GIS Datasets and Web Based Applications

NC Emergency Management

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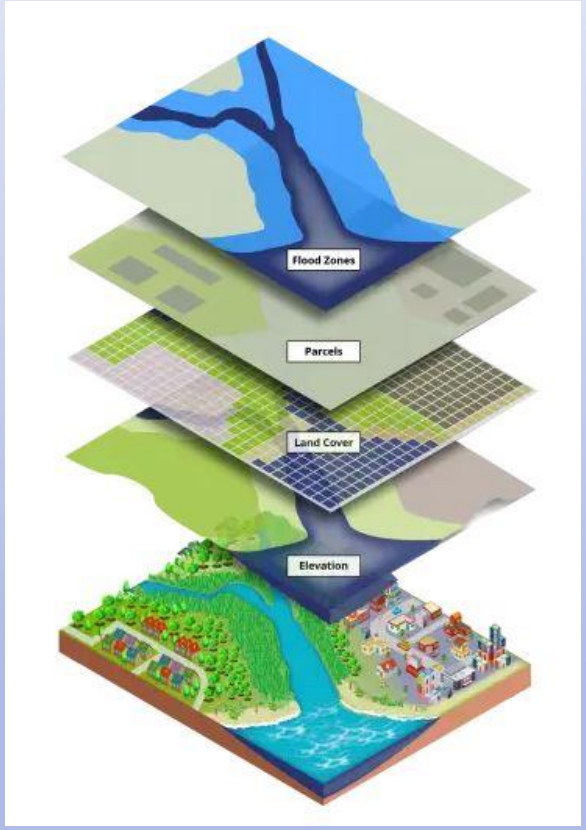
GIS Datasets
Created By NC Emergency Management



