962**

Dam failure is considered in the HMP but annualized losses statewide are negligible. Therefore, the risk of dam failure is minimal in the MID areas, which also contain relatively few high-risk dams. Similarly, hazardous substances, radiological emergencies, and terrorism hazards are not annualized and are not summarized at the county level in the HMP to draw a conclusion about the relative severity of these events. In some instances, such as radiological emergencies, no such hazard has manifested as a disaster event in State history and therefore the severity is considered minimal.

4.3.11 Multi-Hazard Interface

In some instances, a disaster occurrence will increase the risk of disaster and worsen an existing hazard. This interaction between hazards is known as the Multi-hazard Interface. The Multi-hazard approach is well known in wildfire-prone wildland-urban interface (WUI) areas which face natural hazards from wildfires, drought, and mudslides caused by flooding which must all be accounted for in a hazard mitigation plan.[38]

While wildfire hazard is generally not as serious as coastal hazards and flooding, it must be acknowledged that addressing some hazards while ignoring others may cause externalities in community vulnerability that could degrade the overall safety of the community. The following hazards may have “ripple effects” on other hazards, and worsen the risk posed by these hazards under disaster conditions.

Table 18 - Multi-Hazard Interface

Disaster Condition	Increased Risk
Hurricanes and Coastal Hazards	Flooding
	Tornadoes/Thunderstorms
	Dam Failures
	Geological Hazards (Coastal Erosion)
	Hazardous Substances
Flooding	Dam Failures
	Geological Hazards (Coastal Erosion)
	Hazardous Substances
Excessive Heat	Drought
	Wildfires
Drought	Wildfires
Wildfires	Hazardous Substances

Hurricanes and Coastal Hazards present the greatest potential for increasing hazard conditions by worsening flood, severe weather, the potential for dam failures, coastal erosion, and potentially causing the release and spread of hazardous substances such as oil. Flooding has similar effects but is generally more localized and does not carry the same extreme weather externality. Excessive heat, drought, and wildfires are all interconnected systems with potentially cascading effects.

When planning to mitigate risks to hazards, an effective plan will account for potential changes to the environment that could worsen other hazards. To combat these changes the State will strongly favor mitigation measures which address multiple hazards and acknowledge multi-hazard interfaces.

4.3.12 Current and Changing Conditions

A flaw in the HMP approach is that an assessment of hazard and risk rely on historical data and do not directly consider the longer-term implications of a changing climate and sea level rise. These environmental conditions must also be taken in context with changing social conditions. The population of North Carolina has increased by 10 percent from 2010 to 2019, increasing the statewide population to almost 10.5 million, making NC the fourth fastest growing state in the US. However, the population changes within the MID counties have varied from county to county and varies widely. While strong population increases are evident in coastal counties like

Brunswick, Carteret, New Hanover, Onslow, and Pender, the inland counties like Bladen, Columbus, Edgecombe, Jones, Pamlico, Robeson, and Scotland have seen a decrease in population (Craven County also had a modest decrease in population although partly coastal). The population in Wayne and Duplin counties has stayed relatively constant with a .2% and .1% increase respectively, with Cumberland experiencing a modest 2.5% increase[39].

Table 19 - Population Change in MID Counties

County	Population 2010	Population 2019	% Change in Population 2010-2019
Bladen	35,181	32,722	-7%
Brunswick	108,069	142,820	32.2%
Carteret	66,700	69,473	4.2%
Columbus	57,992	55,508	-4.3%
Craven	104,171	102,139	-2%
Cumberland	327,197	335,509	2.5%
Duplin	58,666	58,741	.1%
Edgecombe	56,619	51,472	-9.1%
Jones	10,143	9,419	-7.1%
New Hanover	203,284	234,473	15.3%
Onslow	186,892	197,938	5.9%
Pamlico	13,109	12,726	-2.9%
Pender	52,415	63,060	20.3%
Robeson	134,493	130,625	-2.9%
Scotland	36,062	34,823	-3.4%
Wayne	122,886	123,131	.2%

Source: *Annual Estimate of Residential Population for Counties in NC,* US Census Bureau, April 1, 2010 to July 1, 2019, March 2020

Population changes are important to consider because with increasing population, an increase in disaster losses may also be expected due to more individuals living in hazardous areas – in this context, coastal areas - and more property, such as housing stock and commercial property at risk of destruction. Conversely counties with a decreasing population may face challenges in sufficient planning and reduced access to resources to meet their needs, including a dwindling tax base and a reduction in critical services such as police, fire, and rescue. Effective mitigation

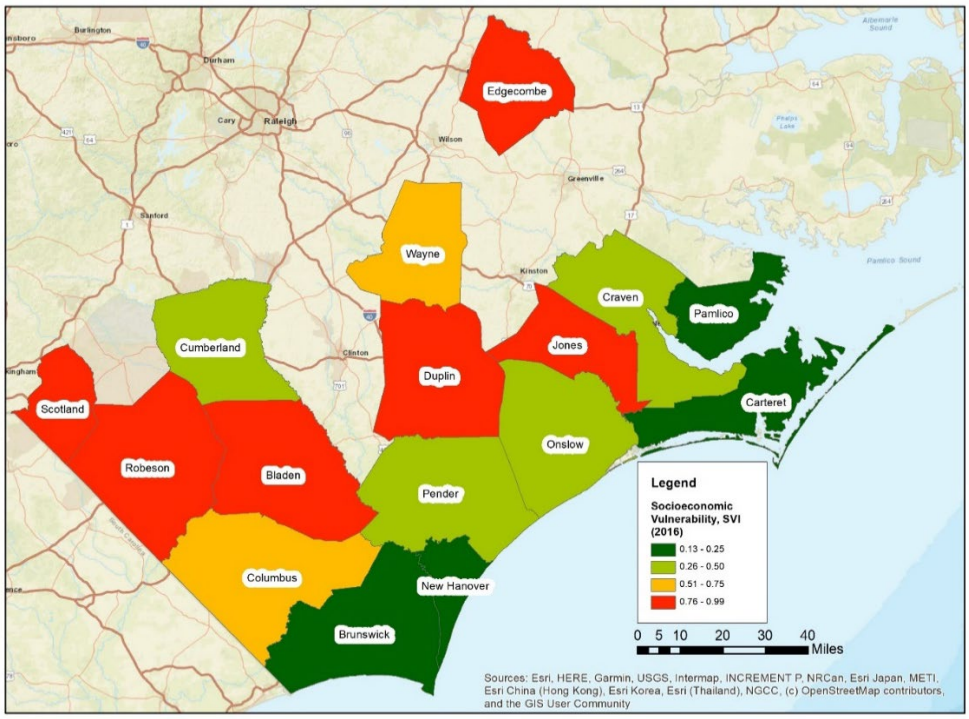
planning takes these factors into account as well as the nature of the hazard while selecting the best course of action to mitigate risks specific to the community.

In addition to population changes, social vulnerability is an important factor in assessing hazard vulnerability. The Center for Disease Control (CDC) defines social vulnerability as the resilience of communities when confronted by external stresses on human health, stresses such as natural or human-caused disasters, or disease outbreaks. CDC's Social Vulnerability Index uses 15 U.S. census variables at tract level to help local officials identify communities that may need support in preparing for hazards; or recovering from disaster. The Geospatial Research, Analysis, and Services Program (GRASP) created and maintains CDC's Social Vulnerability Index (SVI).[40]

One of these SVI indices is a measure of socioeconomic status. The socioeconomic SVI is driven by census data on poverty level, employment, total income, and education level. The SVI is set on a scale from 0 to 1, with numbers closer to 1 indicating reduced resiliency and therefore greater susceptibility to hazard.

As of 2018, a significant portion of the MID areas had a high SVI. Spatially, a "belt" of high SVI counties are north and west of the coastal areas, with coastal counties such as Brunswick, New Hanover, Carteret, and Pamlico having the strongest SVI in the MID areas in 2018 data. In selecting appropriate mitigation measures, the SVI – and other vulnerability information – must be considered.

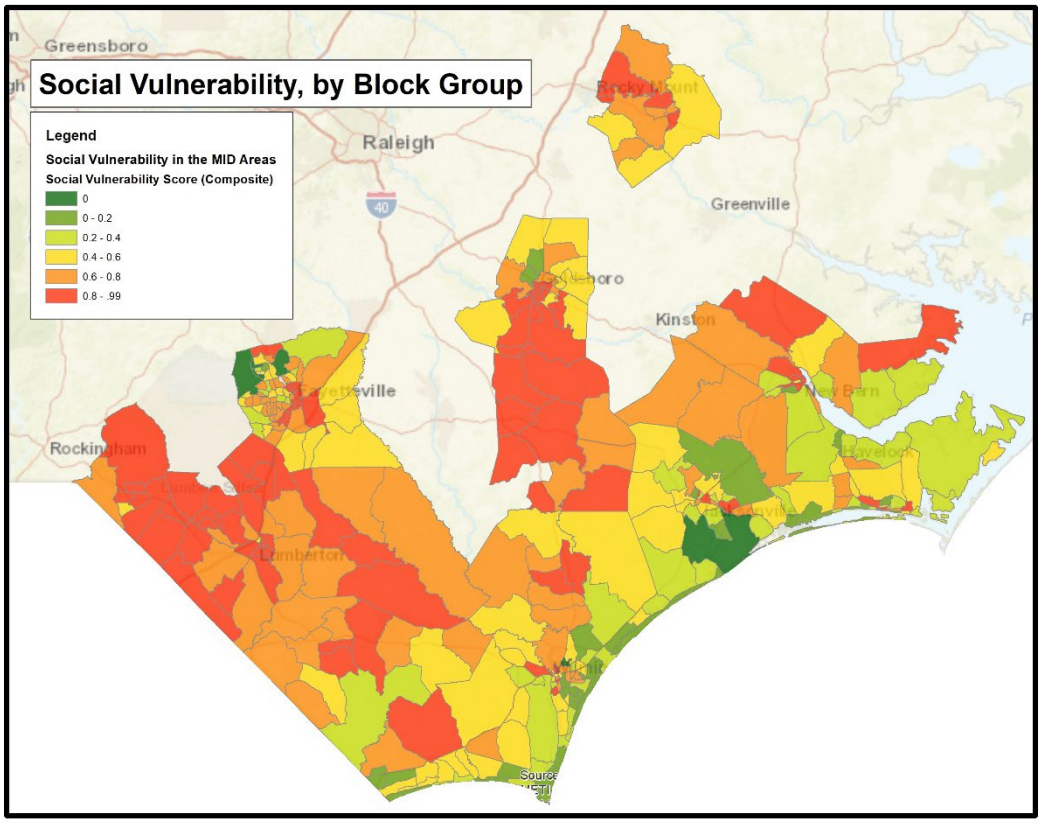
Figure 12 - Socioeconomic Social Vulnerability Index, MID areas, 2018



A closer look at the geographic patterns of social vulnerability from 2018 revealed specific pockets of vulnerability in certain counties. Northwest Robeson County, Southeast Scotland County, central Bladen County, and West Duplin County emerge as serious social vulnerability areas. An area of social vulnerability is evident in West and central Edgecombe County as well. Finally, north Pamlico County also faces significant social vulnerability issues.

A review of the block group patterns and social vulnerability in 2018 indicated a significant shift in vulnerability from eastern, coastal North Carolina which are relatively less vulnerable to a more vulnerable population found inland. These vulnerabilities also appear in the current CDBG-DR applicant pool for recovery services provided by NCORR, which aligns strongly with the geographic distribution of vulnerable areas.

Figure 13 - Social Vulnerability by Block Group (2018 data)



Updated SVI data from 2020 reveals similar patterns at the county level, with additions to the "High" social vulnerability category among some of the inland MIDs including Cumberland County, Wayne County, and Sampson County, and increased social vulnerability in Craven County and Pamlico County.

The impacts of the COVID-19 pandemic also led to rising housing costs, and increased cost burden especially on low-income renters. According to HUD's CPD Mapping Tool, 29.4% of North Carolina households experience cost burden (paying more than 30% of the household's income on housing costs) and 12.6% experience severe cost burden (paying more than 50% of the household's income on housing costs). Just 6.4% of renter units in North Carolina are affordable to those with 30% HUD Area Median Family Income (HAMFI), and 23.3% of renter units are affordable to those with 40% HAMFI.[41]

4.3.13 Environmental Justice

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.[42] Inclusion, equity, and authentic engagement require the active and comprehensive participation of these audiences. Executive Order 12898 requires that all federal agencies adopt environmental justice strategies to protect the health of people living in communities overburdened by pollution. HUD programs are required to consider how federally assisted projects may have disproportionately high and adverse human health or environmental effects on minority and low-income populations. The Environmental Protection Agency (EPA) states that environmental justice will be achieved when all persons have the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

EPA published the Regional Resilience Toolkit[43], a guide that provides a planning process that integrates environmental justice in building regional resilience plans for State and local governments. The toolkit includes a five-step process for resilience planning with stakeholders.

1. **Engage**. Engage stakeholders and build trust.
2. **Assess**. Conduct a vulnerability assessment, including problem statements, hazard scenarios, and maps.
3. **Act.** Prioritize feasible, impactful strategies with stakeholder buy in and develop a long-term plan.
4. **Fund.** Engage funders, decision makers, and make a case for the funding of specific projects.
5. **Measure.** Return to the process and make the plan a living document, complete with metrics, timelines, and performance criteria.

NCORR's mitigation planning efforts mirror the basic steps in the EPA process. In developing the baseline Mitigation Needs Assessment and Mitigation Action Plan, NCORR implemented the EPA strategies to engage stakeholders in assessing risks and defining items for action included in the plan. Since the development of the initial Action Plan, community input has been

obtained in the identification of buyout DRRAs identified for DRRA Phase I, providing all area citizens with an opportunity to be involved in the planning process. The majority of DRRA Phase I counties are located in Hurricane Matthew MID areas. Specifically, NCORR engaged local communities about the buyout program in Columbus, Cumberland, Edgecombe, Jones, Robeson and Wayne counties. NCORR is currently in the process of scheduling meetings with local governments in the Phase II areas, comprised of counties impacted by Hurricane Florence or dually impacted by both hurricanes, including state MID areas. Now that there are no COVID-19 restrictions, DRRA planning and implementation is progressing. NCORR will continue to perform outreach to communities and is scheduling community and local government meetings to review potential DRRAs. In addition, broad community input has been solicited by holding two sets of public hearings; one set of hearings were held in 2019, and one virtual hearing was held in June 2021 to meet the requirements of 86 FR 561 (that allocates additional MIT funds to the state) to obtain public input into action plan development. The Community Development team at NCORR maintains regular contact with community stakeholders representing the Infrastructure Recovery Program and the Public Housing Restoration Fund, and Community Development representatives were actively engaged in the substantial amendment of this action plan in 2022.

NCORR is also committed to continued planning through the State's Recovery Support Function Groups to ensure that the planning process has been faithful to the original objectives of inclusion and equal access – and if not, that the plan is corrected with stakeholder input to better address recovery and resilience topics. NCORR commits to the inclusion of under-represented, minority, and low-income populations in its mitigation planning process, DRRA identification process, and ultimate execution, as well as in the identification and selection of applicants to the Public Housing Restoration Fund and the project selection process for the Infrastructure Recovery Program.

4.4 Threat to Community Lifelines

In November 2014, the National Association of Counties (NACo) published "Improving Lifelines: Protecting Critical Infrastructure for Resilient Counties." NACo defines lifelines as programs and services provided to the public, including the infrastructure systems vital to counties to operate, which are vital to the county and sometimes extend to an entire region. These lifelines ensure the public health, safety, and economic security. Lifelines differ from "life support" systems, which include emergency services and public health.[44]

There are four main factors that define lifelines:

- They provide necessary services and goods that support nearly every home, business and county agency,
- Lifelines deliver services that are commonplace in everyday life, but disruption of the service has the potential to develop life-threatening situations,

- They involve complex physical and electronic networks that are interconnected within and across multiple sectors, and
- A disruption of one lifeline has the potential to effect or disrupt other lifelines in a cascading effect.

The four major lifelines as defined by NACo are energy, water, transportation, and communications.

In February 2019, FEMA released the Community Lifelines Implementation Toolkit which further hones in on seven Community Lifelines: 1) safety and security, 2) communications, 3) food, water, sheltering, 4) transportation, 5) health and medical, 6) hazardous materials management, and 7) energy. [45]

In the Implementation Toolkit, the focus is on activating lifelines for support during incident response. The Notice instead challenges the State to consider the Community Lifelines as an element of mitigation and resilience planning. The components of the Community Lifelines are indicated below:

Table 20 - Community Lifeline Components

Community Lifelines	Component	Community Lifelines	Component
Safety and Security	Law Enforcement/Security	Energy	Power (Grid)
	Search and Rescue		Temporary Power
	Fire Services		Fuel
	Government Service	Communications	Infrastructure
	Responder Safety		Alerts, Warnings, Messages
	Imminent Hazard Mitigation		911 and Dispatch
Food, Water, Sheltering	Evacuations		Responder Communications
	Food/Potable Water		Financial Services
	Shelter	Transportation	Highway/Roadway
	Durable Goods		Mass Transit
	Water Infrastructure		Railway
	Agriculture		Aviation
Health and Medical	Medical Care		Maritime
	Patient Movement		Pipeline

Community Lifelines	Component	Community Lifelines	Component
	Public Health	Hazardous Material	Facilities
	Fatality Management		Hazardous Debris, Pollutants, Contaminants
	Health Care Supply Chain		

The Mitigation Needs Assessment seeks to quantitatively assess the significant potential impacts and risks of hazards affecting the Community Lifelines. It is the expressed intent of HUD that CDBG-MIT funded activities that ensure that these critical areas are made more resilient and are able to reliably function during future disasters, can reduce the risk of loss of life, injury, and property damage and accelerate recovery following a disaster.

To quantitatively assess the damage previously dealt to each lifeline, FEMA Public Assistance (PA) project costs and FEMA Individual Assistance (IA) FEMA Verified Loss (FVL) for both Hurricanes Matthew and Florence were reviewed in the MID areas. The damage was categorized according to the impacted Community Lifeline. The result is a total damage breakdown using these funding sources as a proxy for damage across each lifeline. FEMA Hazard Mitigation Grant Program (HMGP) projects for residential mitigation (elevation, reconstruction, and acquisition) and infrastructure were not included, as HMGP projects largely intersect the purpose and nature of CDBG-MIT funds in the sense that they seek to reduce future losses.

The approach is to identify the most heavily impacted Community Lifelines and focus CDBG-MIT funds on those lifelines to provide long-lasting or permanent interventions to break the cycle of repeated Federal investment to serve the same vulnerable lifelines.

Table 21 - Damage to Lifelines, FEMA PA and IA, MID Areas

Event	Damage Verification Source	Safety and Security	Food, Water, Sheltering	Health and Medical	Energy
Hurricane Matthew	Public Assistance	$56,068,699	$40,151,959	$1,000,402	$6,164,177
	Individual Assistance		$47,978,514		
Hurricane Florence	Public Assistance	$118,211,811	$698,147	$1,106,425	$4,247,591
	Individual Assistance		$188,408,439		
Total		**$174,280,510**	**$277,237,059**	**$2,106,827**	**$10,411,768**

Event	Damage Verification Source	Communications	Transportation	Hazardous Materials Management	Total

Hurricane Matthew	Public Assistance	$313,580	$111,721,533	$39,594	$215,459,943
	Individual Assistance				$47,978,514
Hurricane Florence	Public Assistance	$4,472	$479,128	$125,691	$124,873,264
	Individual Assistance				$188,408,439
Total		**$318,052**	**$112,200,661**	**$165,284**	**$576,720,160**

To better inform the analysis, and to pinpoint needs across each lifeline, a deeper analysis is warranted.

4.4.1 Safety and Security

The Safety and Security lifeline is focused on immediate damage prevention, law enforcement, fire services, rescue operations, and government services. The FEMA PA Category B projects, "Emergency Protective Measures," is a suitable measure of the immediate pre-disaster needs of impacted communities. These emergency measures and public services account for approximately 30 percent of the FEMA documented damage to lifelines.

Continued public services and the reduction of downtime in critical needs is a significant focus of mitigation funds.

4.4.2 Food, Water, Sheltering

Food, Water, and Sheltering are critical needs post-disaster and the primary focus of some FEMA PA projects related to water infrastructure such as water and sewer as well as FEMA IA documented damage. The FEMA IA estimate is based on applicants with FEMA Verified Loss (FVL) greater than $0 to real property in the MID areas. Based on the assessment of damage to each lifeline, the Food, Water, Sheltering lifeline accounted for the greatest extent of damages with 48 percent of FEMA documented damages to lifelines.

The State endeavors to use CDBG-MIT funds to address the threat to the Food, Water, and Sheltering Community Lifeline through buyout initiatives as well as the Public Housing Restoration Fund and the Infrastructure Recovery Program. Other resources are available to address facets of the complimentary Community Lifelines, but the CDBG National Objectives and existing program structure established for CDBG-DR funds provides an existing framework to best address this lifeline.

4.4.3 Health and Medical

Health and Medical lifelines include medical care, fatality management, and the health care supply chain. Primarily, CDBG-MIT funds can fortify the Health and Medical lifeline by easing patient movement and providing for public health improvements through the implementation of a variety of programs or projects. There are few FEMA PA projects directly associated with

the Health and Medical lifeline, however the Health and Medical lifeline is greatly benefited by the auxiliary benefits through improvements in infrastructure.

4.4.4 Energy

The Energy lifeline is comprised of power delivery, both permanent and temporary, and the supply of fuel. Many FEMA PA projects are associated with the installation of generators for temporary power and the hardening of power grids.

