GIS Datasets
Created By NC Emergency Management

LiDAR Data
Digital Elevation Model “DEM”
Special Flood Hazard Areas (floodplains)
Building Footprints
Hazard Mitigation’s Acquisitions sites
LiDAR -- *Light Detection And Ranging*

Is really just “Mass Points” at its core

Quality level “QL” 1
- Has 8 points per meter

Quality level “QL” 2
- Has 2 points per meter

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<thead>
<tr>
<th>Class</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Processed Unclassified</td>
<td>8</td>
<td>Undefined</td>
</tr>
<tr>
<td>2</td>
<td>Ground</td>
<td>9</td>
<td>Water (Hydro Cleaned Areas)</td>
</tr>
<tr>
<td>3</td>
<td>Low Vegetation (0.5 – 3ft)</td>
<td>10</td>
<td>Breakline Proximity</td>
</tr>
<tr>
<td>4</td>
<td>Medium Vegetation (3 – 10ft)</td>
<td>11</td>
<td>Noise (High Point)</td>
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<tr>
<td>5</td>
<td>High Vegetation (10-220 ft)</td>
<td>13</td>
<td>Roads</td>
</tr>
<tr>
<td>6</td>
<td>Buildings (Automated)</td>
<td>14</td>
<td>Bridges</td>
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<tr>
<td>7</td>
<td>Noise (Low Point)</td>
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LiDAR - derived datasets

All Points

Bare Earth

Height Above Ground
“DEM” -- Digital Elevation Model

Is LiDAR derived

Test Question: Why would NC EM/DOT spend millions on LiDAR just to make a DEM?
Looking at DEMS in 3D makes more sense
Special Flood Hazard Area (SFHA)
Risk Building Footprints
Just under 5 million buildings in NC

Will this one flood?
Understanding:

FFE = First Floor Elevation
BFE = Base Flood Elevations

100YR Flood Elevation = 13 ft.
FFE = 5.2 ft.

Base Flood Elevation “BFE”
The elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.
Have accurately mapped ~4,500 of NCEM HM Acquisition sites
- Have ~50 that need to researched, mapped and fixed
- Have ~100 that mapped to the wrong parcel and need to be researched and fixed
GIS and Spatial Data Accuracy or “Scale”

Local (City/County) GIS Data will normally be the most accurate and potentially the most detailed.

Data created by the State, normally won’t be as accurate or as updated.

Federal or Nationwide dataset are normally the most coarse and are not normally updated annually.
Rest Services vs. (static) GIS datasets

https://spartagis.ncem.org/arcgis/rest/services/Public

ArcGIS REST Services Directory

Home > services > Public

Folder: Public

Current Version: 10.81

View Footprints In: ArcGIS Online Map Viewer

Services:

- Public/CORS (MapServer)
- Public/DRRA_Review (MapServer)
- Public/FRIS_FloodZones_Prelim (MapServer)
- Public/FRIS_FloodZones (MapServer)
- Public/FRIS_HydraModel (MapServer)
- Public/FRIS_Panels (MapServer)
- Public/HurricaneEvacStudyZones (MapServer)
- Public/ISAIAES_stormsurge_inundation_estimate_nc (ImageServer)
- Public/Mitigation_SRL_RL (MapServer)
- Public/MitigationProperties2015 (MapServer)
- Public/NC_AllBuildings (MapServer)
FMP’s Web Based Applications

- Spatial Data Download “SDD”
- FRIS Flood Risk Information System
- FIMAN Flood Information Mapping and Alert Network
- Flood.nc
Spatial Data Download “SDD”
https://sdd.nc.gov/

WELCOME TO NORTH CAROLINA'S SPATIAL DATA DOWNLOAD

Login below with your NCID
A North Carolina ID (NCID) is required.
Don't have a NCID? Sign up here.

NCID USER NAME:

PASSWORD:

LOGIN

Hazards
Information provided with Floodplain Mapping.

Base Data
- Quality Level 2 LiDAR
- Legacy LiDAR
- Digital Elevation Models

Built Environment
Data on structures and other built environments.
Data Available on SDD

Please Select Data Type for Download

Click one of the blue boxes to view and download data. Then draw or select an area of interest on the map.

Hazards

FLOOD ZONES
Download the 100 year flood zones and associated layers such as cross sections, benchmarks, political areas, counties.

Base Data

QL1 / QL2 LIDAR
2 points per meter dataset from 2014 to 2015 covering 59 counties. 8 points per meter dataset from 2016 to 2017 covering 41 western counties.

ELEVATION
Digital Elevation Model (DEM) data for QL1 / QL2 source data.

LEGACY LIDAR
This data from 2001-2005 is available on the EDW.

Built Environment

SCHOOLS
Build points for Schools Campus points for school polygon for campus

BUILDINGS INFORMATION
Building footprints Building points
FRIS Flood Risk Information System
https://fris.nc.gov/fris

File Geodatabase
Effective Index Map
FIMAN
https://fiman.nc.gov/
flood.NC.gov
NC’s Flood Information Center

Do You Know Your Flood Risk?

Property Risk
Learn about flood risk at a specific address, to include flood hazard, structural and content impacts, potential insurance rates, mitigation opportunities and the location of flood warning sites near you.

Learn More
Questions?

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