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

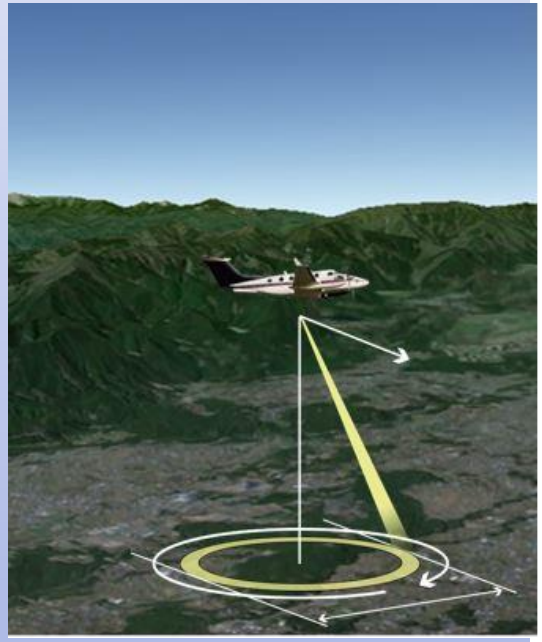
-Has 8 points per meter

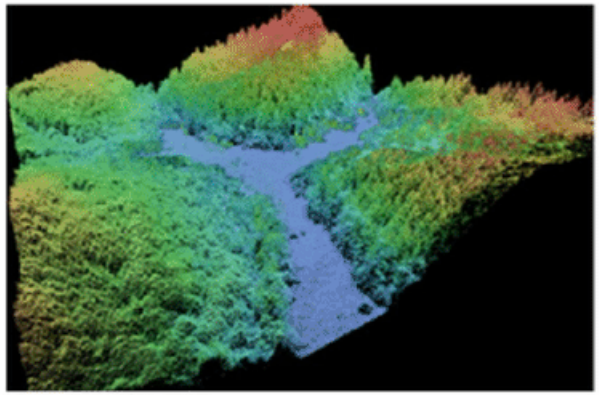
Quality level “QL” 2

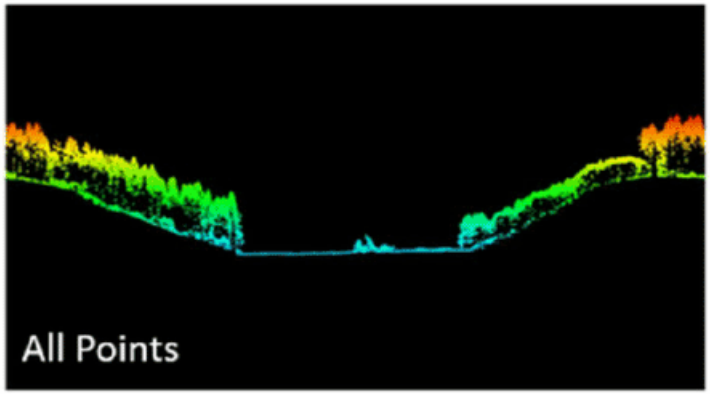
-Has 2 points per meter

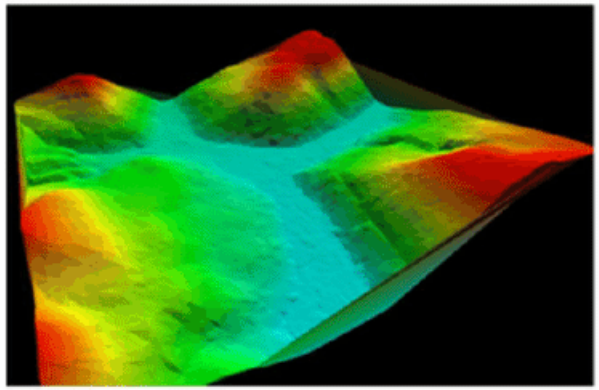
Class	Description	Class	Description
1	Processed Unclassified	8	Undefined
2	Ground	**9**	Water (Hydro Cleaned Areas)
3	Low Vegetation (0.5 – 3ft)	10	Breakline Proximity
4	Medium Vegetation (3 – 10ft)	11	Noise (High Point)
5	High Vegetation (10-220 ft)	13	Roads
6	Buildings (Automated)	14	Bridges
7	Noise (Low Point)		