In "Improving Lifelines," power delivery is one of the major lifelines considered and there are multiple opportunities presented for counties, such as smart grids, emergency backup power, and updated building codes which may be provided by other funding sources.

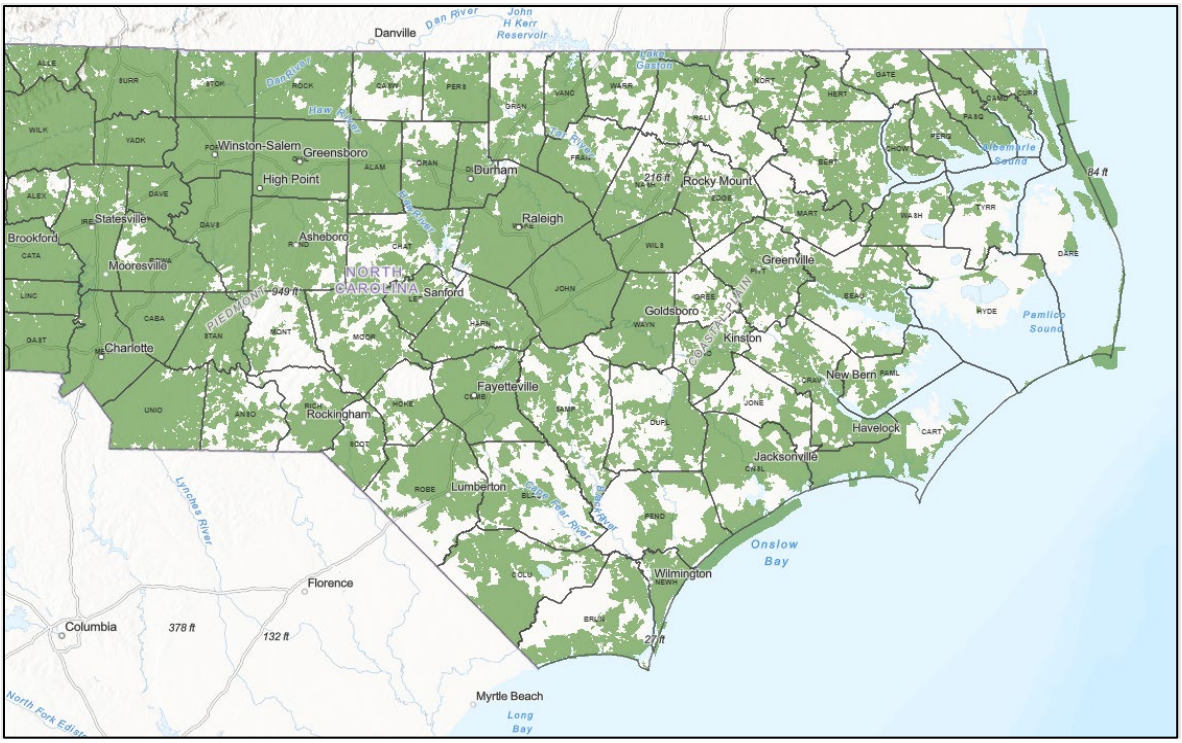
4.4.5 Communications

The Communications lifeline closely aligns with a State priority to improve access to high-speed internet Statewide. On March 14, 2019, Governor Roy Cooper signed Executive Order No. 91, "Establishing the Task Force on Connecting North Carolina, Promoting Expansion of Access to High-Speed Internet and Removing Barriers to Broadband Infrastructure Installation."

The Communications lifeline is critical in every phase of disaster. Communications in pre-disaster help educate and inform vulnerable individuals about their risk and also helps them prepare for disaster. During disaster, timely communication can directly save lives and property. Post-disaster, communications are necessary to simplify accessing recovery resources and staying in touch with vital information throughout the recovery process.

The relative damage and repair to communications infrastructure is limited in the FEMA PA projects pool. This may be an indicator that there is little communications infrastructure existing in the MID areas. The map below demonstrates the lack of broadband infrastructure in MID counties, including Robeson, Columbus, Brunswick, Pender, Duplin, Edgecombe, Onslow, Jones, Craven, and Pamlico. Generally, southeast North Carolina has insufficient broadband access.[46]

Figure 14 - Broadband Service Areas Greater than or Equal to 25mbs Download, 3 Mbps Upload (2019)



4.4.6 Transportation

The Transportation lifeline has the some of the greatest potential for intersect between other lifelines. For instance, improved infrastructure helps the safety and security lifeline by providing access to rescue during a disaster event. A significant amount of FEMA PA funds have been dedicated to restoring damaged transportation infrastructure. Nearly 20 percent of FEMA PA funds address a transportation infrastructure need.

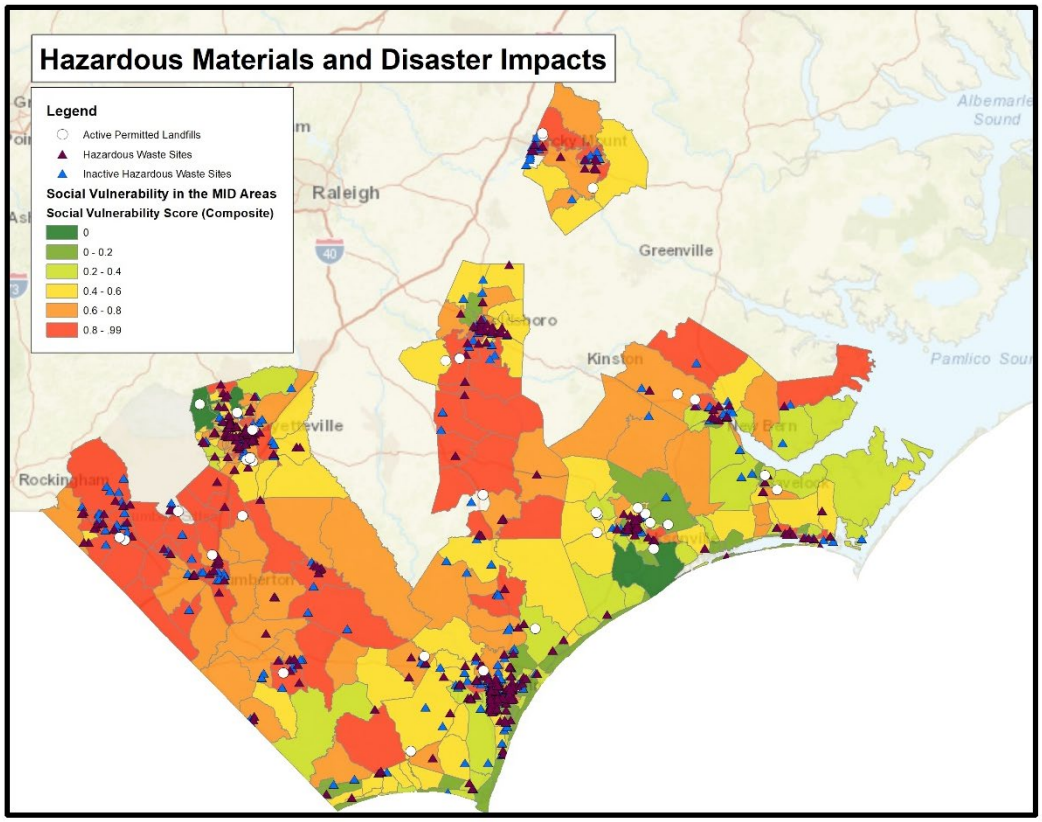
4.4.7 Hazardous Materials Management

Hazardous Materials management intersects with many other Community Lifelines, specifically Transportation, Safety and Security, and Food, Water, and Sheltering. Previous analysis of the risk of hazardous materials exposure in the MID areas has been conducted in this Assessment to ensure that a hazardous materials scenario is not overlooked. One way hazardous materials management is provided for is through funding hazardous materials abatement, such as lead and asbestos removal, during rehabilitation or reconstruction of damaged property through CDBG-DR funded programs. Generally, CDBG-MIT funds will indirectly augment the Hazardous Materials Management lifeline.

Hazardous materials may pose greater threat to vulnerable, minority, and low-income communities, as historically hazardous waste sites have been located adjacent to communities with these characteristics. NCORR has assessed the location of hazardous waste sites in comparison to vulnerable communities. The data assessment includes active and inactive

hazardous waste contamination sites as well as active permitted landfills. The location of these areas was mapped and compared to the social vulnerability index (SVI) score for the most impacted area. More information on SVI is found in Part 4.3.12 above.

Figure 15 - Hazardous Materials Location and Vulnerable Areas (2019)



Certain areas appear at greater risk of a hazardous materials management lifeline exposure, such as Scotland County, Edgecombe County, and parts of Cumberland and Robeson County where the SVI score is relatively high and there are significant concentrations of hazardous materials. Other areas had significant hazardous materials exposure risk but were relatively higher on the SVI scale, and therefore may have the tools and resources to address hazardous materials management issues as they arise. Hazardous materials management is extremely localized, often taking place in the literal backyard of the impacted and recovering population. Therefore, interventions in this lifeline are often more site dependent and will need to be delivered with significant care for the impacted individuals' unique circumstances.

In consideration of the increased risk of high SVI areas with hazardous materials concerns, NCORR considers the unique needs of these communities, including the need for community education on hazards and risk, making sure opportunities for these vulnerable communities to be heard are presented throughout the planning and implementation process, and continuing to develop plans and data collection exercises that continue to contribute to equitable treatment for vulnerable communities.

In the implementation of the Strategic Buyout and Public Housing Restoration Fund programs, NCORR will assess the potential impacts and seek to discourage relocating buyout applicants or reconstructing public housing units in areas of increased risk.

4.5 Risk Assessment

The risk assessment summarizes the vulnerability of the MID areas in context with the Community Lifelines. The Local Mitigation Handbook recommends implementing problem statements to quickly summarize the risks to the impacted community. These problem statements are intended to break down the major issues into a sentence or short paragraph[47]. After a review of the hazards, risks, and Community Lifeline vulnerability, the following problem statements have been defined for the MID areas:

- Hurricanes, coastal hazards, and flood hazards are the greatest risk to the MID areas and account for the largest amount of damage and loss of life in the MID areas.
- Hurricanes, coastal hazards, flood hazards, and other weather-related natural hazards are expected to increase in probability and severity due to changes in climate and sea level rise.
- Losses to the Food, Water, and Sheltering Community Lifeline are the most critical mitigation need based on an analysis of FEMA-documented damage.
- Mitigating losses to the Safety and Security, Transportation, and Energy Community Lifelines are the next most pressing needs, in descending order.

These problem statements inform the cardinal direction of the CDBG-MIT funded activities and drive the nature of the public and stakeholder engagement.

The Risk Assessment drives toward solutions that primarily address impacts from coastal hazards and flooding. However, the work done to categorize all hazards is foundational to the understanding of the area. NCORR will work toward considering all risks in program and project implementation, so that other risks in impacted communities are not ignored or worsened by a course of action intended to limit losses from coastal hazards and floods. Additionally, the work done on this risk assessment may be useful in using CDBG funding sources to address non-flood and non-coastal hazard risks in the future.

Table 22 - Hazards by Threat to Community Lifeline

Hazard	Safety and Security	Food, Water, Sheltering	Health and Medical	Energy
Flooding	Extreme Threat	Extreme Threat	Extreme Threat	Extreme Threat
Hurricanes and Coastal Hazards	Extreme Threat	Extreme Threat	Extreme Threat	Extreme Threat
Tornadoes/Thunderstorms	High Threat	High Threat	High Threat	High Threat
Hazardous Substances	High Threat	High Threat	High Threat	Moderate Threat
Excessive Heat	Moderate Threat	Moderate Threat	High Threat	Low Threat
Wildfires	Moderate Threat	Moderate Threat	Moderate Threat	Low Threat
Drought	Moderate Threat	High Threat	High Threat	Low Threat
Severe Winter Weather	Low Threat	Low Threat	Low Threat	Low Threat
Earthquakes	Low Threat	Low Threat	Low Threat	Low Threat
Dam Failures	Low Threat	Low Threat	Low Threat	Low Threat
Geological Hazards	Low Threat	Moderate Threat	Low Threat	Low Threat
Radiological Emergencies	Very Low Threat	Very Low Threat	Very Low Threat	Very Low Threat
Terrorism	Very Low Threat	Very Low Threat	Very Low Threat	Very Low Threat
Hazard	**Communications**	**Transportation**	**Hazardous Material Management**	**Combined Threat**
Flooding	Extreme Threat	Extreme Threat	Extreme Threat	Extreme Threat
Hurricanes and Coastal Hazards	Extreme Threat	Extreme Threat	Extreme Threat	Extreme Threat
Tornadoes/Thunderstorms	High Threat	Moderate Threat	Moderate Threat	High Threat
Hazardous Substances	Moderate Threat	Moderate Threat	High Threat	High Threat
Excessive Heat	Low Threat	Low Threat	Low Threat	Moderate Threat
Wildfires	Low Threat	Low Threat	Moderate Threat	Moderate Threat
Drought	Low Threat	Low Threat	Low Threat	Moderate Threat
Severe Winter Weather	Low Threat	Low Threat	Low Threat	Low Threat
Earthquakes	Low Threat	Low Threat	Low Threat	Low Threat
Dam Failures	Low Threat	Low Threat	Low Threat	Low Threat
Geological Hazards	Low Threat	Moderate Threat	Low Threat	Low Threat
Radiological Emergencies	Very Low Threat	Very Low Threat	Very Low Threat	Very Low Threat
Terrorism	Very Low Threat	Very Low Threat	Very Low Threat	Very Low Threat

4.6 CDBG-DR Considerations

The primary focus of CDBG-MIT funding is a forward looking, risk-based approach to implementing projects designed to reduce future losses from disaster. Conversely, CDBG-DR is a responsive funding source intended to repair, restore, and rehabilitate communities after a disaster.

During program design for CDBG-MIT, it became apparent that lessons learned and data gathered implementing CDBG-DR programs would be a major consideration for CDBG-MIT programming. In this instance, the unmet housing recovery need for Hurricane Matthew and Hurricane Florence informs programming for CDBG-MIT.

4.6.1 Buyout

A spatial analysis of areas with high concentrations of homeowners interested in HMGP acquisition, repetitive loss and severe repetitive loss property, and/or areas with homeowners likely to meet the Low/Mod Housing (LMH) and Low/Mod Housing Incentive (LMHI) indicates that more than 2,200 owner-occupied properties are strong candidates for buyout activity in both Hurricane Matthew and Hurricane Florence MID areas. As buyout areas are finalized, they will be located on the https://rebuild.nc.gov/buyout website. Community stakeholder and resident engagement continues to develop to inform the final buyout program demand.

Table 23 - Identified Buyout Need Summary

Buyout Zone Phase	Approximate properties in *identified* buyout zones	Approximate properties in *potential* buyout zones	Approximate Buyout Need
Phase I	1,473	N/A	$ 146,576,900
Phase II	N/A	3,000	$ 390,000,000
Total	**1,473**	**3,000**	**$ 536,576,900**

This estimate does consider the buyout of vacant land, small rental property, multi-family residential property, or commercial property, which could greatly increase the funds required to execute the buyout objective.

4.6.2 Buyout Process and Philosophy

NCORR seeks to be as transparent as possible in sharing information on the selection of areas for concentrated, strategic buyout. Buyout zones, or Disaster Risk Reduction Areas (DRRAs), are developed using spatial (map) data from multiple sources, including NCDPS, NCEM, NCDEQ, impacted counties and cities, and U.S. Census data. Buyout areas are determined using the following methodology.

First, NCORR conducted a review of and gathered spatial data for county-level flood zones, low- and moderate-income ReBuild NC CDBG-DR applicants, repetitive loss properties, and Hazard Mitigation Grant Program acquisitions and applications for acquisition. After that analysis, NCORR identified spatial concentrations, or "hot spots", for these data factors. Where 100-year floodplain data was not available, but other factors were present such as repetitive loss or HMGP acquisition interest, U.S. Geological Survey (USGS) flood inundation data for Hurricane Matthew and Hurricane Florence were added to see where else storm impacts may have occurred outside of the floodplain.

In identified hot spots, street-level satellite imagery was used to identify neighborhood features that would make a potential buyout program difficult to administer or unlikely to have community buy-in. These features include nearby schools, active commercial corridors, "main street" features, hospitals, and other community amenities.

In the remaining areas, parcel level data was reviewed to determine the zoning and ownership characteristics of the parcels, and to match parcels with repetitive loss, HMGP acquisition applicants, and other data. Finally, where possible, NCORR focused on census blocks where the population was more than 40 percent LMI. These LMI areas provide the greatest potential for meeting the LMI national objective (described in greater detail in Section 10.6 below) and create a buyout program that is intended to be equitable to LMI individuals and households, and provide LMI individuals a greater level of assistance and more options for both their property mitigation and storm recovery.

DRRA maps are shared with the local governments and citizens. Final maps, once confirmed, will be provided to the government partners and citizens, which broadly indicate where DRRAs are located. Once an agreement is reached with the local government and the program has met with the community, the maps are posted on the Strategic Buyout Program (SBP) website at https://rebuild.nc.gov/buyout.

Buyout DRRAs have been established in the counties shown in Table 24 based on the need in these areas. CDBG-MIT funds will be used for buyouts in these MID counties.

Table 24 - Buyout Need by DRRA, Phase I Finalized DRRA

County	Area	Buyout Need *(Parcel Level)
Columbus	Whiteville	113
Cumberland	Fayetteville	32

County	Area	Buyout Need *(Parcel Level)
Edgecombe	Tarboro, Pinetops, Princeville	592
Jones	Pollocksville	17
Robeson	Lumberton	381
Wayne	Goldsboro, Seven Springs	375
Total		1,510

NCORR is also in the process of identifying additional Phase II DRRAs for its buyout program. Planning and implementation efforts are underway to identify and launch buyout zones for Phase II in Florence MID areas, Matthew MID areas, State-identified MID areas, and dual storm impacted areas at this time. NCORR is coordinating with county and city stakeholders and decision makers to identify additional buyout zones and obtain governmental approval. The expansion of DRRAs was somewhat delayed due to the COVID-19 restrictions, but is now proceeding. NCORR is engaging with local governments, communities, and residents to identify, plan, and implement buyout in Phase II DRRAs. Phase II DRRA locations are currently subject to change as those conversations continue.

The NCORR philosophy on buyout is that no other mitigation approach definitively and permanently removes a vulnerable property – and a vulnerable individual or family – from harm's way. While infrastructure projects are effective, NCORR does not have sufficient funding to undertake major infrastructure projects across multiple counties that would provide the same level of safety and security that can feasibly be provided with buyout. Further, as the frequency of damaging weather events has increased in the past five years, the need for buyout in vulnerable areas has grown, and NCORR intends to give interested owners every option to safely relocate.

NCORR had considered establishing a minimum rate of participation in order for the Strategic Buyout Program to move forward in each DRRA. NCORR concedes that a Buyout Program will be more effective in terms of permanent mitigation when a participation rate is over 50 percent. However, NCORR believes that if this threshold is not met, this strategy could lead to further uncertainty and hesitation in participation in future program offerings from NCORR. Further, experience has shown that Buyout participation rates tend to increase over time. NCORR understands that deciding whether to participate in a Buyout Program is a major life decision for most citizens who may have deep ties to the storm-impacted community. NCORR plans to make the application and decision-making process as trouble-free as possible, without introducing the element of uncertainty that a minimum participation rate would introduce.

Funding buyout addresses a major recovery need, strengthens every Community Lifeline directly or indirectly, and aligns with the State priority to acquire vulnerable property (detailed in Part 4.7 below). Therefore, buyout activities constitute the a major programmatic allocation of CDBG-MIT funding.

NCORR commits to furthering environmental justice by including the local municipalities in the planning process, along with the potential buyout applicants at critical steps in the execution of the program. First, NCORR performed the analysis of vulnerable areas. Second, these assumptions were presented to local stakeholders and decision makers to ensure that these assumptions aligned with the community need and best interest of the community. Third, this process was presented to the specific population targeted for potential buyout. As feedback at every step of the process is heard, the plan is adjusted as needed to account for the needs of NCORR's valuable stakeholders.

4.6.3 Housing Development - Buyout

The original Action Plan included an assessment of the affordable housing need created by the buyout effort. This analysis is now found in the Hurricane Florence CDBG-DR Action Plan in support of the affordable housing allocation in that plan. Individuals interested in affordable housing initiatives developed by NCORR should refer to the the Hurricane Florence CDBG-DR Action Plan at https://rebuild.nc.gov/action-plans.

4.6.4 Public Housing Restoration

Needs analysis conducted after Hurricane Florence identified Cumberland County, Onslow County, and Pitt County as areas of significant concern for rental housing availability based on the number of total housing units available and the percentage of these units occupied by renters versus the overall renter housing need (see the Florence CDBG-DR Action Plan for more detail).

In a 2017 survey of Public Housing Authorities, including Greenville Housing Authority, Pembroke Housing Authority, Lumberton Housing Authority, Rocky Mount Housing Authority, and Wilmington Housing Authority, NCORR found that there were still significant repairs that needed to be made including approximately $5,200,000 in Lumberton alone. This represents need that could be more fully addressed using mitigation funding. Given the significant number of public housing developments in Cumberland County, particularly in the Fayetteville area, the mitigation needs assessment aligns with prior analysis conducted with regard to public housing unmet needs following Hurricanes Florence and Matthew.