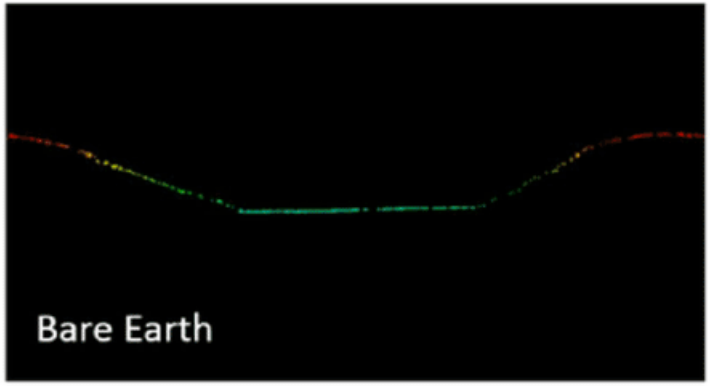
LiDAR – derived datasets

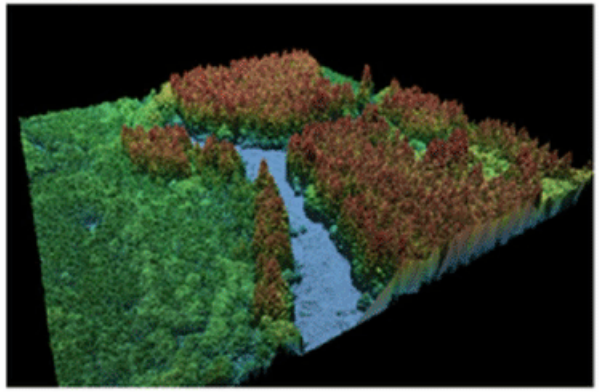


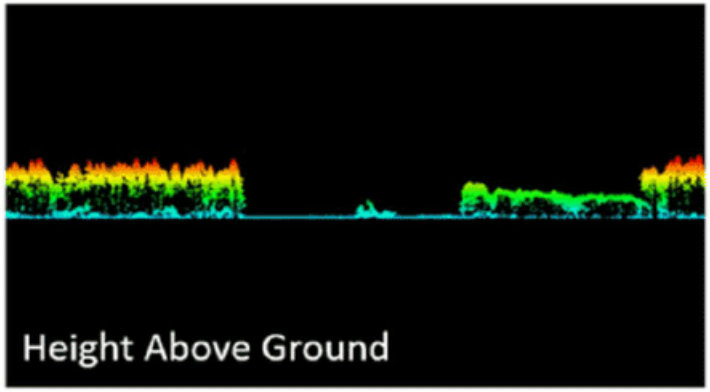








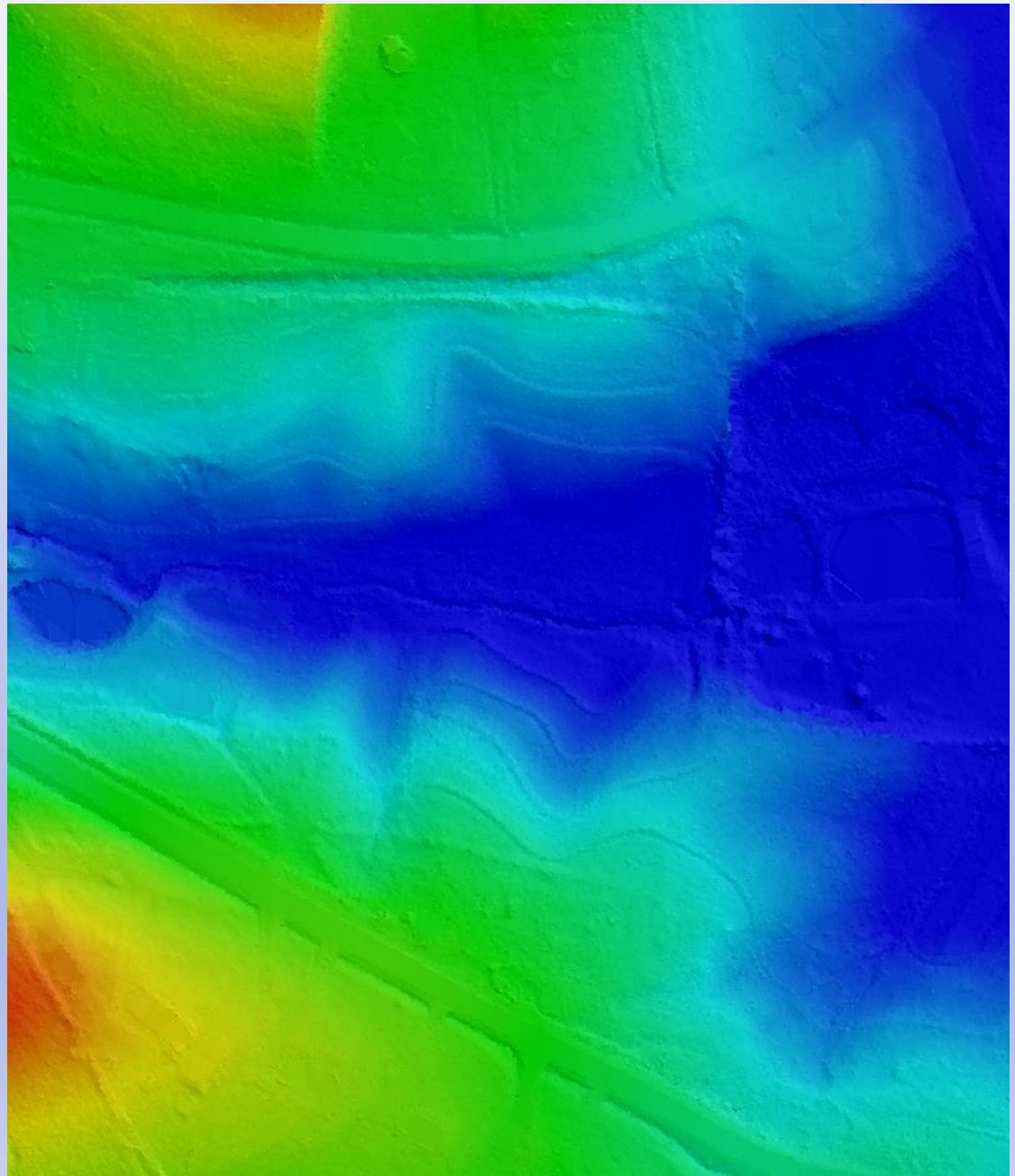




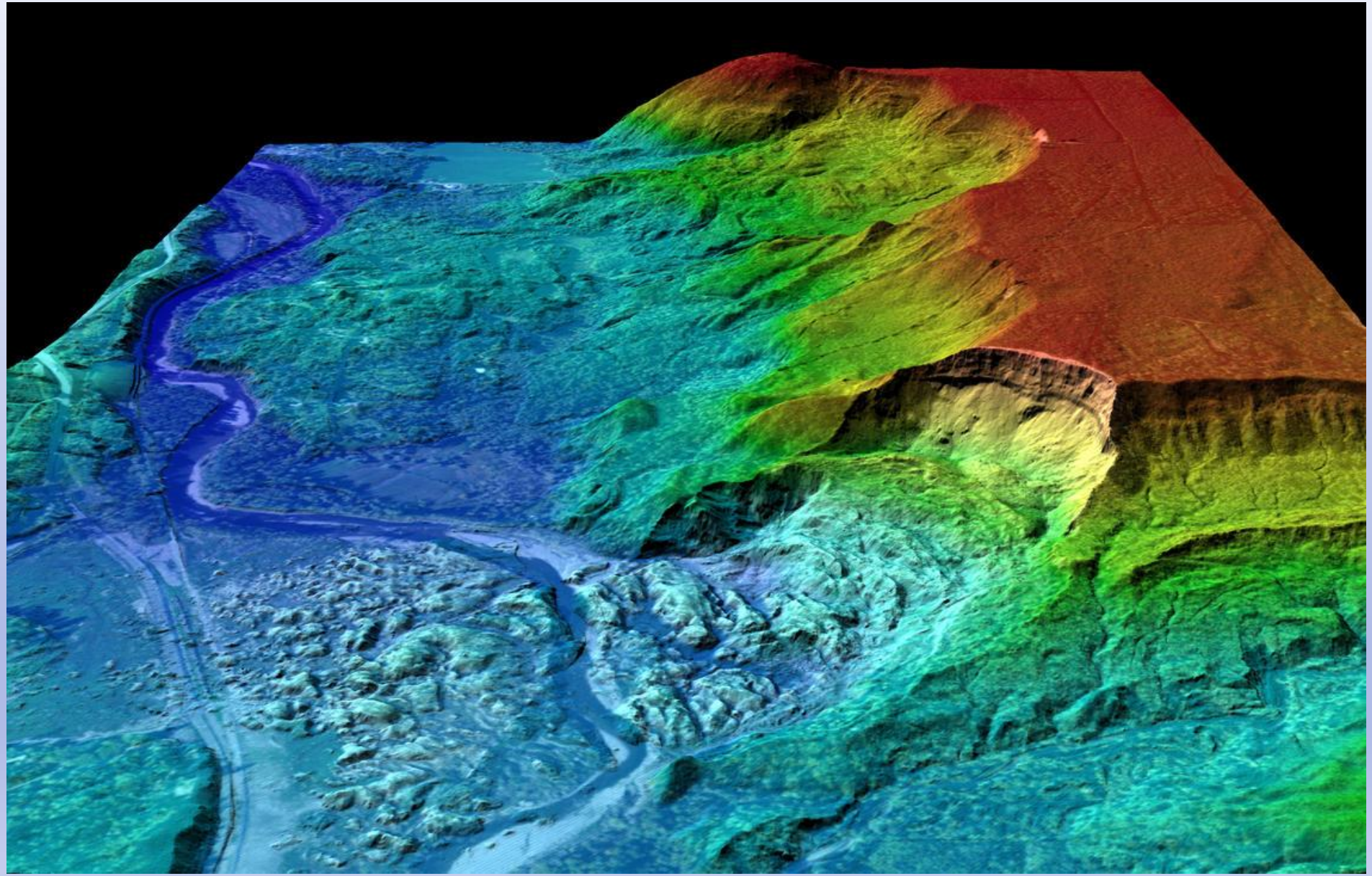
“DEM”--Digital Elevation Model

Is LiDAR derived

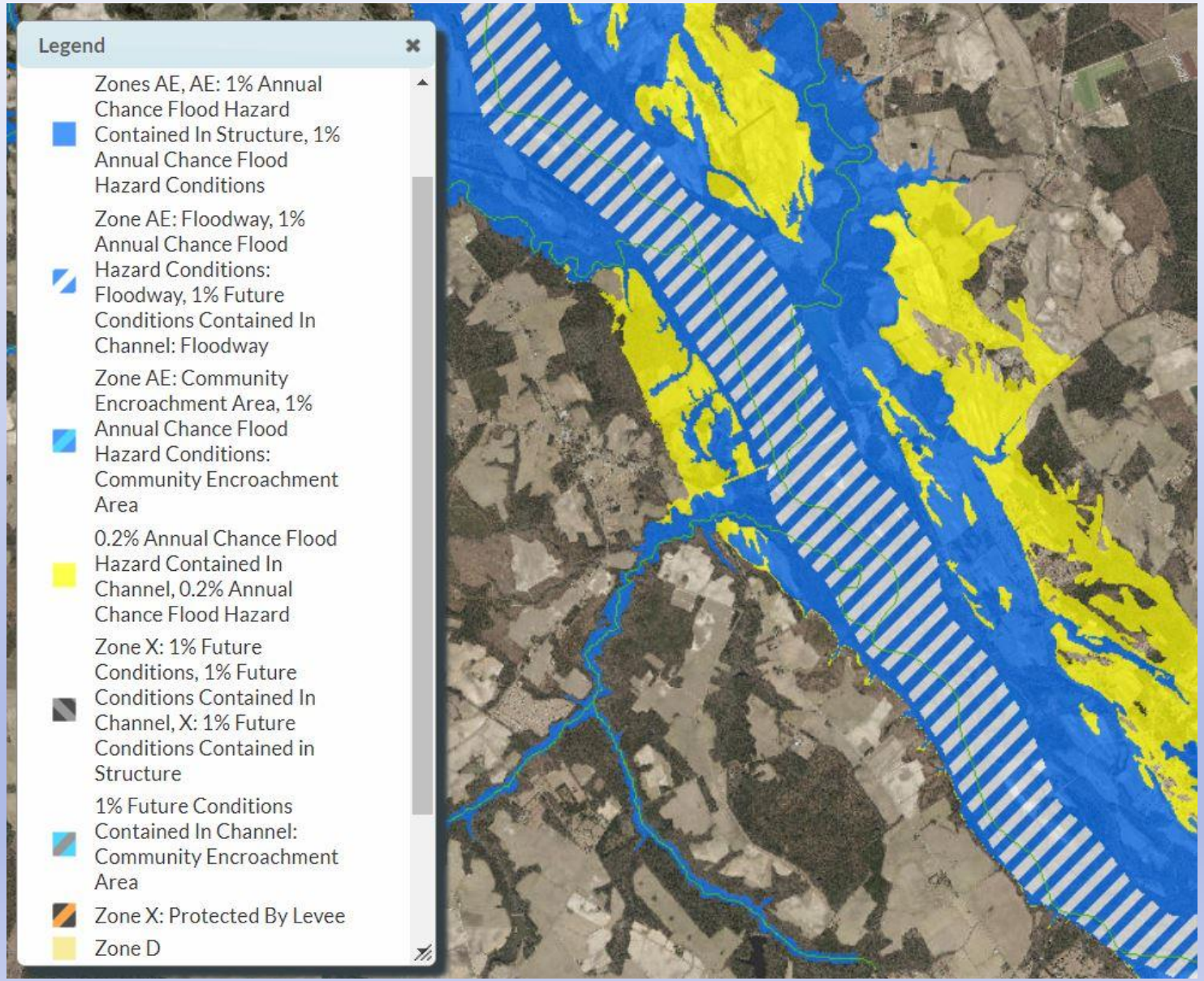
Test Question: Why would NC EM/DOT spend millions on LiDAR just to make a DEM?



Looking at DEMS in 3D makes more sense



Special Flood Hazard Area (SFHA)



Risk Building Footprints

Just under 5 million buildings in NC

Field Collection
First Floor Elevation
Foundation Type
Roof Shape
Roof Slope
Number of Stories
Parcel Conflation
Occupancy Type
Building Value
Year Built
Heated Sq Ft
Roof Shape
HAZUS Block Conflation
Roof Cover Type
Roof Cover Quality
Water Resistance
Roof Deck Attachment
Roof Deck Age
Roof Wall Connection
Roof Frame Type
Hurricane Shutters
Roof Tie Downs
Window Area
Masonry Reinforcing
Joist Spacing
Number of Units

Understanding:

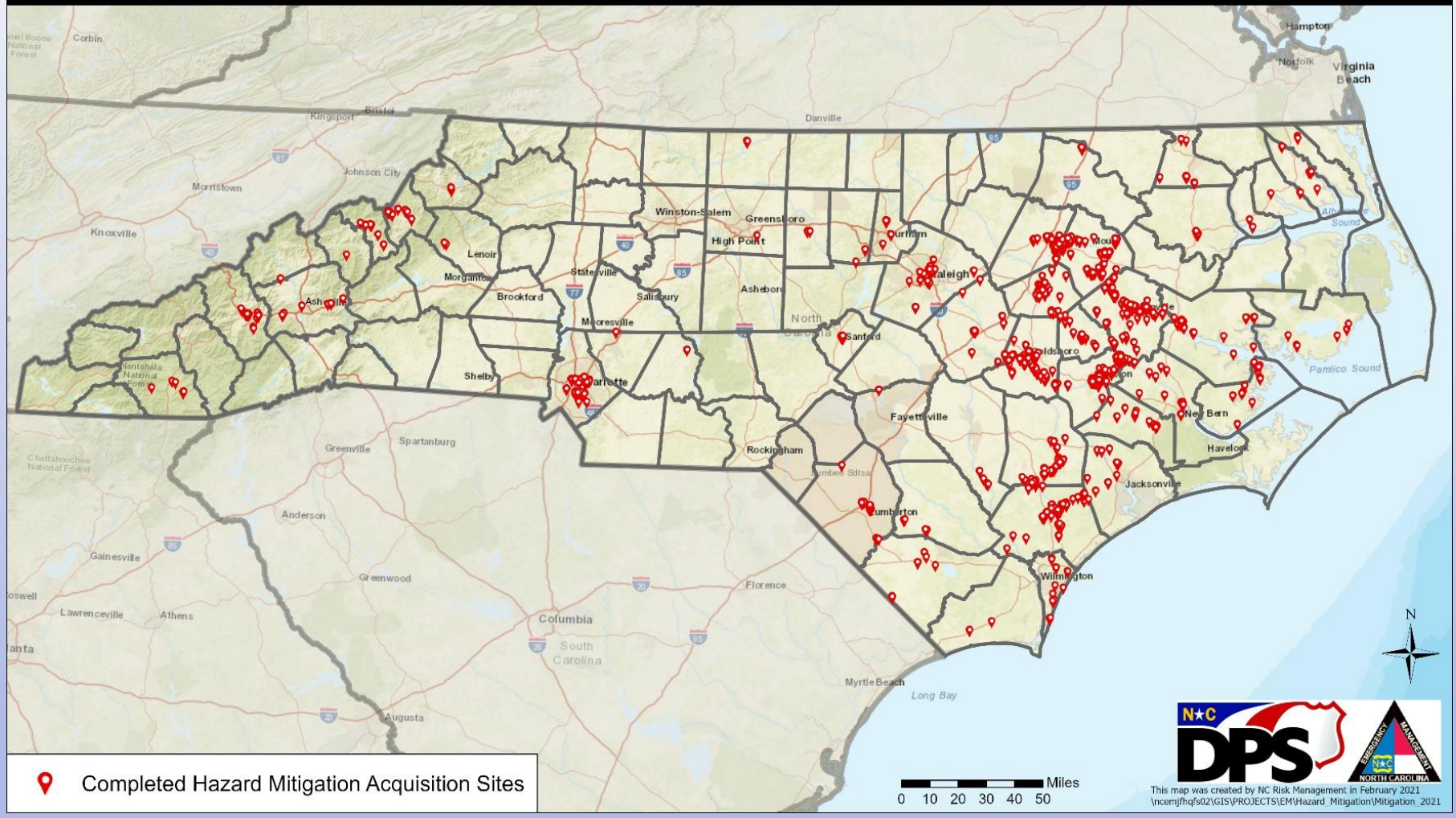
FFE = First Floor Elevation

BFE = Base Flood Elevations

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.

Completed Hazard Mitigation Acquisition Sites

As of December 31, 2020



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

JSON | SOAP

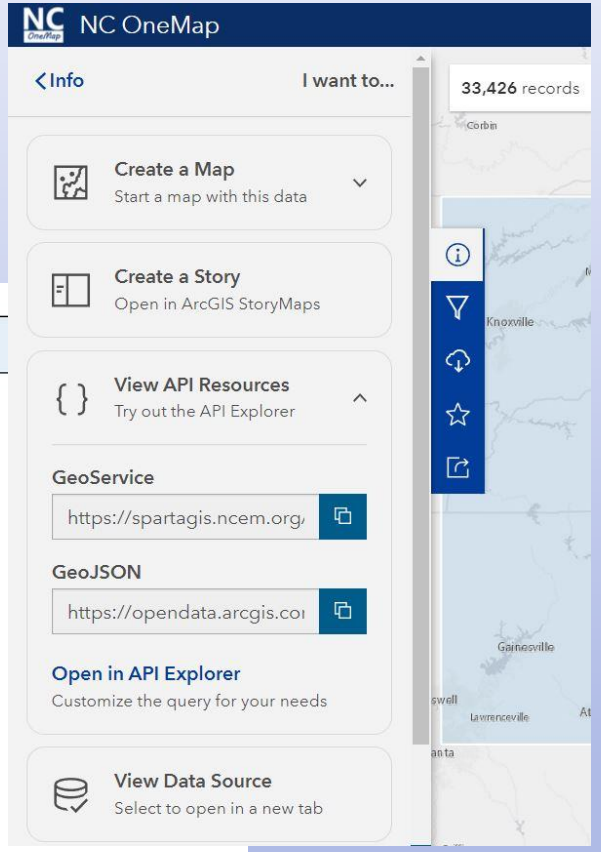
Folder: Public

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/ISAIAS_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/

SPATIAL
Data Download

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.