4.6.5 Infrastructure Recovery

Prior analysis of infrastructure impacts from Hurricane Matthew using FEMA PA data demonstrated that there was significant damage to roads and bridges (Transportation Lifeline), Water Control Facilities (Food, Water and Sheltering Lifeline), Public Buildings and Public Utilities, and Parks, Recreational, and Other Facilities. Therefore, the analysis conducted for the

Hurricane Matthew Action Plan aligns with the primary risks and hazards identified in the State Hazard Mitigation Plan and this Action Plan, particularly in the areas of water-related infrastructure and transportation, as well as safety and security. A reanalysis of FEMA PA data in November 2022 affirmed the significant unmet need for recovery after Hurricane Matthew in the Transportation Community Lifeline category, as well as to the Food, Water, and Sheltering Community Lifeline category.

Table 25 - Infrastructure Unmet Need Analysis from Hurricane Matthew

Community Lifeline Category	Damage Category	Estimated Total Loss (Need)	Federal Obligations (FEMA PA Federal Share Obligated)	Estimated Unmet Need (Estimated Total Loss less Federal Obligations)
Transportation	C - Roads and Bridges	$119,754,373	$89,815,780	**$29,938,593**
Food, Water, and Sheltering	F - Public Utilities	$48,799,869	$36,599,902	**$12,199,967**
Food, Water, and Sheltering	D - Water Control Facilities	$23,105,468	$17,329,101	**$5,776,367**

Source(s): FEMA Public Assistance (PA) data as of 11/8/2022

NCORR is prioritizing infrastructure recovery needs from Hurricane Matthew and will explore support for recovery needs demonstrated from Hurricane Florence in future amendments if needed.

4.7 Assessing Priorities

In Section 5 of the HMP, the State outlines 27 actions to reduce risk. The CDBG-MIT funded activities in this Action Plan align with certain items on the HMP action priority list. Based on the CDBG-MIT level of funding and NCORR's mitigation priorities, there is significant overlap between state priorities, the assessment of the data for community needs, and the CDBG eligible activities of planning, buyout, affordable public housing, and infrastructure recovery..

The HMP action items that most align with CDBG-MIT activities include:

- **NC-2.** Acquire, elevate, provide structural retrofits, and otherwise leverage resources to protect or mitigate risk to people and personal property such as residences and businesses.
- **NC-3.** Training local governments, state agencies, and other organizations on emergency management and mitigation.
- **NC-6.** Work with local communities to promote changes in local policies, regulations, and activities such as land use, building codes, regional planning, improving storm drainage systems, and supporting the Community Rating System (CRS).

- **NC-14.** Provide useful data, studies, and other products that can help local communities better understand their risks.

NCORR recognizes that additional State priorities exist in the HMP, but to focus on the MID area risk reduction needs, these specific priorities are considered to be most strongly associated with CDBG-MIT funded interventions. While NC-2 is most directly related to the buyout program and the Public Housing Restoration Fund programming being proposed for CDBG-MIT, NCORR's planning efforts and buyout efforts that engage the community and local governments indirectly support items NC-3, 6 and 14. The Infrastructure Recovery Program most closely aligns with NC-6. For each CDBG-MIT activity defined below, the direct connection to the HMP action item is indicated.

4.7.1 North Carolina Consolidated Plan

The State of North Carolina is currently updating its Consolidated Plan for 2021-2025. Public comments on the draft Consolidated Plan will be accepted through April 29, 2021. Requirements for consolidated plans are published at 24 CFR Part 91. Several agencies contribute to the Consolidated Plan, including the North Carolina Department of Commerce (DOC) for the administration of CDBG funds; The North Carolina Department of Health and Human Services (DHHS) for the administration of Housing Opportunities for Persons with AIDS (HOPWA) funds and Emergency Solutions Grants (ESG); and The North Carolina Housing Finance Agency (NCHFA) for the administration of HOME Investment Partnership funds and Housing Trust Funds (HTF).

While the CDBG-MIT notices indicate that the CDBG-MIT Action Plan does not require complete consistency with the Consolidated Plan for a period of time, NCORR has reviewed the draft 2021-2025 Consolidated Plan to ensure that the objectives, goals, programs, and projects included within this Action Plan do not conflict with Consolidated Plan objectives and support Consolidated Plan outcomes within the scope of the CDBG-MIT framework. While the Consolidated Plan goals do not directly address mitigation efforts, the draft Plan clearly takes disaster recovery and flood risk into consideration as on page 70, the Plan notes, "According to analysis by the NYU Furman Center, 281,881 units (6% of all units) are located in the floodplains of North Carolina. Of those units, 70,665 are occupied by renter households and 4,936 are subsidized rental housing units. The estimated poverty rate in the flood plains is 17.7% which is higher than the statewide average of 14%. Thus, it is likely that many low and moderate-income households in North Carolina are vulnerable to climate change."
The draft Consolidated Plan includes five basic goals, to:

1. Increase housing affordability and availability.
2. Provide a suitable living environment through the provision of public services and public facilities.
3. Expand economic opportunities.

4. Stimulate housing and economic inclusiveness.
5. Respond to needs pertaining to the COVID-19 pandemic.

These goals align with the goals of the CDBG-MIT Action Plan, the SBP, the Public Housing Restoration Fund and Infrastructure Recovery Program, and with NCORR as an organization. The Consolidated Plan also provides the State's commitment to comply with fair housing (including affirmatively furthering fair housing), equal opportunity, and accessibility requirements. The Department of Commerce has published the draft Analysis of Impediments to Fair Housing Choice, 2021-2025. Public comments on this document were due on March 29, 2021. NCORR shares and adopts the commitments made in the Consolidated Plan in the operation of its CDBG-DR programs, and the commitments made in this Action Plan are not to be construed as a replacement or substitution for those commitments.

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5.0 Long-Term Planning and Risk Mitigation Considerations

With the mitigation funds available, NCORR supports driving toward clear, actionable mitigation activities which are supported by a data-driven analysis of the mitigation need. NCORR has reviewed its option within the available funding and has decided to focus its activities on three program areas in addition to planning: buyout, infrastructure, and public housing. NCORR will revisit planning needs as projects and programs develop to ensure that activities undertaken with CDBG-MIT funds engage local, regional, State, and Federal partners to produce a data-driven, comprehensive analysis of the mitigation approaches funded in this Action Plan.

This part of the Action Plan provides an overview of broad planning initiatives across the State, favoring actionable elements of building codes, land use, and flood risk protection that support overall state mitigation efforts.

5.1 Executive Order 80

On October 29, 2018, Governor Roy Cooper signed Executive Order No. 80, "North Carolina's Commitment to Address Climate Change and Transition to a Clean Energy Economy." E.O. 80 requires the following actions specific to NCORR activities:[48]

- **E.O. 80, Part two.** Requires that cabinet agencies shall evaluate the impacts of climate change on their programs and operations and integrate climate change mitigation and adaptation practices into their programs and operations.
- **E.O. 80, Part nine.** Requires that cabinet agencies shall integrate climate adaptation and resiliency planning into their policies, programs, and operations:
    - To support communities and sectors of the economy that are vulnerable to the effects of climate change; and
    - To enhance the agencies' ability to protect human life and health, property, natural and built infrastructure, cultural resources, and other public and private assets of value to North Carolinians.

As NCDPS is a cabinet agency and NCORR is an office operating within NCDPS, the requirements of E.O. 80 apply to NCORR activities. To comply with E.O. 80, the unmet needs analysis must evaluate changes in need based on the requirement to anticipate and respond to climate change in disaster impacted areas. This analysis will inform the Action Plan so that proposed programs contained therein are responsive to this executive order.

To better conform to E.O. 80, a portion of the planning allocation may be used to determine how best to comply with E.O. 80 and how to further the goals of E.O. 80, including agency coordination on E.O. 80 objectives.

5.2 Building Code Standards

In 2018, the North Carolina Department of Insurance's (NCDOI) Engineering and Codes Division developed the 2018 State Building Codes. Those Building Codes include:

- 2018 North Carolina State Administrative Code and Policies
- 2018 North Carolina State General Building Code
- 2018 North Carolina State Existing Building Code
- 2018 North Carolina State Residential Code
- 2018 North Carolina State Mechanical Code
- 2018 North Carolina State Plumbing Code
- 2018 North Carolina State Fuel Gas Code
- 2018 North Carolina State Fire Prevention Code
- 2018 North Carolina State Energy Conservation Code

North Carolina State Building Codes are updated approximately every five years and the current versions were adopted effective January 1, 2019. Current state building codes address floodplain construction requirements but are not as stringent as those recommended by American Society of Civil Engineers' ASCE-24 "Flood Resistant Design" guidance. As the lead Federal Agency in flood plain management, FEMA deems ASCE 24 to meet or exceed the minimum National Flood Insurance Program (NFIP) requirements for buildings and structures.

In 2019, NCORR resiliency and planning staff initiated conversations with the North Carolina Department of Emergency Management and Department of Insurance in an effort to align state building codes with ASCE 24 recommendations. No further activities developed from these conversations. The resiliency team, however, has established the North Carolina Resilient Communities Program that helps to address this need, and has been working to align policy for the state's own construction within floodplain areas with the guidelines established in Executive Order No. 266 issued on July 25, 2022.

5.2.1 Vertical Flood Elevation Protection

The Elevation Requirements set in North Carolina State building codes at R322.2.1 "Elevation Requirements" currently require elevation to above the base flood elevation (BFE) within the 100-year floodplain.[49] Earlier iterations of the building code required an additional foot above the base flood elevation within the 100-year floodplain (commonly referred to as a "freeboard" requirement).

In its current CDBG-DR implementation, NCORR requires that new or substantially improved residential structures are elevated two feet or more above the BFE or high-water mark (if outside the floodplain). This standard also applies to new construction performed in shaded or

unshaded X Zones according to Flood Insurance Rate Maps (FIRMs). For new construction using CDBG-MIT funds, NCORR will remain consistent with this requirement and depending on the facts of the construction may require additional freeboard or other mitigation techniques to ensure that new construction is sufficiently protected. NCORR commits to ensuring responsible floodplain and wetland management based on the history of flood mitigation efforts and the frequency and intensity of precipitation events.

5.3 Land Use and Zoning Policies

Land use and zoning practices, including adopting zoning regulation and amending zoning text or maps is a legislative policy choice entrusted to local elected officials. According to the University of North Carolina's School of Government "Plans provide a context to consider the long-term impact of individual land use decisions. Planning provides for public participation, coordination of programs and decisions, and the opportunity to set forth the basic policy choices that underlie a rational program of land use regulation. Although not mandated to do so, most populous North Carolina cities and counties have adopted plans."[50]

The University of North Carolina's School of Government identifies several plans typically adopted by the State's local governments:

Comprehensive Plans. Traditionally used by local governments as their principal planning tool, and includes land use, housing, transportation, community facilities, recreation, infrastructure, hazards, and other key community needs over a long-time horizon. Elements of a Comprehensive Plan may also include:

- **Land Use Plans.** Often included in the Comprehensive Plan but sometimes separately maintained, land use plans set land development priorities and future land use for the community.
- **Neighborhood or Area Plans.** These plans are similar to the overall Comprehensive Plan, but apply only to a neighborhood, area, township, or other smaller designation and outlines specific goals and opportunities in those identified areas.

Specialized Plans. Specialized plans include plans for historic district preservation, transportation or mobility plans, hazard mitigation plans, and other plans specific to a special need or purpose for the area.

Functional Plans. Functional Plans look at how government functions, such as transportation, water and sewer services, or parks and recreation, will be carried out in the future.

Strategic Plans. These plans focus on a few key issues, have a shorter time frame (such as two to five years), identify specific implementation responsibility and timeline, and have a regular follow-up on the results. These plans often have strong participation from community groups and leaders.

These plans present opportunities for local areas to incorporate natural hazard mitigation through the adoption of sound land use and zoning practices consistent with known threats to the community. A 2018 survey of local governments conducted by the University of North Carolina found that an increasing number of cities and counties, particularly the more-populous cities and counties, have adopted a comprehensive plan. While 70 percent of all responding jurisdictions report having adopted a comprehensive plan, over 90 percent of the cities with populations over ten thousand have adopted a plan (compared with 70 percent in 1998 and 75 percent in 2008).

Plan-adoption rates decrease for cities with smaller populations: 79 percent for cities with populations between one thousand and ten thousand, and only 26 percent for cities with populations under one thousand. Of the responding counties, 78 percent report having adopted a comprehensive plan.

However, adopted plans are not always updated regularly. The same 2018 survey found that about half of the adopted plans had been updated within the prior five years, about a quarter were last updated within the past six to ten years, and a quarter were last updated more than ten years prior to the survey. These percentages are about the same for cities and counties and across all population sizes.

Table 26 - Comprehensive Plan Adoption, 2018

Jurisdiction Population	Total Respondents	% Adopting Comprehensive Plan
Municipalities		
Less than 1,000	74	26%
1,000 - 10,000	119	79%
11,000 - 24,000	38	92%
Greater than 25,000	31	94%
Municipality Total	**262**	**68%**
Counties		
Less than 25,000	20	80%
Greater than 25,000	58	78%
County Total	**78**	**78%**
Total Responses	**340**	**70%**

Note: Percentage totals may deviate from 100 due to rounding. Source: UNC School of Government. *Planning and Zoning Law Bulletin Plan-Consistency Statements. p.7.*

https://www.sog.unc.edu/sites/www.sog.unc.edu/files/reports/20180809_PZLB27_2018-11-30_0.pdf

Table 27 – Plan-Update Frequency, State of North Carolina 2018

		Last Plan Update		
Jurisdiction Population	**Total Respondents**	**< 5 Years Ago**	**6 - 10 Years Ago**	**> 10 Years Ago**
Municipalities				
Less than 1,000	19	53%	32%	16%
1,000 - 10,000	92	49%	26%	25%
11,000 - 24,000	34	41%	50%	9%
Greater than 25,000	30	40%	30%	27%
Municipality Total	**175**	**46%**	**32%**	**21%**
Counties				
Less than 25,000	16	44%	25%	31%
Greater than 25,000	45	51%	27%	22%
County Total	**61**	**49%**	**26%**	**25%**
Total Responses	**236**	**47%**	**31%**	**22%**

Note: Percentage totals may deviate from 100 due to rounding. Source: UNC School of Government. *Planning and Zoning Law Bulletin Plan-Consistency Statements. p.7.*
https://www.sog.unc.edu/sites/www.sog.unc.edu/files/reports/20180809_PZLB27_2018-11-30_0.pdf

Even a 2018 plan updated within five years, a reasonable timeframe between plan revisions, was missing key information about the impacts of Hurricanes Matthew and Florence. These storms dramatically reshaped the planning landscape in impacted areas and may have fundamentally shifted community development priorities.

NCORR has planning funds available to assist in the development of some of these objectives, based on the specific needs identified through stakeholder engagement and input from government partners.

5.4 USACE Planning and Flood Mitigation Efforts

Damage from flooding continues to be the biggest threat to the health and safety of North Carolina residents. The CDBG-MIT allocation is directly tied to the impacts of flooding from

Hurricanes Matthew and Florence. In addition, as stated in 5.2.1. above, CDBG-DR funded projects located in the 100-year floodplain require vertical elevation.

To support broader flood reduction efforts, NCORR is involved in several planning efforts. NCORR participates in several of the US Army Corps of Engineers (USACE) feasibility study planning efforts. Three studies are aimed the Tar, Neuse and Cape Fear River basins. Discussions on these efforts are around potential flood risk reduction measures (structural, non-structural, natural and nature-based) under consideration. Sea level rise and beach erosion are also of great concern because it leads to flooding and other negative environmental consequences. NCORR is also involved with USACE study and planning efforts for the South Atlantic Coastal Study and other beach nourishment studies[51].

5.4.1 High Wind

In addition to this vertical height requirement, NCORR will take into consideration high wind considerations for new or rehabilitated buildings. There are many informational resources available to safeguard against high wind conditions, including *FEMA 543: Risk Management Series Design Guide for Improving Critical Facility Safety from Flooding and High Winds*. FEMA 543 recommends incorporating hazard mitigation measures into all stages and at all levels of critical facility planning and design, for both new construction and the reconstruction and rehabilitation of existing facilities.[52] While the guidelines in FEMA 543 are applicable to critical facilities, they may also be applied to new construction of other buildings and infrastructure. In all instances, NCORR will defer to engineering and design experts to ensure that high wind hazards are addressed.

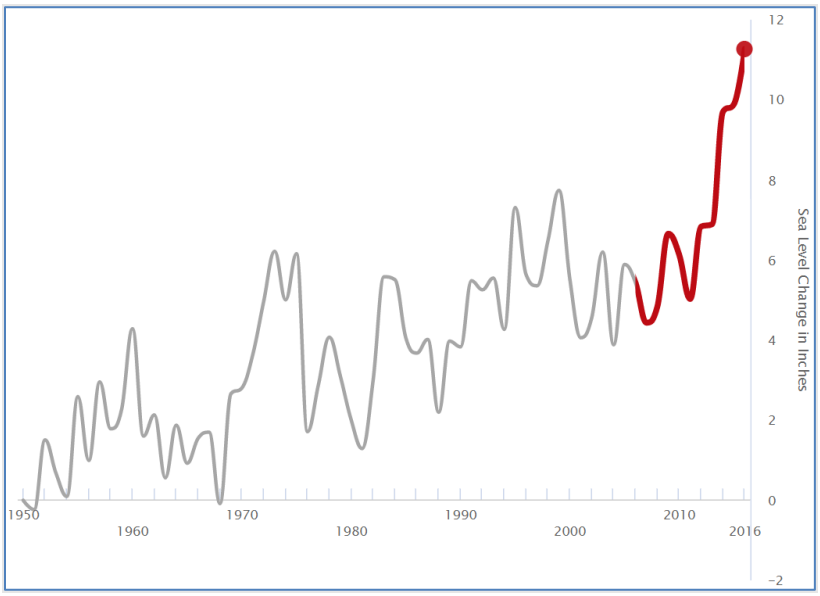
NCORR shall also consider resources and lessons learned from other states in the implementation of their recovery programs. The State of Florida has adopted the *Hurricane Michael FEMA Recovery Advisory (RA) 2 Best Practices for Minimizing Wind and Water Infiltration Damage*[53] as a guiding principle in its recovery programs. This advisory describes specific issues observed in newer residential buildings after Hurricane Michael. The buildings observed were built after the adoption of the first edition of the Florida Building Code (FBC) (March 2002). The advisory provides key points for consideration during rebuilding and mitigation activities. The references cited in the advisory contain additional best practices and guidance for issues commonly observed after storm events. While NCORR does not anticipate executing new construction with its allocation of CDBG-MIT funds, NCORR shall apply the guidance in this document where feasible in the development of new construction funded with CDBG-MIT funds.

5.4.2 Sea Level Rise

In addressing flood mitigation, it is essential to the long-term planning process to also consider the effects of sea level rise on the coastal communities of the State. According to National Oceanic and Atmospheric Administration (NOAA) data, the monthly mean sea level off of the coast of North Carolina has risen almost 1 foot higher than its 1950 level.[54] Sea level rise is of

increasing concern to vulnerable coastal areas of the State because sea level rise has been accelerating over the past 10 years and is now rising an average of one inch every two years. These measurements are conducted with sound methodology and have become increasingly accurate, leading to the conclusion that sea level rise is a significant threat to coastal areas of the State.

Figure 16 - Sea Level Measurement from Wilmington Area Tide Gauge Since 1950



Source: Sea Level Rise.org. *North Carolina's Sea Level Is Rising*. https://sealevelrise.org/states/north-carolina/

NCORR commits to using the best available data to determine whether structures would be at risk of sea level rise and avoid construction or rehabilitation of structures which may be subject to increased risk due to sea level rise and coastal erosion.

5.5 Local and Regional Planning Coordination

The following entities have been engaged in the development of CDBG-MIT activities and are expected to continue to play a role in CDBG-MIT implementation:

- **North Carolina Department of Public Safety (NCDPS).** As an office within NCDPS, NCORR has the full support of NCDPS.
- **North Carolina Emergency Management (NCEM).** The State Hazard Mitigation Officer (SHMO), Steve McGugan, previously met with NCORR staff to discuss HMGP activities and how CDBG funds can best complement NCEM objectives.
- **North Carolina Department of Transportation (NCDOT).** NCDOT staff have met with NCORR staff to discuss major infrastructure plans which may affect NCORR decision making and long-term mitigation planning.

- **North Carolina Department of Environmental Quality (NCDEQ).** The NCDEQ, along with its Division of Coastal Management (NCDCM) have coordinated with NCORR staff on coastal management and coastal climate resilience initiatives. NCORR will identify opportunities to continue coordination with NCDEQ, including the NC Dam Safety Program, to assess regional or localized hazards from dam safety and help inform the full risk of new development in areas subject to hazards posed by dams.

5.6 Flood Insurance Coverage

To the greatest extent possible, NCORR will take steps to increase the affordability of flood and hazard insurance through its CDBG-DR funded program. The program will increase low- to moderate- income owners and renters' ability to afford flood insurance, a significant expense to low-income property owners. This program will support NCORR's overall mitigation efforts to prepare citizens to manage losses from future storm and flood events. For more details, please see the Hurricane Florence Action Plan.

NCORR encourages the purchase of flood insurance outside of the SFHAs as flooding is a risk in NC in non-flood areas too. SBP provides a flood risk flyer called *Keeping North Carolinians Safe for Future Storm and Flood Events* to citizens and buyout participants about the benefits of flood insurance and the risks of flooding during local meetings and at application. This flyer highlights the facts about flooding risks, including the risk of flash floods and that flooding can occur outside of Special Flood Hazard Areas. All PHAs participating in the Public Housing Restoration Program with a requirement to purchase flood insurance will also be informed of this information per Section 582.

Section 582 of the National Flood Insurance Reform Act of 1994, as amended, (42 U.S.C. 5154a) prohibits flood disaster assistance in certain circumstances. In general, it provides that no Federal disaster relief assistance made available in a flood disaster area may be used to make a payment (including any loan assistance payment) to a person for "repair, replacement, or restoration" for damage to any personal, residential, or commercial property if that person at any time has received Federal flood disaster assistance that was conditioned on the person first having obtained flood insurance under applicable Federal law and the person has subsequently failed to obtain and maintain flood insurance as required under applicable Federal law on such property. This means that CDBG-MIT assistance may not be provided for the repair, replacement, or restoration of a property to a person who has failed to meet this requirement.

Guidance from HUD received on October 27, 2021, clarifies that it is also allowable to provide housing incentive payments, in connection with the buyout, to relocate households outside of a floodplain or to a lower-risk area. Therefore CDBG-MIT funds are able to be used to provide an incentive under the Strategic Buyout Program for eligible households who did not maintain flood insurance when required. Additionally, a waiver provided by HUD that allows flexibility on the one-for-one replacement rule that applies to the Public Housing Restoration Fund will permit NCORR to support alternative reconstruction options for public housing developments that are not suitable for rehabilitation and/or in a floodplain.

Section 582 also imposes a responsibility on NCORR and its subrecipients to inform property owners receiving assistance, that triggers the flood insurance purchase requirement, that they have a statutory responsibility to notify any transferee of the requirement to obtain and maintain flood insurance in writing and to maintain such written notification in the documents evidencing the transfer of the property. If they fail to do so transferring owner may be held liable and obligated to reimburse the Federal Government for the disaster relief assistance provided.[55]

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6.0 Mitigation Projects and Leverage

NCORR commits to advancing mitigation programs and activities that advance long term resilience to current and future hazards. NCORR also aligns its CDBG-MIT-funded programs with other planned federal, state, regional, or local capital improvements, where feasible.

Each proposed mitigation activity must define how:

1. It will advance long-term resilience.
2. Align with other planned capital improvements.
3. Promote community-level and regional planning for current and future disaster recovery efforts and additional mitigation investment.

North Carolina maintains an Enhanced Statewide Hazard Mitigation Plan published in February 2018 as well as county Hazard Mitigation Plans updated every five years. Following Hurricane Matthew, North Carolina invested in more detailed planning creating a Hurricane Matthew Resilient Redevelopment Plan (RRP) for each of the 50 disaster declared counties. The RRPs address the County's needs for achieving holistic recovery and redevelopment by analyzing the risks to its assets, identified needs and opportunities, determines the potential costs and benefits of projects, and prioritizes the projects. A majority of those plans listed multiple housing options in their top five priorities – specifically acquisition, buyout, elevation, and relocation to prevent future loss and increased access to affordable housing outside of the SFHA. The needs assessments following Hurricane Florence demonstrated a similar need.

The State of North Carolina has effectively applied multiple funding sources to achieve the State HMP, local HMP, and RRP priorities. Any additional analysis, risk assessment data, or any mitigation activity will be incorporated into future revisions of these plans so that community leaders may return to the HMP and RRP as primary sources of mitigation planning. Additional program details, including leverage for specific mitigation projects, can be found in Section 10 of this plan.

6.1 Strategic Buyout Program

In 2019 and 2020, NCORR worked with the State Hazard Mitigation Officer (SHMO) and the National Flood Insurance Program (NFIP) coordinator to identify Disaster Response Recovery Areas (DRRAs) that leverage CDBG-DR grant funds with extensive data provided by FEMA-funded HMGP acquisition projects, NFIP claims, and repetitive loss/severe repetitive loss property data. The first Phase I DRRAs incorporate over 1450 properties from the approved HMGP buyout and elevation list, the repetitive and severe repetitive loss lists, and the over 2,200 applicants that HMGP could not fund both in and out of floodplains and floodways. NCORR negotiated the DRRAs with local authorities often adding to the size of areas based on local expertise and needs. Finally, NCORR held Town Hall type meetings with the residents of

the DRRAs before opening the applicant intake process. NCORR was in the process of identifying Phase II DRRAs in response to mitigation needs with local governments and partners as of SAPA 2. Citizen input was obtained through public meetings and a public hearing in 2021.

Other sources of funds primarily of interest to long-term mitigation are funds received for FEMA Public Assistance (PA), FEMA Hazard Mitigation Grant Program (HMGP), Small Business Administration (SBA) Disaster Loans, Department of Transportation (DOT) funds, and U.S. Army Corps of Engineers (USACE) funds.

Given the limited CDBG-MIT funds available to the State, it is difficult to meaningfully interface with the major infrastructure projects that the USACE typically undertakes. Currently, there is no opportunity for CDBG-MIT funds to directly support a USACE project given the level of CDBG-MIT funding and the scope of USACE projects. If new USACE projects are introduced, NCORR will consider whether they would be a vehicle for leverage of CDBG-MIT funds. However, it is important to note that while not providing direct funding to USACE projects, NCORR is involved in USACE planning. NCORR's effort will be directly impacted by the projects being undertaken by USACE.

The North Carolina Department of Transportation (NCDOT) has been a communicative partner in mitigation planning. NCDOT has shared information on potential future projects to lend context to multiple mitigation approaches, including potential buyout areas and Disaster Risk Reduction Areas (DRRAs). As these projects have not been approved for construction and are in the early planning stages, they do not yet present a leverage opportunity for CDBG-MIT programs. As NCDOT projects develop, NCORR will reassess the viability of a leverage opportunity with NCDOT projects.

Similar to its CDBG-DR activities, NCORR's CDBG-MIT activities perform a duplication of benefits review for all SBP applicants, as well as for Public Housing Restoration Fund and Infrastructure Recovery Program applicants to ensure that there is no provision of additional disaster recovery funds provided to applicants for the same purpose. More information on DOB processes and procedures can be found in the individual program manuals for each program, located at www.rebuildnc.gov. Additional program details are outlined in Section 10 of this action plan.

6.2 Public Housing Restoration Fund

There are a number Public Housing Authority developments located within the 100-year floodplain in MID counties, demonstrating a clear need for mitigation of flood risk for residents of public housing. A 2022 analysis of HUD's "Public Housing Developments" and data on floodways and 100-year floodplains yielded at least 87 public housing developments (562) units at risk of flooding in the MID counties, with a noticeable cluster in the Fayetteville area in Cumberland County. The Public Housing Restoration Fund may be defined as a mitigation activity because the program provides a way to mitigate current and future risk of flooding for public housing developments located in areas that are at risk of flooding and damage from

previously identified Highly Likely hazards across the state for a vulnerable population of low-income renters.

In the original 2017 unmet needs analysis following Hurricane Matthew, the State conducted outreach (via survey) to housing providers in impacted areas to determine the damages, displacement, and unmet needs of subsidized and supportive rental housing. The State contacted PHAs in the most impacted areas, including Greenville Housing Authority, Pembroke Housing Authority, Lumberton Housing Authority, the Housing Authority of the City of Rocky Mount, and Wilmington Housing Authority. Information was received from four of the five housing authorities. The Lumberton Housing Authority had, by far, the most extensive damage totaling an estimated $8 million, with approximately $5 million in remaining unmet need. There are currently 264 families who are displaced and living with family members or using housing vouchers, who have yet to move back into their homes as all units are still in the process of being repaired.

As part of SAPA 5 for Matthew, the State identified that in addition to the ongoing need in Robeson County with the City of Lumberton, the Housing Authority of the City of Goldsboro and the Wilson Housing Authority both have additional recovery needs.

As part of SAPA 7 for Matthew, there was an additional need for funds identified by the Wilson Housing Authority during the selection process for the Whitfield Homes Expansion project. The updated public housing need at the time increased to $11,172,422.

The State's initial Action Plan under CDBG-DR for Matthew created the Public Housing Restoration Fund with an allocation totaling $13.4 million across the initial Action Plan and subsequent Substantial Amendments. The funding was reallocated to the CDBG-MIT Action Plan, in consideration of a realignment of longer-term resilience and mitigation activities with the objectives of the CDBG-MIT funds.

In the context of Hurricane Florence, some Public Housing Authorities (PHAs) continued to grapple with the effects of Hurricane Matthew while dealing with Hurricane Florence-specific recovery needs. The total FEMA Public Assistance claims for Hurricane Florence related to Public Housing is over $46 million, this includes significantly dual-impacted areas such as Fayetteville, Laurinburg, and Lumberton.

Under CDBG-DR funding for Hurricane Florence, $16.3 million was previously allocated to the Public Housing Restoration Fund to rehabilitate and/or repair Public Housing Authority (PHA) properties that were damaged. Funds were to be used to address unmet recovery needs after accounting for insurance and other Federal disaster funding, or to make facilities more resilient from future storm events. This includes relocating PHA units out of the floodplain to help protect against future flood insurance losses.

The $16.3 million has now been reallocated in CDBG-MIT funds to further support and strengthen ongoing recovery efforts.

6.3 Infrastructure Recovery Program

The Infrastructure Recovery Program identifies the need for mitigation activities in connection with the impacted Community Lifelines as a result of Hurricane Matthew and Florence.

The 2022 FEMA public assistance unmet need reanalysis for the Hurricane Matthew Action Plan highlights that 77% or $54,601,512 of the total estimated infrastructure unmet need is related to the following damage categories:

- Category C: Roads and Bridges;
- Category G: Recreational – Other
- Category F, Public Utilities

The State has reallocated $18 million of funding for the Infrastructure Recovery Program in CDBG-MIT funds. The allocation allows the State further to strengthen the ongoing recovery efforts related to housing with CDBG-DR funds, but also create a realignment of longer-term resilience and mitigation activities for the CDBG-MIT funds.

Projects will continue to be located in previously identified MID counties. The projects will specifically target LMI and Urgent Need communities ensuring a connection to a HUD National Objective, as well as CDBG activity eligibility.

Overall, the inclusion of the Infrastructure Recovery Program in the CDBG-MIT Action Plan further helps to ensure that the funding is advancing long-term resilience goals, that programming aligns with other planned capital improvements, and that the promotion of community-level and regional planning efforts are integral to NCORR's mitigation efforts and investments.

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7.0 Natural Infrastructure

Beyond the specific methods needed to assess and compare grey infrastructure against natural infrastructure options relative to their utility to mitigate risk, a framework is required that would provide guidance to North Carolina on how to consider natural infrastructure solutions in its envisioned CDBG-MIT projects. NCORR is focused on how municipalities are advancing adaptation to climate change through the management of natural infrastructure assets that provide municipal and ecosystem services. Such focus provides effective solutions for minimizing coastal flooding, erosion, and runoff, as do man-made systems that mimic natural processes—known as natural infrastructure. Across North Carolina, aging water infrastructure is creating challenges for water management. Combined sewer systems are pumping toxins into estuaries, bays, lakes and other water bodies and overflowing during extreme precipitation events into urban and residential areas. At the same time, coastal communities are being heavily damaged from extreme storm events and sea level rise. Experts agree that natural infrastructure such as healthy wetlands can provide many of the same benefits of traditional man-made infrastructure at a much lower investment and maintenance cost. Natural infrastructure approaches include forest, floodplain and wetland protection, watershed restoration, wetland restoration, permeable pavement and driveways; green roofs; and natural areas incorporated into city designs, and conservation easements. A natural infrastructure approach represents a successful and cost-efficient way to protect riverine and coastal communities. While there is much to be done in the way of design and restoration in coastal communities, this plan, due the preponderance of MID counties and communities and their locations, will focus on upstream rather than coastal natural infrastructure.

Ordinances and codes are the regulatory mechanisms available to local governments for land use and natural resource management. Though local governments in North Carolina have no preexisting grants of power, the General Assembly has made both general grants of power to cities and counties and specific grants of power to regulate other activities under certain special circumstances. Cities and counties are generally allowed to “by ordinance define, regulate, prohibit, or abate acts, omissions, or conditions detrimental to the health, safety, or welfare of its citizens and the peace and dignity of the county; and may define and abate nuisances.” Other grants of authority are made to address specific issues, including the environmental impacts of development, and are found in other statutes.

Many of the resources discussed here are written as separate ordinances but could also be modified to work in a unified ordinance framework. Some of the ordinances are written as overlay ordinances, which are used to establish additional development requirements in specific areas of a community, such as environmentally sensitive areas. The additional requirements are superimposed over, or “overlay”, the base regulations already in place.

Many local governments in North Carolina are already required to adopt stormwater regulatory programs due to the urbanizing nature of the community or its location near sensitive resources (e.g., impaired waters, coastal locations). As part of these regulatory programs, NCDEQ collaborated with the University of North Carolina School of Government to develop several model stormwater ordinances that local governments can look to for guidance.

The Phase II Stormwater Model Ordinance was developed to meet requirements under the federal Clean Water Act for cities and towns that operate municipal separate storm sewer systems (MS4s) located in urbanized areas and serving a population of fewer than 100,000. The language includes performance standards that address quality, as well as the magnitude and rate of runoff.

The Model Tree Protection Ordinance provides communities with guidance for retaining trees. Tree protection ordinances can mitigate some of the impact of development while also ensuring community benefits, such as increased property values, stormwater runoff management, cooling, and air quality. The model ordinance sets out a framework for local governments and stakeholders to follow in deciding how to protect trees in their communities.

Multiple opportunities exist to capitalize on natural infrastructure amelioration and restoration. For Buyout undertakings, this would include conversion of DRRA properties into seasonal floodplains that have had structures demolished and are landscaped riparian buffer zones containing marginal native species returned to units of government/local government for permanent deed restrictions preventing re-development. These seasonal floodplains will serve to impound and filter both storm and floodwaters.[56]

For Infrastructure projects funded by the Infrastructure Recovery Program, funding can be used to restore natural resource systems and use green infrastructure technologies to meet HUD's recommendations for subrecipients to incorporate natural resiliency measures into infrastructure projects. Examples of projects that may be developed include, but are not limited to, restoring, developing, and/or enhancing natural barrier dune systems; creating wetland habitats to act as storm surge barriers; enhancing and replacing near shore and riverine vegetation and forest canopies that were lost or impacted by Hurricane Matthew; creating living shorelines and riverbanks; and restoring man-made or natural beach or riverine environments.

The Public Housing Restoration Fund aims to undertake resiliency interventions that include, among others, nature-based stormwater management features, nature-based coastal protection features, and resilient retrofits.

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8.0 Cost Verification and Construction Standards

NCORR acknowledges the emphasis in the Notice to institute green building design standards, specifically when executing new construction, or rehabilitation or replacement of substantially damaged residential buildings, and will follow the guidance located in 84 FR 4844 concerning green building design. Rather than be limited by a single green building design technique, NCORR will require that new construction meet the best fit for new construction from many possible approaches. For all new or replaced residential buildings, the project scope will incorporate Green Building materials to the extent feasible according to specific project scope. Materials must meet established industry-recognized standard that have achieved certification under at least one of the following programs:

- ENERGY STAR (Certified Homes or Multifamily High-Rise).
- Enterprise Green Communities.
- LEED (New Construction, Homes, Midrise, Existing Buildings Operations and Maintenance, or Neighborhood Development).
- ICC-700 National Green Building Standard,
- EPA Indoor AirPlus (ENERGY STAR a prerequisite).
- Any other equivalent comprehensive green building program.

For each project subject to the above, the specific green building technique or approach used will be recorded. NCORR will implement and monitor construction results to ensure the safety of residents and the quality of homes assisted through the program. All new housing created in whole or in part with CDGB-DR funds will comply with current HUD Decent, Safe, and Sanitary (DSS) standards. Rehabilitation of non-substantially damaged structures must comply with the HUD CPD Green Building Retrofit Checklist available at https://www.hudexchange.info/resource/3684/guidance-on-the-cpdgreen-building-checklist/, to the extent that the items on the checklist are applicable to the rehabilitation. NCORR will consult FEMA P-798, Natural Hazards and Sustainability for Residential Buildings, to align green building practices with the increased sustainability and resiliency.

Any applicable new housing developed with CDBG-MIT funds will comply with accessibility standards set at 24 CFR Part 40. NCORR will utilize the UFAS Accessibility Checklist as a minimum standard for structures with five or more units to assist in the compliance of Section 504 of the Rehabilitation Act. The checklist will be used when reviewing the design of all newly constructed residential structures (other than privately owned residential structures). The Fair Housing Act (including the seven basic design and construction requirements set in the Fair Housing Act)[57] also applies to buildings with four or more units. Titles II and III of the Americans with Disabilities Act also applies to public housing.

8.1 Cost Verification

At all times, construction costs, including demolition costs, must remain reasonable and consistent with market costs at the time and place of construction/demolition. NCORR follows the policies set in its Procurement Manual to perform an independent cost analysis for applicable procured activities and a cost principles analysis and budget certification for awards to assist in determining that costs are reasonable and necessary.

NCORR will review projects and test for compliance with financial standards and procedures including procurement practices and adherence to cost reasonableness for all operating costs and grant-funded activities. All program expenditures will be evaluated to ensure they are:

- Necessary and reasonable.
- Allocable according to the CDBG contract.
- Authorized or not prohibited under state/local laws and regulations.
- Conform to limitations or exclusions (laws, terms, conditions of award, etc.).
- Consistent with policies, regulations, and procedures.
- Adequately documented.
- Compliant with all Cross Cutting Federal Requirement including Uniform Administrative Requirements at 2 CFR 200. Per 2 CFR § 200.317, Subrecipients utilizing Program funds must follow all procurement guidelines contained in 2 CFR §§ 200.318-327.

8.2 Timely Expenditure of Funds and Reprogramming

NCORR has adopted procedures to ensure the timely expenditure of funds, track expenditures in each month, monitor expenditures of recipients, reprogram funds in a timely manner, and project expenditures over time. NCORR or its subrecipients of funding must be able to report expenditures for each approved activity. A record of the account balances is maintained for each approved activity that accounts for expenses accrued as well as obligations that have been incurred but not yet been paid out. As part of those controls, the system of record (Salesforce) includes the submission of Requests for Payment to track expenditures against pre-established activity budgets as well as for retention of records related to expenditures. Monthly expenditures are recorded in Salesforce as well as through the reporting mechanisms established by the Business Systems and Reporting team. The Business Systems and Reporting team also ensures that actual and projected expenditures of funds are reported in the Disaster Recover Grant Reporting system (DRGR) quarterly performance report (QPR). The use of these systems will ensure that contracts and bills are paid timely.

Technical assistance and training are provided by NCORR to Subrecipients to ensure that they understand their roles and responsibilities to comply with all federal and state requirements in the Subrecipient Agreements (SRA). Included in these responsibilities is the proper and timely submission of invoices. NCORR establishes strict timelines and milestones within each of the SRA agreements entered into with subrecipients, contractors, consultants and recipients of funds. These requirements and milestones will be specifically outlined in each agreement and will be designed to be specific to categories of funding. All grantees are required to expend all funds within a certain timeframe as outlined in the Public Law and Federal Register Notices that govern the obligation of funds.

At times, it may be necessary for NCORR to reprogram grant funds. Funds may need to be reprogrammed for many reasons, including but not limited to:

- The Activity did not expend all funds awarded.
- The grant time period expired.
- Projects or programs were completed under budget and funds were remaining.
- A grant agreement expired, with no amendment necessary.
- A projected award is unable to be contracted.
- A project is determined to be ineligible.
- Slow or untimely project start date.
- An additional mitigation need is identified.

NCORR will review the use of funds quarterly as a part of the quarterly expenditure reports and may use those reports as a foundation to approach reallocation. Alternatively, changes in program design which necessitate a substantial Action Plan amendment may present an opportunity for NCORR to expediently reprogram funds. Through the grant cycle, subrecipients and contractors may request additional funds. These requests for funds will be evaluated as they are received. If the facts and circumstances of the request warrant additional funds, and additional funds are available, NCORR may reprogram funds at that time. Any funds reprogrammed which exceed the threshold criteria for a substantial Action Plan amendment will be formalized through the substantial Action Plan amendment process.

NCORR does not anticipate the creation of program income in the expenditure of CDBG-MIT funds. If program income is generated through the course of CDBG-MIT administration, the Action Plan will be updated to reflect a plan for managing program income.

8.3 Broadband

QAP requirements from NCHFA indicate that any substantial rehabilitation or new construction of a building with four or more units planned with CDBG-MIT funds must include installation of broadband infrastructure except where it is infeasible due to location, cost, or structural concerns. NCORR will ensure that these activities are undertaken in planned projects for the Public Housing Restoration Fund, and for any projects that meet the criteria in future amendments to this plan.

8.4 Operation and Maintenance Plans

NCORR has required all infrastructure projects funded through the Infrastructure Recovery Program and projects as part of the Public Housing Restoration Fund to provide NCORR with a plan for operation and maintenance indicating funding from sources other than CDBG-MIT funds. For the Infrastructure Recovery Program, funding from state and local sources will fund the continued maintenance and operation of programs. Public Housing Authorities and communities that are awarded funding through the Public Housing Restoration Fund are required to provide staff and funding for long term operation and maintenance of any projects funded with CDBG-MIT funds.

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9.0 Relocation Requirements and Ensuring Accessibility

NCORR is continuing to make every effort to minimize temporary and permanent displacement of persons due to the delivery of the HUD's CDBG-DR and CDBG-MIT programs it administers. Participation in the Strategic Buyout Program is voluntary for property owners (see section 9.1), and such owners will not be considered "displaced persons" according to 49 CFR 24.2(a)(9).

In rare cases, the Public Housing Restoration Fund may also require temporary relocation during reconstruction, rehabilitation, or new construction. However, program activities aim to avoid relocation whenever possible.

However, when displacement occurs, such as when a rental tenant is permanently displaced due to an owner's voluntary participation in the Strategic Buyout Program or the Public Housing Restoration Fund, NCORR will follow its *URA Policy Manual* requirements and it's *Residential Anti-Displacement and Relocation Assistance Plan (see Appendix A in the URA Policy Manual)*, available at https://www.rebuild.nc.gov/about-us/plans-policies-reports/policies-and-procedures.