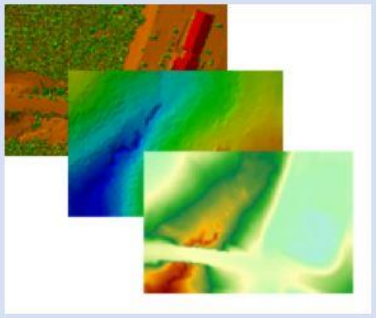
NCID USER NAME:

PASSWORD:

LOGIN

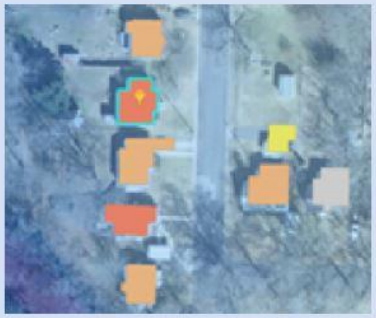
Hazards

Information provided with Floodplain Mapping.



Base Data

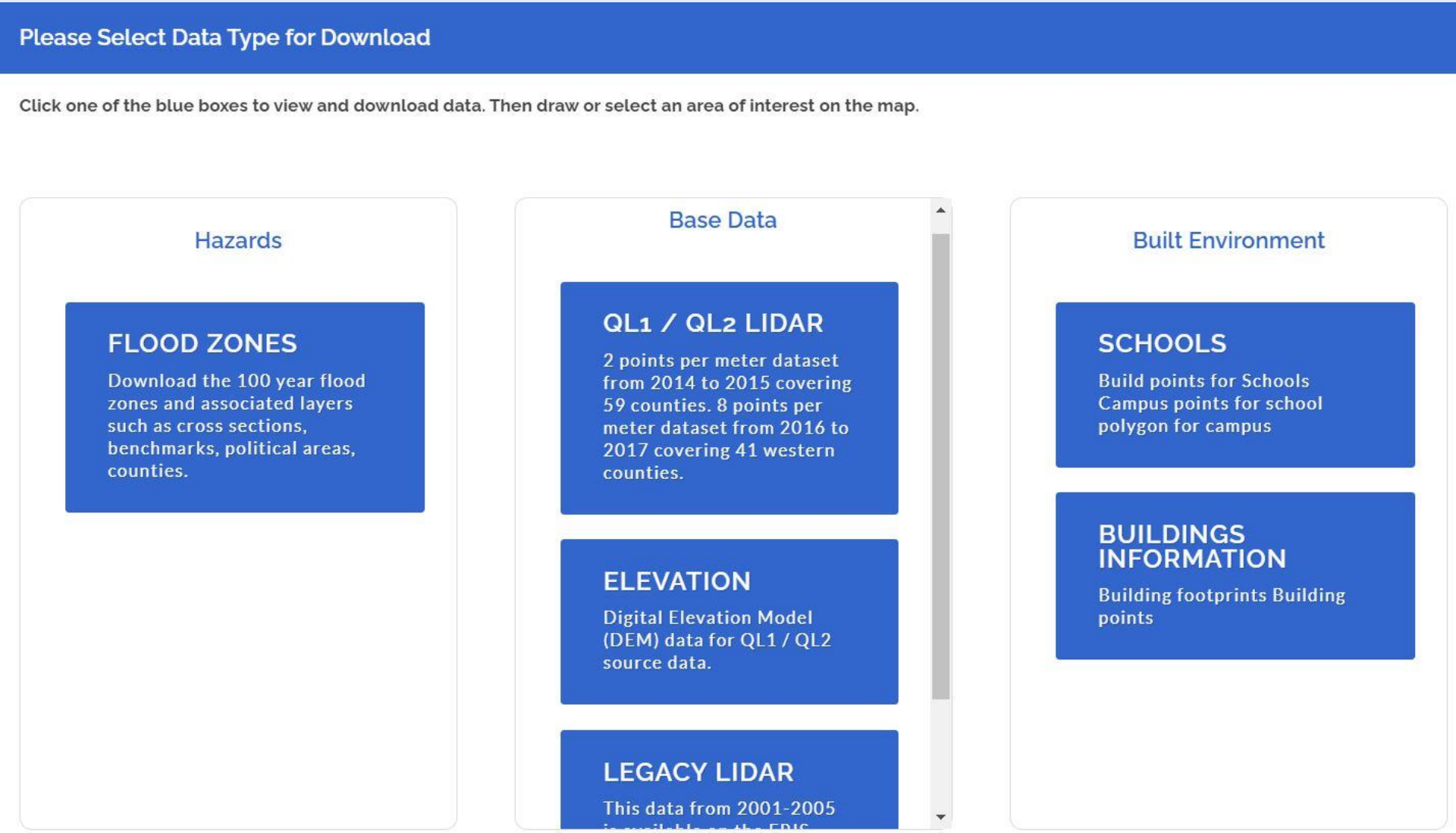
- Quality Level 2 LiDAR
- Legacy LiDAR
- Digital Elevation Models