Eligible displaced persons will receive all benefits required under the Uniform Relocation Assistance and Real Property Acquisition Act (URA), a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. Because the regulations for CDBG-MIT waive the relocation requirements under Section 104(d), the URA protections under 49 CFR Part 24 apply to eligible persons displaced as a result of the buyout program. In addition, the waiver to section 414 of the Stafford Act applies, which means that URA protections will apply to eligible persons under the Strategic Buyout Program starting with the program launch date of January 27, 2020, as it was more than one year after the presidentially declare disasters. NCORR will also relies on the HUD Handbook 1378, Tenant Assistance, Relocation and Real Property Acquisition Handbook, in its administration of URA protections.

In accordance with URA regulations, NCORR will provide displaced persons with relocation advisory services and URA benefits including but not limited to the:

- Provision of the required notices including the General Information Notice, Notice of Relocation Eligibility or Notice of Non-Displacement, and 90-Day Notice to Move;
- Reimbursement of eligible expenses associated with moving;
- Housing assistance payments if there is an increase in the cost of housing; and
- Identification of comparable housing. The program will make every effort to identify three comparable units however, displaced residential tenants will not be required to move unless at least one comparable unit has been offered.

9.1 Voluntary Acquisition

NCORR's Buyout Program is voluntary and NCORR will not utilize the power of eminent domain. While NCORR has no direct authority to perform eminent domain, it could request the Division of Administration to execute eminent domain on its behalf. Although NCORR does not intend to use the State's eminent domain authority, NCORR is indicating how it meets the four-part criteria under 49 CFR 24.101(b)(1) (i-iv):

(i) No specific site or property needs to be acquired, although the Agency may limit its search for alternative sites to a general geographic area. Where an Agency wishes to purchase more than one site within a general geographic area on this basis, all owners are to be treated similarly. (*See* appendix A, § 24.101(b)(1)(i).)

NCORR will be implementing its Strategic Buyout Program within DRRAs identified as being areas at risk for future storm damage. No specific sites or properties are being identified for purchase under the Strategic Buyout Program. The Program will offer to acquire property in DRRAs from eligible owners based on the appraised current Fair Market Value (CMV). The Initial Offer, based on the CMV, will be offered to all eligible applicants; therefore, applicants are being treated equally.

(ii) The property to be acquired is not part of an intended, planned, or designated project area where all or substantially all of the property within the area is to be acquired within specific time limits.

The Strategic Buyout Program is not part of a designated plan or development project that must be acquired within a specific timeframe. There is no specific time limit for the purchase of properties under the Strategic Buyout Program.

(iii) The Agency will not acquire the property if negotiations fail to result in an amicable agreement, and the owner is so informed in writing.

All offers to purchase Buyout participant properties will be made in writing and be based on a current Fair Market Value appraisal of the property. Because the Strategic Buyout Program is voluntary, property owners will be informed in writing that they may reject NCORR's Initial Offer to buy the property or voluntarily withdraw from the Program any time prior to closing. If an owner rejects the Initial Offer or withdraws from the Program, NCORR will not pursue the purchase of the property further.

(iv) The Agency will inform the owner in writing of what it believes to be the market value of the property. (*See* appendix A, § 24.101(b)(1)(iv) and (2)(ii).)

NCORR will provide all participants to the Buyout Program with an appraisal indicating the current Fair Market Value of their property upon which any offer amount to buy the property will be made.

9.2 Accessibility, Section 504 Requirements and Limited English Proficiency (LEP)

To ensure accessibility for applicants of all programs funded using CDBG-MIT funds, NCORR has adopted a Section 504/Americans with Disabilities Act (ADA) policy which ensures the full right to reasonable accommodations by all program participants. Under this policy, case managers shall assess the specific needs of each program beneficiary and determine if a 504/ADA modification is required based on the family's needs and circumstances.

Public hearings and meeting are held in accessible sites and buildings. As was evidenced in the first rounds of public hearings in Robeson, Edgecombe, and Craven Counties on October 14 through October 16, 2019, for the input for the first Mitigation Action Plan, each facility hosting the public hearing was fully accessible. Further, the presentations were made simultaneously for individuals with hearing impairment (accommodations included sign language interpretation as well as text projected onto a screen). The transcription was translated into Spanish in real-time and printed materials were also translated into Spanish, which according to NCORR's accepted Language Accessibility Program (LAP), is the largest non-English spoken language in North Carolina. North Carolina qualifies as a safe harbor state in that over 5% of its population speaks another primary language outside of English in the home. The adopted LAP is cognizant of these demographics and offers print material in Spanish and will provide other language translation services as needed.

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10.0 Activities and Allocation of Funds

The most significant consideration in developing CDBG-MIT activities and the allocation of funds is the Mitigation Needs Assessment. This assessment, found above, is comprised of an analysis of the State Hazard Mitigation Plan as well as data from the ongoing CDBG-DR funded State recovery. Mitigation activities are also funded in context with threats to Community Lifelines.

Throughout the implementation of the grant, NCORR certifies that it will conduct and carry out the grant in conformity with title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) and the Fair Housing Act (42 U.S.C. 3601–3619) and implementing regulations, and that it will affirmatively further fair housing. Activities will further comply with environmental requirements at 24 CFR Part 58. Activities concerning lead-based paint will comply with the requirements of 24 CFR part 35, subparts A, B, J, K, and R. NCORR certifies that it will comply with applicable laws in the management and implementation of grant funds, both State and Federal.

10.1 Crosscutting Terms Defined

HUD and other federal crosscutting requirements and standards are applicable to activities proposed in this Action Plan. These requirements and standards and some common definitions of these items are included below.

- **Accessibility and Accessibility Standards.** The Uniform Accessibility Standards Act (UFAS) requires that buildings and facilities designed, constructed, or altered with federal funds be accessible and these standards were developed to define what "accessible" means. UFAS is one of the standards which federal grantee shall use to comply along with Title II of the Americans with Disabilities Act.
- **Affirmatively Furthering Fair Housing (AFFH).** AFFH is a legal requirement that NCORR further the requirements of the Fair Housing Act. The obligation to affirmatively further fair housing has been in the Fair Housing Act since 1968 (for further information see Title VIII of the Civil Rights Act of 1968, 42 U.S.C. 3608 and Executive Order 12892).
- **Community Participation.** The primary goal is to provide citizens where CDBG-funded activities will take place an opportunity to participate in an advisory role in the planning, implementation, and assessment of proposed programs and projects. NCORR commits to hearing from all impacted individuals regardless of race, color, national origin, income, or any other potential social disparity. The MIT requirements include the formation of an active citizen advisory committee during the duration of the MIT grant implementation to provide input.
- **Effective Communication.** Communication methods include the provision of appropriate auxiliary aids and services, such as interpreters, computer-assisted real time transcription (CART), captioned videos with audible video description, visual alarm devices, a talking thermostat, accessible electronic communications and websites,

documents in alternative formats (e.g., Braille, large print), or assistance in reading or completing a form, etc.

- **Environmental Justice.** Environmental justice means ensuring that the environment and human health are protected fairly for all people regardless of race, color, national origin, or income. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations" (2/94) requires certain federal agencies, including HUD, to consider how federally assisted projects may have disproportionately high and adverse human health or environmental effects on minority and low-income populations.
- **Environmental Review**: In accordance with NEPA and 24 CFR Part 58 and 24 CFR Part 50, as well as 40 CFR Parts 1500 through 1508, an environmental review must be completed on any HUD-funded project. Even if an activity is found to be exempt from environmental review, NCORR must document the exemption and file this documentation in association with other project records.
- **Fair Housing and Equal Opportunity**. NCORR commits to working toward eliminating housing discrimination, promote economic opportunity, and achieve diverse, inclusive communities by leading the nation in the enforcement, administration, development, and public understanding of federal fair housing policies and laws. The laws implemented and enforced by FHEO include the Fair Housing Act, Title VI of the Civil Rights Act of 1964, Section 109 of the Housing and Community Development Act of 1974, Section 504 of the Rehabilitation Act of 1973, Titles II and III of the Americans with Disabilities Act of 1990, The Architectural Barriers Act of 1968, and The Age Discrimination Act of 1975
- **Limited English Proficiency**. Under Title VI of the Civil Rights Act of 1964 and in accordance with Supreme Court precedent in *Lau v. Nichols*, recipients of federal financial assistance are required to take reasonable steps to ensure meaningful access to their programs and activities by limited English proficient (LEP) persons. In accordance with Executive Order 13166, the meaningful access requirement of the Title VI regulations and the four-factor analysis set forth in the Department of Justice (DOJ) LEP Guidance apply to the programs and activities of federal agencies, including HUD. In addition, EO 13166 directs each federal agency that provides financial assistance to non-federal entities to publish guidance on how their recipients can provide meaningful access to LEP individuals and thus comply with Title VI regulations forbidding funding recipients from restricting an individual in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program. The Fair Housing Act prohibits national origin discrimination in both private and federally-assisted housing. For example, a housing provider may not impose less favorable terms or conditions on a group of residents of a certain national origin by taking advantage of their limited ability to read, write, speak or understand English.
- **Low-income Households.** HUD defines a low-income individual or household a one whose income is at or below 80% of the Area Median Income (AMI).

- **Protected Classes.** The seven classes protected under the Federal Fair Housing Act are color, disability, familial status, (i.e., having children under 18 in a household, including pregnant women), national origin, race, religion, and sex. Discrimination is also forbidden based on age (those 40 years of age or older) or genetic information.
- **Reasonable Accommodation.** Reasonable Accommodation is a change, exception, or adjustment to a rule, policy, practice, or service that may be necessary for a person with disabilities to have an equal opportunity to use and enjoy a dwelling, including public and common use spaces, or to fulfill their program obligations. Please note that the ADA often refers to these types of accommodations as "modifications." Any change in the way things are customarily done that enables a person with disabilities to enjoy housing opportunities or to meet program requirements is a reasonable accommodation. In other words, reasonable accommodations eliminate barriers that prevent persons with disabilities from fully participating in housing opportunities, including both private housing and in federally-assisted programs or activities. Housing providers may not require persons with disabilities to pay extra fees or deposits or place any other special conditions or requirements as a condition of receiving a reasonable accommodation.

10.2 Connection between Mitigation Activities and Identified Risks

In review of the Mitigation Needs Assessment and threats to Community Lifelines, it is critical to add a diversified set of strategic programs to the original allocation proposed for Strategic Buyout Program activities in order to promote the long-term mitigation of risks related to affordable housing and infrastructure. Buyout programs remove vulnerable people and property from harm's way, greatly reducing the expectation of future investment in the recovery of those people and property. Additionally, buyout relieves strain on every Community Lifeline and is in alignment with a major priority of the State's Hazard Mitigation Plan. The Public Housing Restoration Fund addresses the unmet housing need of a vulnerable low-income population, with many of the PHA developments participating in the program located in the 100-year floodplain. The program aligns with NC-2 in the state's Hazard Mitigation Plan. Risks and damage to infrastructure were high in previous hurricanes and the threat is projected to increase as the climate shifts, particularly with relation to water-related infrastructure. Addressing infrastructure recovery with CDBG-MIT funds aligns with the intent of the funding source and the state HMP.

In accordance with the Main Notice, the Action Plan must identify how the proposed use of funds: 1) meet the definition of mitigation activities; 2) address the current and future risks as identified in the Mitigation Needs Assessment; 3) will be CDBG-eligible activities under title I of the Housing and Community Development Act (HCDA) or otherwise eligible pursuant to a waiver or alternative requirement; and 4) will meet a national objective. Therefore, for each identified for CDBG-MIT activity identified in this section, NCORR will specify the connection to:

1. The State Enhanced Hazard Mitigation Plan "Action Item".

2. The Community Lifeline weakness addressed through the mitigation activity.
3. The CDBG-eligible activity as set forth in Title I of the Housing and Community Development Act (HCDA) or through specific waiver provided by HUD.
4. The HUD National Objective criteria satisfied through activity execution.

For each allocation, the reference to the HMP Action Item will be the numbered priority stated in the HMP. A detailed list of Action Items is included in section 4.7 above. The CDBG-eligible activity is presented as the subsection of the Housing and Community Development Act, or specific waiver.

In addition, every CDBG-MIT activity must meet a National Objective. The HUD National Objective criteria that apply to CDBG-MIT activities include the following:

- **LMI (Low- and moderate-income).** Activities which benefit low- and moderate-income individuals, such as providing an area benefit to an LMI area, establishing benefits to limited clientele, or housing LMI individuals and households.
- **LMH (Low/Mod Housing).** Set by HUD in 80 FR 72102, the **Low/Mod Housing** national objective is met when the buyout program combines the acquisition of properties with another direct benefit—Low- and Moderate-Income housing activity, such as down payment assistance, for example—that results in occupancy and otherwise meets the applicable LMH national objective criteria.
- **LMHI (Low/Mod Housing Incentive).** Set by HUD in 82 FR 36825 to allow for meeting a National Objective when CDBG-MIT funds are used for a housing incentive award, tied to the voluntary buyout or other voluntary acquisition of housing owned by a qualifying LMI household, for which the housing incentive is for the purpose of moving outside of the affected floodplain or to a lower-risk area; or when the housing incentive is for the purpose of providing or improving residential structures that, upon completion, will be occupied by an LMI household.
- **UNM (Urgent Need Mitigation).** Set by HUD in the Notice to allow for certain mitigation activities. To meet the UNM National Objective, NCORR must document that the activity addresses the current and future risks as identified in the Mitigation Needs Assessment of most impacted and distressed areas and will result in a measurable and verifiable reduction in the risk of loss of life and property.

Some CDBG-MIT activities align with the unmet recovery need and have some functional overlap with CDBG-DR activities. Activities where a CDBG-MIT activity is used in combination with CDBG-DR funds already allocated will be indicated in the activity description.

This Action Plan does not modify any Federal standards or other legal requirements. Any effort by the State of North Carolina or its agents to modify such standards or other legal requirements must be preceded by the ordinary procedures to request a waiver from the appropriate Federal authority. As Public Law 115-123 provided “The Secretary of Housing and

Urban Development may waive, or specify alternative requirements for, any provision of any statute or regulation that the Secretary administers in connection with the obligation by the Secretary or the use by the recipient of these funds (except for requirements related to fair housing, nondiscrimination, labor standards, and the environment), if the Secretary finds that good cause exists for the waiver or alternative requirement and such waiver or alternative requirement would not be inconsistent with the overall purpose of Title I of the Housing and Community Development Act of 1974." Notice of proposed waivers must be accompanied by evidence of public comment including, but not limited to, review and input by low-income and minority residents, businesses, and other institutions.

10.3 Allocations and Programming

The total CDBG-MIT allocation set forth in PLs 115-123 and 116-20 is $202,686,000. NCORR will set aside five percent of these funds ($10,134,300) for administrative costs associated with the mitigation activities described below. An additional eight percent of the funds ($15,201,450) will be set aside for planning related activities in accordance with section 10.3.1 below, including Action Plan development, public outreach, and coordination on future planning with local and regional coordinating entities. $123,103,400 will be allocated to the Strategic Buyout Program, $36,246,916 to the Public Housing Restoration Fund, and $18,000,000 to the Infrastructure Recovery Program.

Following re-analysis for the Mitigation Needs Assessment, lessons learned from CDBG-DR, and from community and stakeholder input, these programmatic allocations represent the best use of CDBG-MIT funds.

10.3.1 Planning Funds

Eight percent of CDBG-MIT funds ($15,201,450) are allocated to planning activities. In the original Action Plan, NCORR did not fully describe how these funds would be used. Since that time, NCORR has begun coordination with the State Disaster Recovery Task Force's Recovery Support Function (RSF) subcommittees – starting with the Environmental Preservation Recovery Support Function – to identify potential planning opportunities.

NCORR may consider the use of planning funds based on recommendations proposed by the RSF groups and may also consider planning opportunities identified through coordinating state agencies, such as the DOT, DEQ, and NCEM.

NCORR has also established significant internal resources to assist in the identification of suitable plans, including the internal Resilience Team and the Policy and Community Development Team. These teams, as well as other internal NCORR staff, have the expertise necessary to identify plans that align with the CDBG-MIT Action Plan and the State Hazard Mitigation Plan. Specific planning needs were also identified in the creation of the Action Plan

and planning priorities are also outlined in the State Hazard Mitigation Plan. The Action Plan will not be amended every time a planning activity is pursued. Instead, NCORR will provide details on ongoing planning activities on its website at https://rebuild.nc.gov.

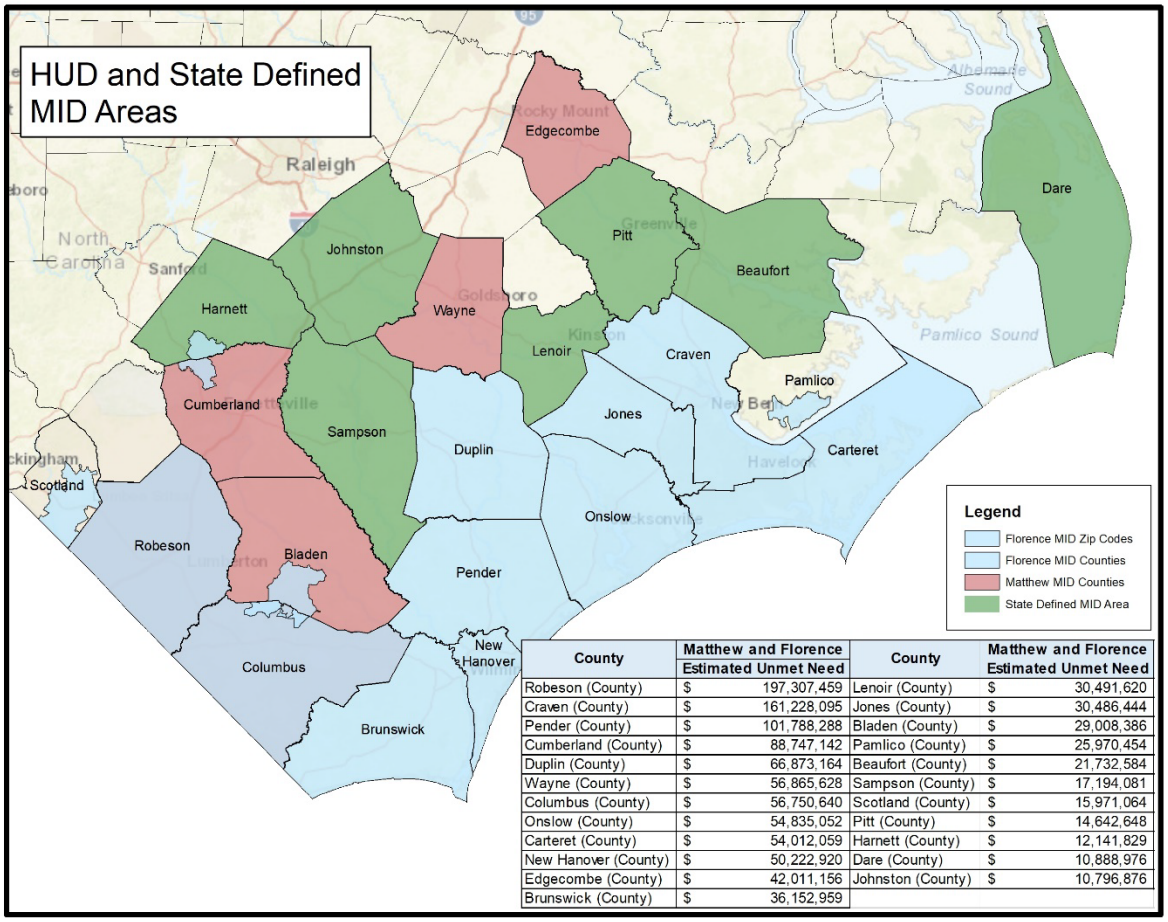
10.4 MID Areas and State-Identified MID Areas

The HUD-designated MID areas are the Hurricane Matthew-established MID counties (Bladen, Columbus, Cumberland, Edgecombe, Robeson, and Wayne Counties) and the additional Hurricane Florence MID areas (Brunswick, Carteret, Craven, Duplin, Jones, New Hanover, Onslow, Pender, Scotland, and Pamlico Counties). CDBG-MIT regulations require that a minimum of fifty percent of MIT funds be spent in HUD MID areas.

In consideration of the unique recovery and mitigation needs created by the large area of the State that was impacted by both Hurricane Matthew and Hurricane Florence, NCORR conducted an analysis of damage to areas that were impacted by both storms. In adherence with the allocation methodology outlined in Appendix A for both 82 FR 5591 for Hurricane Matthew and 85 FR 4681 for Hurricane Florence, NCORR calculated an estimated unmet need for both events combined. This analysis used the Major-Low, Major-High, and Severe damage categories for both events and multiplied those damage categories by the repair estimation factors included in Appendix A for each respective notice.

Based on the unmet need, seven counties have been added which are considered State-identified MID areas. These counties are Beaufort, Dare, Harnett, Johnston, Lenoir, Pitt, and Sampson. The threshold to be considered a State-identified MID is greater than $10 million in combined losses at the county level for both storm events. These state-identified areas are for recovery and mitigation planning purposes and for a deeper understanding of the hardest hit dual impacted areas of the State.

Figure 17 – HUD and State-Identified Most Impacted and Distressed Areas



County	Matthew and Florence Estimated Unmet Need		County	Matthew and Florence Estimated Unmet Need	
Robeson (County)	$	197,307,459	Lenoir (County)	$	30,491,620
Craven (County)	$	161,228,095	Jones (County)	$	30,486,444
Pender (County)	$	101,788,288	Bladen (County)	$	29,008,386
Cumberland (County)	$	88,747,142	Pamlico (County)	$	25,970,454
Duplin (County)	$	66,873,164	Beaufort (County)	$	21,732,584
Wayne (County)	$	56,865,628	Sampson (County)	$	17,194,081
Columbus (County)	$	56,750,640	Scotland (County)	$	15,971,064
Onslow (County)	$	54,835,052	Pitt (County)	$	14,642,648
Carteret (County)	$	54,012,059	Harnett (County)	$	12,141,829
New Hanover (County)	$	50,222,920	Dare (County)	$	10,888,976
Edgecombe (County)	$	42,011,156	Johnston (County)	$	10,796,876
Brunswick (County)	$	36,152,959			

Disaster Risk Reduction Areas (defined in Section 10.7.1) may be located in HUD-identified or State-identified MIDs. While expenditures in these state-identified MID areas do not meet the 50 percent expenditure requirement set by HUD, they do satisfy the requirement from HUD which states that grants under the 2018 and 2019 Appropriations Acts in response to Hurricane Florence may be used interchangeably and without limitation for the same activities in the most impacted and distressed areas related to Hurricane Matthew.

Of the $123,103,334 allocated to the Strategic Buyout Program, NCORR allocates 97 percent of the funds, or $119,410,234 to Hurricane Matthew and Florence HUD-designated MID areas based on the mitigation needs assessment and the process for DRRA selection. Twelve of the sixteen HUD-designated MIDs represent the areas with the greatest unmet needs. The remaining CDBG-MIT funds associated with the Strategic Buyout Program are reserved for state-identified MID areas which also received a Presidentially-declared disaster designation for Hurricanes Matthew or Florence. Future reallocations may be made and will be based on an analysis of need. As additional information becomes available, NCORR may support additional

MID classification for Hurricane Florence impacted areas and update the allocations and the Mitigation Needs Assessment accordingly. Changes to add support for a new MID area would be included in a substantial amendment to the Action Plan.

Table 28 - CDBG-MIT Allocations

Program	Total	% of Total Allocation	$ to LMI	% to LMI	$ to HUD-defined MID areas	% to HUD-defined MID areas
Administrative Costs	$10,134,300	5%	$0	0%	$5,067,150	50%
Planning Costs	$15,201,450	8%	$0	0%	$7,600,725	50%
Strategic Buyout	$123,103,334	61%	$68,937,867	56%	$119,410,234	97%
Public Housing Restoration	$36,246,916	18%	$36,246,916	100%	$28,997,533	80%
Infrastructure Recovery	$18,000,000	9%	$12,600,000	70%	$14,400,000	80%
Total	**$202,686,000**	**100%**	**$117,784,783**	**58%**	**$172,942,067**	**85%**

10.5 Method of Distribution and Delivery

In previous CDBG implementation and delivery, NCORR has consistently prioritized providing funds to communities that experienced the most significant damage from Hurricanes Matthew and Florence. NCORR continues to provide assistance to each impacted county, with a primary focus on those that were most impacted and distressed.

Previous allocations allowed for counties to enter into a subrecipient agreement (SRA) with NCORR to administer aspects of the grant. In consideration of NCORR's increased capacity, knowledge, and expertise since CDBG-DR funds were allocated, NCORR will administer the Strategic Buyout Program, utilizing Cooperative Agreements to convey acquired land to counties or other entities so that they may assume operation and maintenance of the acquired parcel(s). CDBG-MIT funds will not be sub granted for operations and maintenance.

In the case of the Public Housing Restoration Fund and Infrastructure Recovery Program, SRAs have been determined to be beneficial to NCORR for the expedient and proficient use of CDBG-MIT funds, as such the method of distributing funds to the subrecipient will be set forth in the SRA. New and updated SRAs will include:

- The threshold of the grant award and the amount to be sub granted.

- The use of the CDBG-MIT funds by responsible organization, activity, and geographic area.
- The CDBG eligibility criteria and national objective, as well as any additional criteria for the subrecipient's use of funds.

The selection of subrecipients will weigh the following factors, in order of importance:

- Subrecipient alignment with CDBG-MIT objectives and priorities.
- Subrecipient capacity.
- Project/Program feasibility.
- Project/program cost and/or leverage.

Specific terms may be implemented to SRAs depending on the selection criteria reviewed above. Sub-criteria may expand upon these selection criteria in order to fully understand the nature of the proposed project. For more information on subrecipient selection criteria, refer to the Infrastructure Recovery Program manual and the Public Housing Restoration Fund Program manual.

10.6 Vulnerable Populations

A major priority of NCORR is the fair and equitable treatment of the vulnerable populations which are historically neglected during disaster recovery and in the consideration of long-term risk resilience and mitigation measures. The Notice also requires NCORR to assess how the use of CDBG-MIT funds may affect members of protected classes under fair housing and civil rights laws, racially and ethnically concentrated areas, as well as concentrated areas of poverty.

Organizationally, NCORR has sought staff and resources to ensure that vulnerable populations receive equitable and fair treatment. NCORR has a dedicated Resiliency Team, charged with assisting the State Disaster Recovery Taskforce's Housing Recovery Support Function (RSF), a task force that advises NCORR on housing recovery, and which includes several organizations dedicated to serving poor and marginalized households. Key NCORR staff members have also participated in the Racial Equity Institute's Groundwater Approach Training, a nationally recognized program for helping individuals and organizations who want to proactively understand and address racism, both in their organization and in the community.

10.6.1 LMI Priority and DRRA Selection Criteria

NCORR is committed to serving the LMI population of the impacted areas of the State. By waiver in the Notice, the requirement to expend 70 percent of CDBG funds on activities that benefit low- and moderate-income persons is replaced by a requirement to expend 50 percent of funds on LMI activities.

Such waiver does not change the need to prioritize the protection of LMI individuals and families. For example, given the known need and impact, the Public Housing Restoration Program aims to expend 100 percent of its funds to benefit LMI households. Moreover, the Infrastructure Recovery Program intends to retain the 70 percent funding threshold to benefit LMI persons.

In addition, to the extent that it is feasible, buyout activities will prioritize LMI individuals and households through the designation of DRRAs. However, NCORR will also follow HUD guidance to execute buyouts strategically, when feasible, as a means of acquiring contiguous parcels. To the maximum extent practicable, NCORR will attempt to avoid circumstances in which parcels that could not be acquired through a buyout remain alongside parcels that have been acquired through the grantee's buyout program. This may require executing buyouts that do not serve an LMI individual or household.

As a threshold selection criterion, NCORR identified buyout areas (DRRAs) must be located in areas that have been impacted by the presidentially declared disaster, Hurricane Matthew and/or Florence. Therefore, the area may reasonably be expected to be at risk for future storm and flooding damage. NCORR also applies the following criteria when designating a DRRA as well. These criteria were established to promote the state's objective to increase mitigation efforts while serving the LMI population:

1. **Need to Mitigate Against Future Storm-Related Damage**. DRRAs are selected based on data that indicated that these areas are likely to experience subsequent and repeated storm damage, including flooding. An area located within a FEMA-designated floodway or in zone A, AE, AO, AH, A1 - A30, A99, AR, V, VE or V1 - V30 on an existing or preliminary Flood Insurance Rate Map (FIRM) and/or the existence of flood inundation data (such as satellite imagery or photography), indicates vulnerability to subsequent flooding. While current DRRAs are predominantly located in floodplain areas, HUD regulations also allow for the establishment of DRRAs in areas that are at risk of future storm damage, such as flooding, even if such areas are not located within a floodplain, as shown on a FIRM. The properties within the DRRAs located outside of the floodplain are included to mitigate the risk of future storm damage, and ensure neighborhood, area or block integrity.

2. **LMI Prioritization**. In addition, the Program prioritizes those at-risk areas populated by LMI households. Therefore, all DRRAs will have a population of no less than 40% LMI based on the census data from the American Community Survey (ACS), unless:
   - The DRRA is within a census block group that is not lower than 30% LMI, but is adjacent to a block group which is 51% LMI or greater; and/or
   - The DRRA is proposed by the local community, in which case it may not be lower than 30% LMI based on data by census block group OR information provided by

the local community supports that it is greater than 30% LMI, contrary to census data.

The Program will monitor expenditures to ensure that they remain in compliance with HUD's LMI threshold requirements and will adjust policy accordingly if the threshold is not being met. This LMI threshold is a starting point for serving lower-income areas and individual determinations are still made project by project. NCORR remains committed to using a majority of its funds to the benefit of LMI individuals and to focus on the unique needs of vulnerable populations as reviewed in Section 10.6.

3. **Additional Criteria.** Additional criteria may be applied when designating a DRRA including the existence of one or more of the following factors: risk of repetitive storm damage; locations where there is or will be other government disaster recovery investment and/or where a prevalence of data indicates the need for mitigation assistance; identification of areas by local governments based on local knowledge and data regarding flooding, calls for assistance due to flooding, and other local considerations when such areas are also generally consistent with the factors listed above, and after review and approval by NCORR.

10.6.2 Assessment of Vulnerable Populations

Of significant concern is long term resiliency and mitigation which may serve vulnerable populations, such as minorities and low-income individuals and households who have historically been discriminated and marginalized by housing policies, lack of public investment, forced into outer, more rural areas due to lack of affordable housing units. Vulnerable populations are also areas that have high concentrations of poverty and minorities, transitional housing, permanent supportive housing, permanent housing serving individuals and families (including subpopulations) that are homeless and at-risk of homelessness, persons with accessibility issues, including transportation and access to healthcare and services that have been cut off due to poor infrastructure such as roads, those persons with Limited English Proficiency and public transportation, and public housing development areas.

NCORR reviewed demographic data from the US Census Bureau and the CDC Social Vulnerability Index. NCORR considers this data when evaluating the needs for vulnerable populations and when considering areas for proposed buyout DRRAs. Additional resources were also reviewed to provide more background and assessment of vulnerable populations including University of North Carolina's Center for Civil Rights' "The State of Exclusion Report (2013)."

10.6.3 Historical Context

Historically, the least fortunate bear the greatest social, economic, health and environmental costs. Studies have demonstrated that low-income people and people of color are more likely to live in or near a floodplain[58], in industrial areas that spread pollution when threatened by hazards[59], and in neighborhoods with substandard infrastructure[60]. Low-income individuals are

more likely to live in rental housing, may not be able to afford flood or homeowner's insurance, and often hold jobs that make unexpected absences from work due to disaster a serious challenge. For these reasons and many others, vulnerable populations are less likely to be able to insulate themselves from the harm caused by disaster events.

Poverty has historically been a problem for NC. In 2019, 13.6 percent of North Carolinians lived in poverty which compares unfavorably to the national average of 10.5 percent.[61] Further, between 2000 and 2016, the number of concentrated poverty neighborhoods, as well as the number of North Carolinians living in those neighborhoods, has nearly tripled. In 2000, there were 37 neighborhoods in North Carolina where the poverty rate was 40 percent or higher, with 84,493 people (1.1 percent of total population) living in those communities. In 2016, there were more than 348,000 (3.6 percent of the total population) North Carolinians living in 109 concentrated poverty neighborhoods.[62] Both Hurricanes Matthew and Florence further exacerbated this problem. Persons in poverty have less resources to use when recovery from a disaster is needed.

Table 29 - Census Tracts by Poverty Rate, State of North Carolina

Year	Census Tracts with 0-19.9% Poverty Rate	Census Tracts with 20-39.9% Poverty Rate	Census Tracts with 40% or More Poverty Rate	TOTAL Census Tracts
2000	1,255	262	37	1,554
% of Total	80.8%	16.9%	2.4%	-
2012-16	1,384	669	109	2,162
% of Total	64.0%	30.9%	5.0%	-

In a prior review of its programming options, NCORR selected buyout as the most significant and meaningful way to create long-term resiliency. However, the past implementation of these programs (specifically property acquisition programs funded through other means) have had a negative effect of discrimination on the population to be served, leading to inequity in post-disaster recovery and long-term negative impacts on impacted neighborhoods. NCORR remains committed to the significance of buyouts as a long-term resiliency strategy, however, it has also augmented its efforts by including additional mitigation activities, such as the Public Housing Restoration Fund and Infrastructure Recovery Program, to provide a comprehensive set of resiliency strategies.

A May 2016 study published in the International Journal of Environmental Research and Public Health reviewed the long-term effects of property acquisition from a 2008 flood disaster recovery effort. The study found that "Inequitable distribution during flood recovery has been

found to impact the most socially vulnerable, including minorities, female-headed households, low-income households, and the elderly [25]." The study indicated that African Americans and Latinos incurred greater damage, had longer periods of temporary housing, and were less likely to secure adequate resources from flood insurance and the federal government during recovery. In the areas that were examined by the study, the results indicated that inequalities in the allocation of federal recovery funds may have contributed to the lower recovery rates of Latino and elderly populations[63].

Similarly, FEMA-funded property acquisition in the HMGP has come under scrutiny for favoring upper income, white homeowners over renters and minority groups. According to 2019 reporting performed by National Public Radio (NPR), it reviewed 40,000 property buyouts funded by FEMA and state and local governments and found that most of them were in neighborhoods that were more than 85 percent White and non-Hispanic.[64]

These inequalities are examples at a national level, but the conditions in the State of North Carolina are somewhat different. North Carolina's buyouts have disproportionately occurred in low-income, segregated, Black communities. In the past, there has been little financial incentive provided to participants to relocate to safer areas or replace their existing housing. With relatively fewer resources to begin with, these populations were not equipped to recover. It is critical to NCORR to avoid these disparities and develop a buyout program that is equitable, fair, and representative of the people living in the most vulnerable communities in the State.

NCORR's Strategic Buyout Program is aware that buying storm-impacted property at the current fair market value may not provide enough financial resources for a low-income homeowner to buy a subsequent home in a safe area. For that reason, SBP is providing incentives at a level sufficient to make subsequent homeownership possible for low-income program participants. The incentive structure has been developed to ensure that these more vulnerable groups are served and can obtain a safe and affordable housing. The incentive structure is described in the SBP Manual.

10.6.4 Addressing the Needs of Vulnerable Populations

CDBG-MIT funding in general and NCORR as an organization specifically have tools to combat these disparities in the administration of its grant funding. Unlike federal funds provided from sources other than HUD, CDBG-MIT funds require a specific allocation for the benefit of low- and moderate-income individuals. To the greatest extent possible, NCORR focused its efforts on areas that are likely to contain these individuals in the identification of its buyout areas.

NCORR intends to repair or rehabilitate existing housing with MIT funds only in limited cases. NCORR will instead focus on creating new housing opportunities outside of the floodplain and

in areas of reduced risk whenever possible and largely through CDBG-DR funded activities. An analysis of the housing need in these areas, will be conducted prior to approval of any new projects to ensure that these vulnerable populations are served. NCORR will favor the selection of housing proposals which include units that that serve vulnerable populations, including transitional housing, permanent supportive housing, permanent housing serving individuals and families that are homeless and at-risk of homelessness. NCORR directly serves the need for public housing developments by funding public housing authorities directly for more resilient public housing stock through the Public Housing Restoration Fund.

NCORR is considering individuals with access and functional needs that will require assistance with accessing and/or receiving CDBG-MIT disaster resources. These individuals may be children, senior citizens, persons with disabilities, from diverse cultures, transportation disadvantaged, homeless, having chronic medical disorders, and/or with limited English speaking, reading, having comprehension capacity, or altogether be non-English speaking.

NCORR will satisfy effective communications, language assistance needs, and reasonable accommodations procedures required of recipients of Federal financial assistance. NCORR will implement HUD guidance to plan for the functional needs of persons with disabilities in the implementation of relocation activities. NCORR will utilize specialized resources to plan for and accommodate the functional needs of people with disabilities and other vulnerable populations, including, but not limited to, public or private social services, transportation accommodations, information, interpreters, translators, I-speak cards, and other services for those persons who may be visually impaired or speech impaired during the Action Plan process free of charge. NCORR is taking care to ensure that individuals can equitably access disaster recovery resources.

The approach to recovering neighborhoods after Hurricane Matthew was to strategically examine where the damage occurred, and then focus its recovery efforts in those areas, paying special attention to the housing types and special needs of these unique communities. The strategy for mitigation and resiliency is similar in that NCORR will approach disaster resilience and climate change adaptation through a cross-sector lens that anticipates how a changing climate, extreme events, ecological degradation, and their cascading effects will impact the needs of North Carolina's vulnerable populations.

In understanding that families and individuals with social vulnerabilities oftentimes face greater challenges in evacuating during a disaster event, NCORR analyzed FEMA Individual Assistance (IA) applications to determine which neighborhoods withstood the brunt of Hurricane Matthew's impact, took into account the impact of Hurricane Florence for the same impacted areas, reviewed current CDBG-DR applications for assistance, and then examined the socio-economic and demographic profiles of these neighborhoods to ensure that equitable treatment was sought in every step of the process.

NCORR performed an analysis of vulnerable populations during the development of proposed buyout areas and focused on those proposed areas which would potentially serve the most vulnerable individuals and neighborhoods impacted by Hurricane Matthew. An analysis of the demographic features of those proposed buyout areas is found below.

Table 30 – Active Buyout Area Demographics (Updated November 2020)

Finding	Number	Percent
Census Block Groups above statewide LMI average	10	71%
Census Block Groups above statewide African American average	12	86%
Census Block Groups above statewide Hispanic Average	2	14%
Census Block Groups above statewide Households with individuals over 60	12	86%

NCORR has selected buyout areas specifically to provide an opportunity for long term resilience for historically underserved populations. NCORR believes that the demographic makeup and identity of the proposed buyout areas reflects the most vulnerable communities in harm's way. Compared to the overall state demographic profile:

- 71 percent of buyout zones contain greater than the state average of LMI individuals and households.
- 86 percent of buyout zones contain greater than the state average for African American-identifying individuals and households.
- 86 percent of buyout zones contain greater than the state average for households with individuals over 60 years of age.

NCORR recognizes that not every municipality that coordinates with NCORR on buyout will ultimately elect to participate in a buyout program. However, NCORR commits to continuing to assess each new or alternative buyout zone proposed by participating communities to ensure that the buyout zone works in favor of those community members which have historically not had the same opportunities to recover or benefit from long-term resilience and mitigation.

NCORR is committed to rebuilding damaged communities in a more resilient manner that affirmatively furthers fair housing opportunities to all residents. For this reason, the analysis above identifies which impacted neighborhoods have a disproportionate concentration of

minority populations as well as those who may have Limited English Proficiency. As these communities rebuild, the State will focus its planning and outreach efforts to ensure that rebuilding is equitable across all neighborhoods, including making provision for all information available about CDBG-MIT funding and programs in both English and Spanish and having appropriate translation, interpretation, and other services for persons with disabilities free of charge and accessible to the public in accordance with all HUD regulations and program guidelines

Table 31 – Key Impacted Area Demographic Information

County	MID Area	LMI Population	Total Population	% LMI	Minority	Hispanic	LEP	Persons with Disabilities
Anson County	-	12,005	24,295	49.41%	48.6	4.3%	4.9%	12.5%
Beaufort County	-	19,205	47,075	40.80%	25.1%	8.0%	6.1%	13.1%
Bertie County		10,039	20,518	48.93%	61.2%	2.2%	3.9%	14.1%
Bladen County	Yes	16,735	34,105	49.07%	42%	7.5%	3.0%	21.6%
Brunswick County	Yes	47,235	115,025	41.06%	17%	4.7%	2.10%	17.2%
Camden County		3,405	10336	32.94%	12%	3.0%	5.2%	9.5%
Carteret County	Yes	26,895	67,125	40.07%	11%	4.2%	1.8%	19.9%
Chatham County	-	28,425	66,565	42.70%	12.7%	12.3%	5.8%	10.3%
Chowan County		5,561	14370	38.70%	34.5%	3.7%	1.0%	10.3%
Columbus County	Yes	24,610	54,415	45.23%	38%	5.0%	2.6%	20.1%
Craven County	Yes	36,490	100,565	36.28%	30%	7.0%	3.6%	17.4%
Cumberland County	Yes	117,930	314,220	37.53%	51%	11.2%	3.2%	14.0%
Currituck County		8,985	25,247	35.59%	5.8%	4.0%	1.0%	11.1%
Dare County		9,891	35,412	27.93%	2.7%	7.3%	2.7%	9.9%
Duplin County	Yes	29,900	58,775	50.87%	36%	21.3%	12.1%	19.0%
Durham County	-	134,820	275,290	48.97%	37.3%	13.7%	8.9%	7.0%
Edgecombe County	Yes	27,870	54,032	51.58%	57.8%	4.8%	1.6%	12.1%
Gates County		4,705	11,601	40.56%	31.2%	2.3%	1.1%	16.0%
Greene County	-	9,090	19,235	47.26%	36.8%	15.5%	7.1%	18.1%
Guilford County	-	205,120	490,610	41.81%	35.1%	8.2%	5.7%	7.5%
Halifax County		25,015	52,300	47.83%	53.7%	3.1%	0.9%	13.9%
Harnett County	-	48,490	121,000	40.07%	22.0%	13.0%	3.5%	10.1%
Hertford County		11,517	24,262	47.47%	61.0%	3.8%	2.0%	15.2%

County	MID Area	LMI Population	Total Population	% LMI	Minority	Hispanic	LEP	Persons with Disabilities
Hoke County	-	20,520	49,850	41.16%	35.3%	13.6%	5.2%	13.4%
Hyde County	-	1,640	5,005	32.77%	29.0%	9.2%	6.9%	6.8%
Johnston County	-	92,715	176,620	52.49%	16.8%	14.0%	5.5%	10.5%
Jones County	Yes	4,565	10,040	45.47%	34%	4.2%	2.4%	23.8%
Lee County	-	23,400	58,375	40.09%	20.1%	19.5%	8.4%	11.6%
Lenoir County	-	27,790	57,525	48.31%	41.5%	7.5%	4.8%	19.1%
Madison County		10,044	21,347	47.05%	1.5%	2.4%	1.1%	12.2%
Martin County		10,034	23,227	43.20%	42.3%	4.2%	1.4%	13.1%
Moore County	-	36,635	90,530	40.47%	12.2%	6.8%	2.5%	10.1%
Nash County		39,429	94,125	41.89%	41.0%	7.1%	2.6%	11.0%
New Hanover County	Yes	94,235	206,370	45.66%	19%	5.3%	2.8%	12.6%
Northampton County		10,407	20,426	50.95%	57.5%	2.3%	0.9%	14.9%
Onslow County	Yes	58,239	170,790	34.10%	26%	11.8%	2.0%	16.9%
Orange County	-	54,145	128,180	42.24%	11.8%	8.6%	6.0%	5.9%
Pamlico County	Yes	4,965	12,350	40.20%	24%	3.6%	.50%	20.8%
Pasquotank County		16,264	39,546	41.22%	36.5%	5.7%	2.1%	10.2%
Pender County	Yes	22,025	53,820	40.92%	23%	6.4%	3.0%	16.7%
Perquimans County		4,804	13,506	35.57%	23.0%	2.6%	1.7%	8.9%
Pitt County	-	75,519	167,660	45.04%	35.7%	6.3%	2.6%	8.9%
Richmond County	-	21,705	44,665	48.60%	32.0%	6.7%	3.4%	13.2%
Robeson County	Yes	70,970	131,455	53.99%	76.6%	8.3%	3.6%	16.6%
Sampson County	-	29,415	62,945	46.73%	26.6%	20.4%	9.8%	13.8%
Scotland County	Yes	17,835	33,675	52.96%	55%	2.8%	.40%	19.5%
Tyrrell County		1,525	4,090	37.29%	38.1%	9.0%	1.9%	15.5%
Union County	-	73,680	211,280	34.87%	12.3%	11.4%	4.9%	6.3%
Wake County		418,841	1,023,811	40.91%	21.0%	10.3%	5.9%	5.8%
Washington County		5,050	12,331	40.96%	48.0%	5.8%	0.4%	16.8%
Wayne County	Yes	52,850	121,450	43.52%	32.3%	12.3%	6.2%	12.2%
Wilson County	-	34,285	80,005	42.85%	40.4%	10.8%	4.7%	11.4%

CDBG-MIT is not the only source of resilience funding available, and the buyout initiative in this Action Plan cannot be considered in a vacuum. Other funds are available to address a host of important issues resulting from Hurricane Matthew and Hurricane Florence, including significant CDBG-DR investment in single-family housing recovery, property elevation, small rental repair programs, multi-family housing development, public housing development, and construction trades training and code enforcement support programs. CDBG-MIT cannot be divorced from the impacts of these funding sources on these other areas of critical need. FEMA funds such as HMGP and PA may also contribute to the other recovery needs of vulnerable communities.

NCORR will follow Fair Housing and Civil Rights laws in the implementation of its programs. NCORR further understands the complexity of housing resilience in racially and ethnically concentrated areas, as well as concentrated areas of poverty. A recurring theme and comment from the community engagement during Action Plan development was the importance of place and home for impacted individuals. NCORR will coordinate CDBG-DR funded activities with its subrecipient NCHFA and other potential subrecipients or partners to determine the best course of action to provide equitable, meaningful housing solutions for all impacted individuals. To best serve vulnerable populations such as transitional housing, permanent supportive housing, permanent housing serving individuals and families (including subpopulations) that are homeless and at-risk of homelessness, and public housing developments, NCORR will engage local Public Housing Authorities (PHAs) to support resilience needs for public housing at the local level.

10.6.5 Application Status

NCORR is committed to sharing timely and accurate updates on applications to the Strategic Buyout Program. NCORR will publicize the application start date to potential applicants living within the DRRAs identified by NCORR and accepted by the local municipality. After applying, applicants will be assigned a case manager to see them through the buyout process. Applicants can learn more about the status of their application through the following methods:

- 833-ASK-RBNC (833-275-7262).
- Phone call directly to the assigned case manager.
- Direct email to the assigned case manager.

The Strategic Buyout Program is the only direct beneficiary program that uses CDBG-MIT funds. For the Public Housing Restoration Fund and the Infrastructure Recovery Program, NCORR will coordinate and communicate directly with subrecipients only. NCORR will enter into subrecipient agreements with local governments and private non-profits, or Memorandum of Understanding (MOUs) agreements with State agencies, in order to implement these projects,

and the agency will engage with entities who have relevant jurisdictional oversight over the project and project area.

10.7 Strategic Buyout Program

Strategic Buyout			
Allocation: **$123,103,334**	$ to LMI: **$68,937,867**	$ to MID (Minimum): **$119,410,234**	% of Total Allocation to MID: **97%**
Primary Community Lifeline Impact: **Food, Water, Sheltering**	Hazard Mitigation Plan Action Item: **NC-2**	National Objective: **LMH, LMHI, UNM**	CDBG-Eligibility Criteria: **HCDA 105(a)(1), 105(a)(7), 105(a) (24)**

10.7.1 Program Description

Substantial Action Plan Amendment 1 consolidated the budget for the Strategic Buyout Program under the CDBG-MIT Program. SAPA 2 increased the SBP budget by $31,157,100 to a total budget of $182,417,400. These funds were provided to the state in the additional $34,619,000 in CDBG-MIT funds which were allocated to NCORR in January 2021. SAPA 4 reduced the buyout budget by $59,314,066.

The Strategic Buyout Program provides funding for the purchase of eligible properties in Disaster Risk Reduction Areas (DRRA) and files a deed restriction on the parcel, restricting future development. Once the property is purchased, NCORR will demolish and clear the structure. The properties purchased under SBP will be owned by units of general local government and will be maintained in a manner consistent with open space or floodplain management in perpetuity. NCORR, in consultation with units of general local government, and after input from the community, will identify DRRAs and enter into cooperative agreements to facilitate the administration of the program and the transfer of real estate. The program prioritizes low-moderate income persons through the selection of its DRRAs. The CDBG-MIT funds provided to the state are allocated to cover the following costs associated with the buyout program, including: the purchase of properties in areas identified by the state and local partners as being at-risk for future storm damage; Uniform Relocation Assistance and Real Property Acquisition Act (URA) services and benefits when applicable; housing counseling services; and housing incentives. NCORR will administer and manage the Strategic Buyout Program.

Properties and applicants must meet the eligibility criteria for the program as outlined in the Strategic Buyout Program Manual. Eligible property owners whose properties are located in DRRAs may participate in the Strategic Buyout Program. Property owner participation in the

Strategic Buyout Program is entirely voluntary. Clear title must be achieved before an applicant is eligible for the program. The Strategic Buyout Program offers property owners the appraised current fair market value for their property. All eligible participants in the SBP will receive an offer based on current FMV, minus liens, regardless of when they applied for the program. Eligible participants can receive additional incentives to assist their relocation to a less risky area, and to assist with further housing costs associated with purchasing or renting subsequent housing.

CDBG-MIT funds also support the housing counseling effort to assist Strategic Buyout applicants and their tenants in selecting the best subsequent housing option, providing homebuyer, homeownership, renter, and credit enhancement training and counseling, and advising on incentive amounts. Housing Counseling services are delivered in coordination with the North Carolina Housing Coalition (NCHC) network of housing counseling agencies. The Strategic Buyout Program includes some program changes from the initial program design. These changes were described in Substantial Action Plan Amendment (SAPA) 1 and are summarized here again. Initially, the SBP planned to apply the valuation method for offering a purchase price to an applicant based on the appraised pre-storm Fair Market Value (FMV). SAPA 1 revised the valuation method to the appraised current market Fair Market Value (CMV). This revision was made in tandem with a revised incentive structure that provides applicants with a potentially higher level of financial support and more housing choice. Further, utilizing the CMV also will allow applicants to move more quickly through the program process because pre-closing administrative requirements are reduced using this method. A review of the housing market across the MID counties indicated that the market has rebounded so that current FMV will not typically be less than the pre-storm FMV. In the cases where current FMV is less than pre-storm FMV, the incentives to eligible participants will ensure that subsequent housing is both attainable and affordable.

In SAPA 3, NCORR indicated that the program is being administered in two phases. Because of the benefit of strategically acquiring properties when feasible, SAPA 4 includes lots and vacant land as being eligible in Phase I, rather than Phase II. The program will implement Phase II when one or more of the following occurs: sufficient progress is made on Phase I, there is adequate funding availability, program workload can handle additional application activity, the DRRA is relatively small and it is more efficient to implement Phases I and II at once, there is an urgent need to move into Phase II activities, or other factors. As a result, both phases may be implemented concurrently based on the factors described below:

- Phase I of the program prioritizes the purchase of eligible residential property located in Disaster Risk Reduction Areas (DRRAs). Properties eligible under Phase I are primary owner-occupied residence, rental properties and properties that meet the CDBG-MIT definition of second homes, and added in SAPA 4, vacant land/lots within DRRAs. Regulations define second homes as, “For CDBG–MIT funds, a second home is defined as a home that is not the primary residence of the owner, a tenant, or any occupant at the time of the storm or at the time of application for assistance.” In accordance with the regulations, properties that serve as second homes are not eligible for rehabilitation assistance or housing incentives provided through a CDBG–MIT program. Phase I

properties must have been owned by the owner as of the date of the storm and are still owned by the same owner.

- Phase II will allow for the buyout of properties purchased after the storm, and commercial properties. Eligibility for commercial properties will be reviewed on a case-by-case basis. Factors that will be considered in this review include but are not limited to the cost of acquisition and relocation (if applicable), availability of funding, environmental concerns, availability of other programs and resources, etc.

Properties in either phase are not required to be currently occupied by the owner or tenants.

10.7.2 Maximum Award

The current year's Federal Housing Administration (FHA) loan limits are the ceiling for the Current Fair Market Value (FMV), by county, for properties that participate in the program. Maximum awards for properties over four units and commercial properties will be assessed on a case-by-case basis and will be based on the appraised current FMV. At times, an alternative valuation method may be appropriate to determine the true FMV, such as large vacant parcels or the buyout of property with a use other than residential. In these instances, the methodology for determining FMV will be included on a project-by-project basis. More information on appraisals is found in the Strategic Buyout Manual. When an alternative appraisal method is used, the method for the appraisal will be included in the project record. The Initial Offer Price offered to an eligible applicant is equal to the appraised CMV up to the program ceiling. The final amount paid will be minus liens.

Incentives are available to eligible residential applicants above the Initial Offer Price. Properties that meet the definition of second homes are not eligible for incentives. When an incentive is requested, the program will perform duplication of benefits (DOB) and necessary and reasonable analyses of other disaster recovery assistance received. Any DOB will be subtracted from the incentive amount. Incentives are available to owners who were primary residents at the time of the Hurricane Matthew or Florence storm event. Renters who are permanently displaced are eligible for assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA), as amended (see section 9.0). To qualify for all incentives, applicants must move to an area outside the DRRA and to an area of reduced risk (see website for explanation of reduced risk areas and other requirements): https://www.rebuild.nc.gov/Buyout).

Eligible applicants may receive up to two incentives: a risk reduction incentive and an affordable housing incentive. These incentives are described as follows:

- The ***Risk Reduction Incentive*** is an incentive to move to an area of reduced risk for future storm damage; outside of the DRRA, floodway, and 100-year floodplain areas; and free of environmental hazards. This incentive is available to eligible applicants

regardless of income, whether they decide to become a renter or a homeowner after the buyout of their storm-damaged property.

Eligible Participants who qualify for the risk reduction incentive and move to an area of reduced risk will receive one of the following:

- $10,000, if the participant moves to an area that is an area of reduced risk (as defined above) as long as the move is to a *primary residence within the same County* as the storm-impacted property; or
- $5,000 if the participant moves to an area that is in an area of reduced risk (as defined above) outside of the county where the storm-damaged property is located, as long as the move is to a *primary residence within North Carolina.*

- There are three ***Affordable Housing Incentives.*** Eligible applicants may receive one of the following to establish a new primary residence after buyout:
  - The ***Affordable Rental Incentive*** is available to eligible households with annual incomes at or below 80% of AMI who choose to rent after the buyout of the storm-impacted property. The maximum incentive available is available in the Incentive Overview on the Strategic Buyout Program website at https://www.rebuild.nc.gov/Buyout.
  - The ***Affordable Homeownership Incentive*** is available to eligible households with annual incomes at or below 80% of AMI for the purpose of buying a subsequent home in an area of reduced risk that that is within the same county as the at-risk property in the DRRA. The incentive cap varies by county group and is based on average county real estate values based on American Census Survey and real estate data (see website listed above for more information on each county). In order to ensure housing affordability and determine the incentive amount, an analysis of the household's financial situation will be performed to determine need. Housing Counselors will perform the analyses and make a recommendation on the incentive amount to the program. The maximum incentive available by county is provided on the Strategic Buyout Program website at https://www.rebuild.nc.gov/Buyout.
  - The ***Matching Down Payment Incentive*** is available to eligible households with an annual income of up to or at 120% of AMI for the purpose of buying a home in an area of reduced risk within the same county as the storm-damaged property. The Program will match the down payment that a buyer puts down, up to $50,000. The cap for this incentive is $50,000.

All eligible applicants will have one year from the date their storm-impacted property is purchased under the program to request the incentive (using the required forms) and provide supporting documentation. Supporting documentation is required in order to establish eligibility for all incentives. Information and additional eligibility and supporting documentation requirements on these incentives can be found online at https://www.rebuild.nc.gov/Buyout.

10.7.2.1 Housing Counseling Awards

Housing counseling was included in SAPA 2 to the CDBG-MIT Action Plan. In that amendment, housing counseling was not clearly defined as a separate activity. SAPA 3 clarifies that the provision of housing counseling as defined below is a separate activity from Strategic Buyout. NCORR will have the discretion to determine if the housing counseling was provided as a part of the buyout activity or a separate public service, wherein the outcomes of the housing counseling activity will be reported entirely separate from the buyout activity. The budget for housing counseling is a small set aside within the strategic buyout activity. NCORR does not anticipate costs exceeding one (1) percent of the allocation for Strategic Buyout for this activity, and therefore the housing counseling budget will not exceed $1,824,174. This sub-allocation is included in the overall Strategic Buyout allocation defined above.

Housing counseling is defined as a public service and is intended to provide independent, expert advice customized to the need of the beneficiary of service from this program to address that beneficiary's housing barriers and to help achieve their housing goals. Housing counseling includes intake, financial and housing affordability analysis, the development of an action plan for the beneficiary, and follow-up. Homebuyer, homeownership, and rental counseling are included in this activity. Housing counseling services comply with 24 CFR § 214, HUD's codification of Housing Counseling Program requirements and other HUD guidance. Specific services may include homeowner education, renter counseling, home buyer education, financial literacy, credit rehabilitation, debt management and budgeting, homeless counseling, avoiding fraud and scams, applying for public and private resources, foreclosure prevention strategies, and relocation counseling amongst other services tailored to fit the beneficiary's needs. NCORR will coordinate with the North Carolina Housing Coalition (NCHC) to coordinate delivery of this service to applicants based on need and in accordance with program policies.

Housing counseling service is required in order for an applicant to receive an affordable housing incentive as defined above. Housing counseling that successfully results in granting the incentive to the eligible household is allowable as a part of the buyout activity. Housing counseling that is provided but does not result in an applicant or tenant being rehoused or receiving an incentive award remains an eligible activity, but it is considered a public service as defined by 24 CFR § 570.201(e) and will be executed in accordance with the requirements stated therein.

10.7.3 Geographic Eligibility

Following an analysis of impacted areas and communication with local governments concerning disaster risk, NCORR identifies Disaster Risk Reduction Areas (DRRAs) where buyout is most appropriate as a mitigation measure against the predictable risk of future storm and flooding damage and loss. A DRRA is identified by NCORR through data analysis, including input and data

from local governments. The data considered includes repetitive loss property clusters, storm damage, floodplain location, and other natural and man-made features. NCORR also considers the portion of LMI persons in the area population when selecting an area to be a DRRA. A significant portion of the population must meet the HUD definition of LMI in order for the area to be considered a DRRA (see Section 10.6.1). DRRAs are posted on the ReBuild NC website as they are finalized. To be eligible for a buyout, an applicant's property must be located in a DRRA. DRRA applicants will be the first priority. The program will also consider residential properties located in floodways outside of DRRAs on a case-by-case basis as a strategic locational buyout in accordance with policy outlined in the Strategic Buyout Program Manual.

10.7.4 Priorities

The applicants prioritized for Strategic Buyout are those described in Section 10.7.1 above whose property is located in a DRRA.

The LMI population has been prioritized through the selection and prioritization of DRRAs which have a significant percentage of LMI residents as determined through U.S. Census Data or through survey data provided by local governments. Income determinations are made on each participating household. As required, NCORR will ensure that greater than 50 percent of funds benefit LMI beneficiaries (see Section 10.6 above for a review of the characteristics of these populations). The purchase price of the property, any incentives provided, URA services and payments, and in some cases the housing counseling costs are part of this goal.

10.7.5 Eligible Applicants

Applicants must own the property located in the DRRA, achieve clear title, meet program eligibility requirements, and meet the geographic eligibility requirements listed above. Supporting documentation is required to prove eligibility for the initial buyout and subsequent incentives.

10.7.6 Projected Start and End Date

This program is currently taking applications in identified DRRAs.

- Start Date: January 2020
- End Date: April 2032

10.8 Infrastructure Recovery Program

Infrastructure Recovery			
Allocation: **$18,000,000**	$ to LMI: **$12,600,000**	$ to MID (Minimum): **$14,400,000**	% of Total Allocation to MID: **80%**
Primary Community Lifeline Impact:	Hazard Mitigation Plan Action Item:	National Objective:	CDBG-Eligibility Criteria:
Food, Water, Shelter; Transportation; Safety and Security	**NC-6**	**LMI, UNM**	**HCDA 105(a) Sec. 105 (a) (1) (2) (3) (4) (5) (7) (8) (9) (11) (12) (14) (15) (16) (17) (19) (21) (22) (23)**

10.8.1 Program Description

The Infrastructure Recovery Program will be managed and run by NCORR. NCORR will implement the program by providing grants to assist to local and county jurisdictions and not-for-profits to repair and make more resilient storm damaged facilities after factoring in FEMA funding, other federal funds, and private insurance proceeds. While the program is expected to be primarily state managed, the State may enter in subrecipient agreements with units of governments or not-for-profit entities in storm impacted areas to implement specific programs. Funding for the community recovery program is expected to be used to cover the nonfederal share or local match for FEMA disaster recovery programs, centered on the PA and HMGP, however a significant portion of the funds may also be used to address recovery and resiliency needs of public facilities that are not covered by FEMA PA and or have been identified through the county recovery and resiliency plans.

Due to the significant unmet need, the State plans to prioritize funding to assist community facilities that serve older adults, children, persons with disabilities, and/or families living in poverty. It will also prioritize funding projects that are located within a substantially damaged, town, cities, or neighborhoods.

10.8.2 Activity Types

Repair, replace, rebuild, make more resilient or improve public facilities that were damaged by Hurricane Matthew and Florence, and engage in public service activities that support community recovery and/or provide funds to cover the local match from other Federal disaster recovery programs primarily FEMA. Examples include, but are not limited to, roads, schools, water and

wastewater treatment facilities, parks, and other public facilities that communities have determined are important publicly owned assets.

10.8.3 Allocation for Activity

The total program allocation is $18,000,000. This total allocation includes a contingency fund to permit the Community Development team the flexibility to assess changing construction costs and scopes of work as needed, without the need for an action plan amendment to do so.

10.8.4 Maximum Award

Up to $2,000,000 per project. Applicants may request an exception to the maximum award amount.

10.8.5 National Objective

LMI, Urgent Need.

10.8.6 Eligible Activity

Sec. 105 (a) (1) (2) (3) (4) (5) (7) (8) (9) (11) (12) (14) (15) (16) (17) (19) (21) (22) (23) – public facilities, public services, debris removal, relocation, buyout and acquisition, and payment of the non-federal share.

10.8.7 Geographic Eligibility

MID counties (HUD and State).

10.8.8 Priorities

Eighty percent of program funds are set aside for services within the most impacted counties. Evaluation criteria under this program will primarily focus on LMI benefit and MID requirements, but will also consider other criteria, as listed below. Prioritization criteria are expected to be supported within applications by quantitative assessments and outcomes that show impacts and improvements to LMI, the MID and community lifelines:

- Impact of planning or public service effort within the community (as indicated bypast disasters),
- The project's ability to reduce risk and loss of life and property during future disasters,
- Projects that improve resilience for underserved communities and vulnerable populations, and
- Leveraging of additional funding sources.

10.8.9 Eligible Applicants

Local, county and state governments, non-profit organizations in a storm eligible county. All applicants in FEMA PA program with a DR-4285 designated project who have been determined to be eligible for funding.

10.8.10 Projected Start Date

Q1 2020

10.8.11 Projected End Date

Q3 2029

10.9 Public Housing Restoration Fund

Public Housing Restoration Fund			
Allocation: **$36,246,916**	$ to LMI: **$36,246,916**	$ to MID (Minimum): **$28,997,533**	% of Total Allocation to MID: **80%**
Primary Community Lifeline Impact: **Food, Water, Sheltering**	Hazard Mitigation Plan Action Item: **NC-3** **NC-6** **NC-14**	National Objective: **LMI**	CDBG-Eligibility Criteria: **HCDA** Sec. 105 (a) (1) (2) (4) (5) (8) (9) (11) (14) (18) (24)

10.9.1 Program Description:

The Public Housing Restoration Fund will be administered by NCORR. Funds from the Program can be used to rehabilitate and/or repair PHA properties that were negatively affected from Hurricanes Matthew and Florence. Funds can also be used to address unmet recovery long term and mitigation needs after accounting for insurance and other Federal disaster funding, to cover the non-Federal share or local match that PHAs must provide to access FEMA PA grant program, or to make facilities more resilient from future storm events. Based on direct communication between NCORR and the PHAs, deeply affordable rental units managed by PHAs in impacted areas experienced severe damage due to Hurricanes Matthew and Florence. NCORR is working directly with the PHAs to assess and determine the total unmet need for each facility. In the event that the unmet need of the PHAs exceeds the total allocation of funds, the program, through its

policy and procedures, will document how funding allocations to PHAs were made and what eligible activities will be prioritized. The State also reserves the right for this program to either State-manage the Public Housing Restoration fund or provide grants directly to the PHAs to implement the projects using program funds.

10.9.2 Activity Type

Public Facilities Repair and Rehabilitation.

10.9.3 Allocation for Activity

$36,246,916

10.9.4 Maximum Award

Award amounts based upon PHA unmet needs.

10.9.5 National Objective

LMI

10.9.6 Eligible Activity

Sec. 105 (a) (1) (2) (4) (5) (8) (9) (11) (14) (18) (24)

10.9.7 Geographic Eligibility

PHA must be located in a HUD or State designated MID area.

10.9.8 Priorities

PHAs located in a HUD or State defined most impacted county.

10.9.9 Eligible Applicants

PHAs

10.9.10 Projected Start Date

Q1 2020

10.9.11 Projected End Date

Q3 2029

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11.0 Amendments to the Action Plan

NCORR identifies the following criteria which constitute a substantial amendment:

- A change in program benefit or eligibility criteria.
- The addition or deletion of an activity.
- An allocation or reallocation of $15 million or more.
- The addition of a CDBG-MIT defined "covered project".
    - A covered project is an infrastructure project having a total project cost of a $100 million or more with at least $50 million of CDBG funds regardless of source (CDBG-DR, CDBG National Disaster Resilience (NDR), CDBG Mitigation, or CDBG).

Substantial Action Plan amendments will be provided for public comment for no less than 30 days and can be found online at https://www.rebuild.nc.gov/mitigation. When required by a Federal Register Notice, NCORR will also hold a public hearing to obtain public comment and input as required by HUD due to the allocation of $34,619,000 from Public Law 116-20 and as set in 86 FR 565. NCORR will notify HUD, but is not required to seek public comment, when it makes a plan amendment that is not substantial. HUD must be notified at least five business days before the amendment becomes effective. However, every amendment to the action plan (substantial and non-substantial) will be numbered sequentially and posted on the ReBuild NC website above.

Input from the community is a critical component in the amendment process. The Community Advisory Committee (CAC) convenes periodically to review the mitigation needs of the State, particularly when substantial amendments are made to action plans. The purpose of the CAC is to provide increased transparency in the implementation of CDBG-MIT funds, to solicit and respond to public comment and input regarding NCORR's mitigation activities, and to serve as an on-going public forum to continuously inform NCORR's CDBG-MIT programs.

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12.0 Schedule of Expenditures and Outcomes

NCORR maintains a schedule of expenditures and outcomes, periodically updated in accordance with its mandatory reporting to HUD. The schedule of expenditures and outcomes is located at https://www.rebuild.nc.gov/reporting-and-compliance/reporting.

In accordance with the Notice, 50 percent of funds will be expended within six years and 100 percent of funds will be expended within 12 years of HUD's grant execution date.

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13.0 Community Participation and Public Comment

NCORR values the input of its many impacted citizens and the decision makers and stakeholders that represent the vulnerable communities impacted by Hurricanes Matthew and Florence. As set forth in the Notices, NCORR was required to hold at least one public meeting prior to the completion of the initial Action Plan to receive feedback and guidance from citizens and stakeholders to shape project and program design, allocation amounts, and community needs. NCORR was also required to hold a public hearing when the new allocation of $34.6 million in CDBG-MIT funds was announced in January 2021.

The primary driver of community engagement and impacted jurisdictions is to course-correct the plan and to include elements that may have been overlooked. It is difficult to gauge reactions on sometimes divisive issues such as buyout, which has both significant supporters and understandable hesitance. NCORR will work to incorporate feedback into program development to ensure that the programs that are funded are correctly meeting the needs of the affected individuals.

NCORR followed its Citizen Participation Plan specific to CDBG-MIT funds, available at https://www.rebuild.nc.gov/reporting-and-compliance/action-plans. The Citizen Participation Plan includes outreach and engagement strategies for citizen participation, including the use of translation and transcription services in use during public hearings. The Citizen Participation Plan was drafted to comply with the requirements set at 24 CFR Part 91.115. All public hearing locations are selected to be accessible and held at a reasonable time. Materials are made available for those that requested them in a language and format other than English or Spanish.

13.1 2021 Community Engagement and Comment Period

Special public hearing requirements were set in place by Notice 86 FR 561 due to the increase in CDBG-MIT funding provided to the state. A public hearing was required in addition to the 30 day public comment period. A waiver of public hearing requirements was provided in that Notice and NCORR updated its Citizen Participation Plan (https://www.rebuild.nc.gov/action-plans) to accommodate a virtual public hearing in consideration of the ongoing public health considerations related to the Coronavirus pandemic.

The virtual public hearing was held Tuesday, June 22, 2021. The purpose of this hearing was to obtain public input on the proposed uses of the new allocation of CDBG-MIT funds. Due to COVID restrictions, the public hearing was held virtually by WebEx with an online module as well as a phone in option for those without internet access. The public hearing was available in English, Spanish, and a transcript was provided via WebEx as the hearing proceeded. Meeting materials, including a recording of the virtual hearing, are available at https://www.rebuild.nc.gov/about-us/mitigation.

To encourage public engagement and feedback, NCORR issued three press releases about the CDBG-DR Mitigation SAPA 2 comment period and public hearing. In addition, the agency promoted the public comment period and hearing through multiple social media channels and the website. Social media messaging was amplified by the NC Department of Public Safety, NC Division of Emergency Management and other partner agencies to substantially increase frequency and reach. Information about the mitigation comment period and hearing was also shared periodically through listservs managed by NC Emergency Management, which raised awareness of the comment period and hearing across a large network of stakeholders, advocacy groups, nonprofits and local government agencies statewide.

Thirteen attendees participated in the public hearing, which generated three public comments. These comments were included in Appendix A: Response to Public Comments of SAPA 3.

The public comment period for Substantial Action Plan Amendment 3 began December 8, 2021, and ended January 7, 2022. In some instances, public comments are shortened to focus on the specific elements of the comment as they pertain to the action plan. Personal details or private information has been removed from public comments where necessary to protect the identity of the commenter.

Comments specific to the status of an individual's application for assistance were referred internally for additional review and direct response, and may not be reflected in this response to public comments.

Comment: A comment was received from the Seeds of Hope Community Development Corporation in Lumberton, Robeson County emphasizing the need for resilient housing, effective planning, and community involvement in the Strategic Buyout Program.

Response: Local stakeholders are a vital part of the recovery process. Members of the ReBuild NC team have reached out to this group to better understand the needs of the citizens of Lumberton. ReBuild NC does not that significant planning has been done, and continues to be done, to improve the strategic element of disaster recovery efforts.

Comment: A comment was received from Legal Aid of North Carolina (LANC) on three topics. The first is that current NCORR guidance on flood insurance requirements is unclear and provides insufficient flexibility for homeowners unable to afford this expense. The second issue is that additional flexibility is needed for owners of heir property seeking assistance through the buyout program. The third issue is concern about the use of Xactimate (an estimation tool) to determine duplication of benefits and estimated costs of repairs unfairly impacting low-income homeowners.

13.2 2019 Community Engagement

NCORR held a series of three public hearings prior to the completion of the initial Action Plan. These hearings were:

1. October 14, 2019, at the Robeson Community College in Lumberton, NC (Robeson County).
2. October 15, 2019, at the Edgecombe Community College in Tarboro, NC (Edgecombe County).
3. October 16, 2019, at Grover C. Fields Middle School in New Bern, NC (Craven County).

Total attendance at these meetings was 88 in Robeson County, 112 in Edgecombe County, and 73 in Craven County.

At these meetings, NCORR presented four information tables on Buyout, Planning and Resilience Opportunities, Infrastructure, and Affordable Housing. Hearing participants were guided by experts at each table in a discussion and review of options, approaches, and techniques in use nationwide for each activity type and a brief review of the developing approach that NCORR was taking for the use of the CDBG-MIT funds.

Table 32 - Buyout Community Input

Buyout			
If the Buyout Program becomes available for your neighborhood, do you think you might participate in the program?	Robeson	Edgecombe	Craven
Yes	4	13	13
No	3	3	2
I need more information	2	8	6
It would depend on many factors	2	6	4
It would depend on what my neighbors do	2	3	1
It would depend on whether I can find a new home in the same area	1	2	3
Total Engagement	**14**	**35**	**29**

Table 33 - Planning and Resilience Opportunities Community Input

Planning and Resilience Opportunities			
What are the most important planning activities that North Carolina and impacted communities should undertake to mitigate the impact of future disasters?	Robeson	Edgecombe	Craven
Planning studies to identify mitigation opportunities	6	14	10
Changes to local and state zoning and building codes	7	7	3
Resilient construction guidelines	4	7	10
Training and building capacity of local government and nonprofits so they can better assist with mitigation activities	3	10	12
Total Engagement	**20**	**38**	**35**

Table 34 – Infrastructure Community Input

Infrastructure			
Which infrastructure improvements are most important to protect North Carolinians from future disasters?	Robeson	Edgecombe	Craven
Water and wastewater treatment facilities	3	6	3
Electric grids	5	4	5
Natural infrastructure	9	12	9
Transportation	3	7	8
Total Engagement	**20**	**29**	**24**

Table 35 - Affordable Housing Community Input

Affordable Housing			
My community needs more (vote for your top two choices) …	Robeson	Edgecombe	Craven
Affordable, quality homes for sale	11	12	8
Affordable, quality rental units	10	13	12

Affordable Housing			
Housing choices outside of flood zones	11	14	14
Parks and recreational space	5	3	5
Community amenities (such as good schools, stores, etc.)	4	8	4
Total Engagement	**41**	**50**	**43**

In addition to the information tables, the public hearing consisted of a brief presentation on CDBG-MIT funding facts and potential uses. At the conclusion of the public hearing, participants were permitted to enter a comment for the public record or write in their comments. These public comments, and their responses, are include in Appendix A.

During the public comment period of the Action Plan, a second round of Public Hearings were held. These meetings were:

1. December 3, 2019, at the Goldsboro City Council Chambers in Goldsboro, NC (Wayne County).
2. December 5, 2019, at the One Harbor Church in Beaufort, NC (Carteret County).

Total attendance at these second round of public hearings was 55 in Wayne County and 12 in Carteret County.

At these meetings, NCORR had copies of the Action Plan available for review in English and in Spanish and delivered a brief presentation on the Action Plan, including a review of CDBG-MIT is, a review of funding allocations, and details on the different programs selected for funding. At the conclusion of the public hearing, participants were permitted to enter a comment for the public record or write in their comments. These public comments, and their responses, are include in Appendix A.

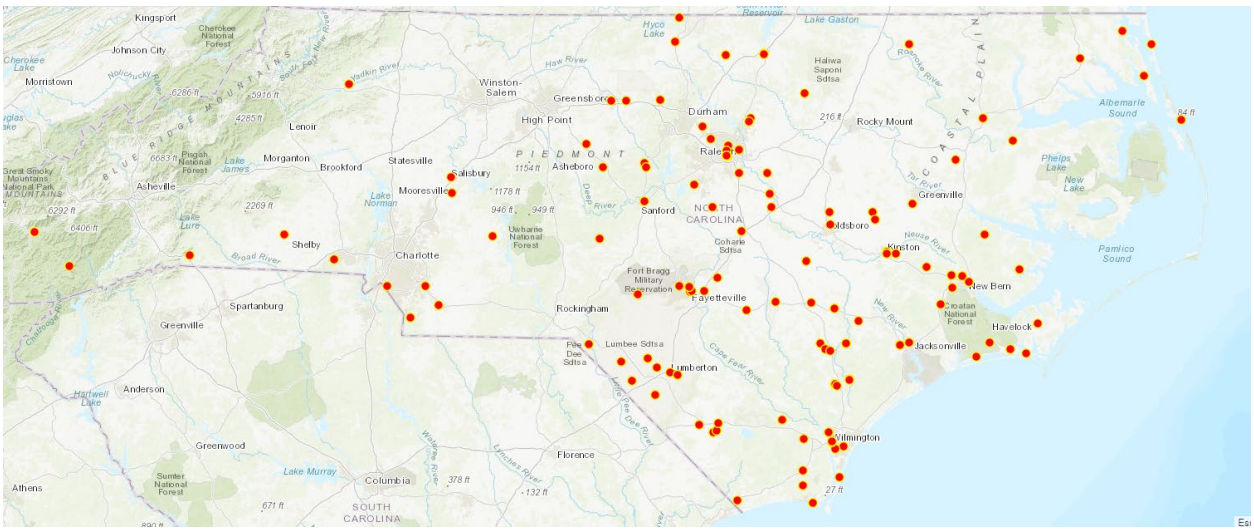
The public hearing transcriptions are available online at https://www.rebuild.nc.gov/mitigation.

13.3 2019 Impacted Jurisdiction Engagement

Given the massive geographical extent of the impacted area, physical meetings with every impacted jurisdiction were infeasible during development of the initial Action Plan. To coordinate with impacted jurisdictions and stakeholders, NCORR released a survey on Wednesday, October 9, through Monday, October 21, 2019. The survey was released to a list of 663 critical stakeholders including public housing authorities, planning organizations, town

governments, city governments, and county governments. Of the 663 invited participants, 173 responded for a response rate of 26 percent.

Figure 18 - CDBG-MIT Survey Response Locations



In the survey, respondents were asked to describe their hazard vulnerability, mitigation measures that they think would be beneficial for their community, and what mitigation activities they have recently implemented or are currently implementing.

High level notes from the survey include:

- Key words include “Housing”, “Community”, “Water”, “Floods”, and “Affordable”.
- A geographic range was expressed in the survey results, indicating good participation statewide.
- Generally impacted jurisdictions appear to see the value in many mitigation approaches, including local planning, smart grids, and rainwater collection.
- Affordable Housing was in high demand with 42.77 percent of respondents ranking it at the highest priority level and another 17.92 percent ranking it at the second highest priority.
- Buyout was well supported, with 62.43 percent of respondents ranking it between the third, second, and first highest priority level.

Figure 19 - Impacted Jurisdiction Stakeholder Survey Word Cloud

The stakeholder survey demonstrated the various mitigation needs that exist in the CDBG-MIT areas. With additional funding, NCORR may be able to address these mitigation needs. In the meantime, NCORR endeavors to locate other resources and maximize the leverage of available funds to ensure that specific community needs are addressed.

13.4 Citizen Advisory Committee

In compliance with the Notice, NCORR has established a Citizen Advisory Committee (CAC). As required, the CAC will convene periodically (no less than twice a year) and review the mitigation needs of the State. The purpose of the CAC is to provide increased transparency in the implementation of CDBG-MIT funds, to solicit and respond to public comment and input regarding NCORR's mitigation activities, and to serve as an on-going public forum to continuously inform NCORR's CDBG-MIT programs.

Although COVID-19 restrictions delayed the establishment of the CAC, the CAC held its first organizational meeting in 2022. In addition to its regular meetings, the CAC will have an opportunity to meet, review, and comment on all draft amendments to the CDBG-Mitigation Action Plan. Information on the CAC and public meetings can be found on the ReBuild NC website at https://www.rebuild.nc.gov/mitigation-cac.

13.5 Response to Citizen Complaints and Appeals

NCORR shall provide a written response to every complaint relative to CDBG-MIT within fifteen (15) working days of receipt. The state will execute its Appeals Procedures in response to appeals received and will require any subrecipients to adopt a similar process. The process will

be tiered whereby applicants will be able to appeal a decision and received further review from another level.

All sub-contractors and local government grantees will be required to develop an appeals and complaint procedure to handle all complaints or appeals from individuals who have applied for or have an interest in CDBG-MIT funding. A written appeal may be filed by program applicants when dissatisfied with program policies, eligibility, level of service or other issue by including the individual facts and circumstances as well as supporting documentation to justify the appeal.

Generally, the appeal should be filed with the administrating entity or sub-contractor. The appeal will be reviewed by the administrating entity with notification to NCORR for the purpose of securing technical assistance. If the appeal is denied or the applicant is dissatisfied with the decision, an appeal can be made to NCORR directly.

In programs that serve individual applicants, applicants may appeal their award determinations or denials that are contingent on Program policies. However, it should be noted that NCORR does not have the authority to grant an appeal of a statutory or HUD-specified CDBG-MIT requirement.

13.6 2019 Public Notice and Comment Period

When the initial Action plan was being developed in 2019, a comment period of at least 45 days as required by HUD was provided for citizens, affected local governments, and other interested parties an opportunity to comment on the initial draft. The initial public comment period began on November 7, 2019, and ended on December 23, 2019, at 5:00 PM.

13.7 Mitigation Website

In accordance with CDBG-MIT requirements, NCORR has developed and will maintain a comprehensive website regarding all disaster recovery activities assisted with these funds. NCORR will post all Action Plans and amendments on the NCORR's CDBG-MIT website at http://www.rebuild.nc.gov/mitigation. The website gives citizens an opportunity to read the plan and its amendments and to submit comments. This website is featured prominently on, and is easily navigable from, NCORR's homepage. NCORR will maintain the following information on its website: actions plan, any substantial amendments, all performance reports, citizen participation requirements, and activities/program information that are described in the action plan, including details on contracts and ongoing procurement opportunities and policies, including opportunities for minorities, women and other disadvantaged persons, veteran, and other historically underutilized businesses (HUB). Paper copies of Substantial Action Plan Amendments will be available in both English (including large, 18pt type) and Spanish as needed at applicant service centers. ReBuild NC Center locations are found at the ReBuild NC

website at https://www.rebuild.nc.gov/information-assistance. Note that ReBuild NC Centers may not be accessible during certain COVID-19 restrictions.

After approval of the initial Action Plan, HUD provided the State an action plan approval letter, grant terms and conditions, and grant agreement. The State executed the grant agreement with HUD.

Substantial Action Plan Amendment 1 was approved by HUD on March 9, 2021. All subsequent amendments to the action plan include a 30-day public comment period. After the conclusion of the required comment period, all comments are reviewed and responded to by the State. The State's consideration on all public comments can be reviewed in Appendix A once the comment period ends and the comments are received.

More information on public notice and participation are found in the Citizen Participation Plan at https://rebuild.nc.gov/action-plans.

13.7.1 Contact Information

Interested parties may make comments or request information regarding the Citizen Participation Planning process by mail, telephone, facsimile transmission, or email to NCORR.

Comments and complaints may be submitted as follows:

- Written comments may be mailed to:
  North Carolina Office of Recovery and Resiliency (NCORR)
  PO Box 110465
  Durham, NC 27709
- Email comments: publiccomments@rebuild.nc.gov
  Please include "CDBG-MIT" in the subject line.
- By telephone for those hearing impaired: (984) 833-5350, TDD 1-800-735-2962
- By Fax transmission: (919) 405-7392

NCORR will post this and all Action Plans and amendments on the State's CDBG-MIT website at https://www.rebuild.nc.gov/mitigation to give citizens an opportunity to read the plan and to submit comment(s). Please provide comments to NCORR directly at (984)-833-5350 or publiccomments@rebuild.nc.gov. At the conclusion of the public comment period, all comments will be reviewed and the State will provide responses to the comments. The State's consideration of all public comments is available in Appendix A. Following submittal by NCORR of the Action Plan or Amendment to HUD, HUD has a review period to consider and approve the Action Plan. Upon approval by HUD, a final version of the Action Plan Amendment is posted on NCORR's website.

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Appendix A: Response to Public Comments

The public comment period was extended to a 45-day comment period to ensure there was a significant opportunity to receive public comment. The CDBG-Mitigation Substantial Action Plan Amendment 4 public comment period began December 9, 2022 and ended January 23, 2023.

There were public comments that NCORR received as part of the 45-day comment period, but the comments that were received mistakenly referenced CDBG-DR programming and were meant for the Hurricane Matthew and Florence CDBG-DR Action Plans, as such those comments are not reflected in this CDBG-MIT Action Plan public comments section.

The Citizen Advisory Committee (CAC) held a virtual public meeting on Tuesday, January 10, 2023. The CAC met to discuss the Substantial Action Plan 4 and provide input on the proposed uses of the newest allocation of CDBG-MIT funds. The CAC presentation was available in English, Spanish and a transcript was provided via WebEx. Meeting materials, including a recording of the virtual hearing, are available at https://www.rebuild.nc.gov/about-us/mitigation.

Information about the 45-day mitigation public comment period and CAC meeting were shared across different stakeholders, advocacy groups, and other local government agencies statewide. There was a total of 83 attendees which included, CAC members, members of the broader public, partner organizations, and members of media organizations.

General feedback received during the CAC meeting targeted the importance of NCORR continuing to provide venues for public comment, such as the CAC, and broaden those spaces for discussion for CDBG-DR related program and activities.

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