Built Environment

Data on structures and other built environments.

Data Available on SDD



FRIS Flood Risk Information System

https://fris.nc.gov/fris

Data Search

County: Wake

DFIRM:

Stream:

Select a DFIRM Pane

Select a stream to

Wake

Shapefiles

Preliminary Index Map

LIDAR DEM 50

LIDAR DEM 20

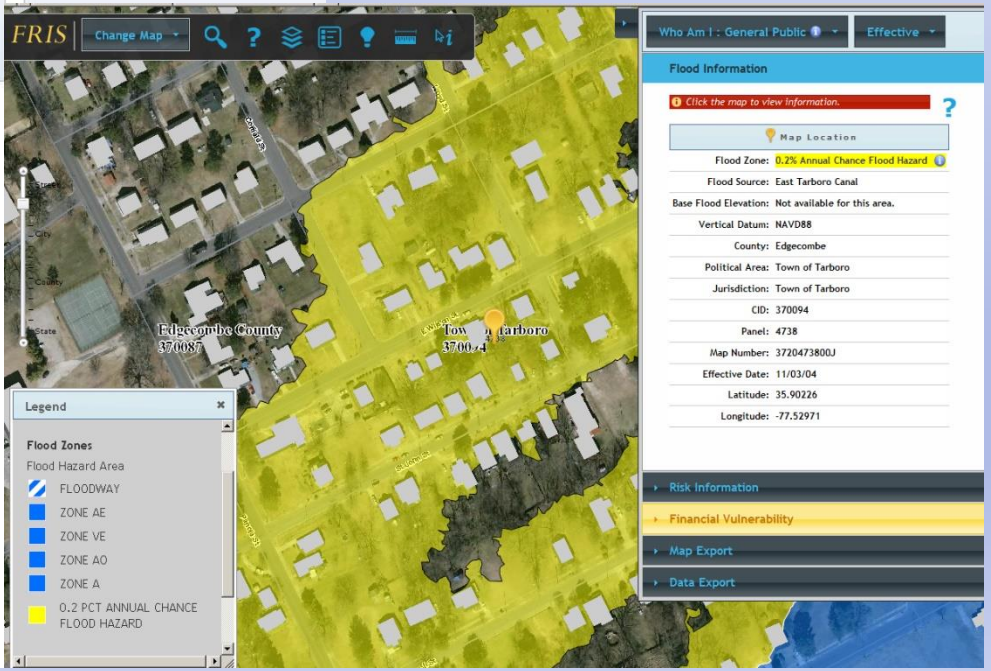
LIDAR Bare Earth

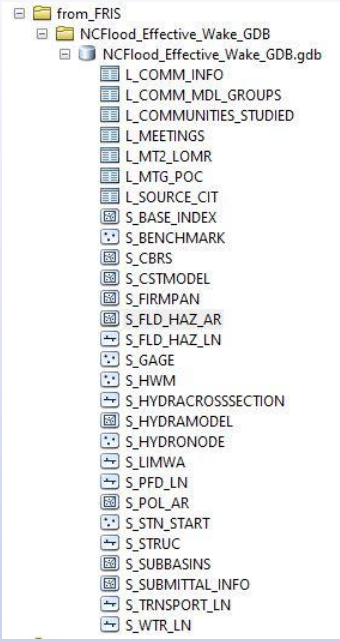
FIS Report

File Geodatabase

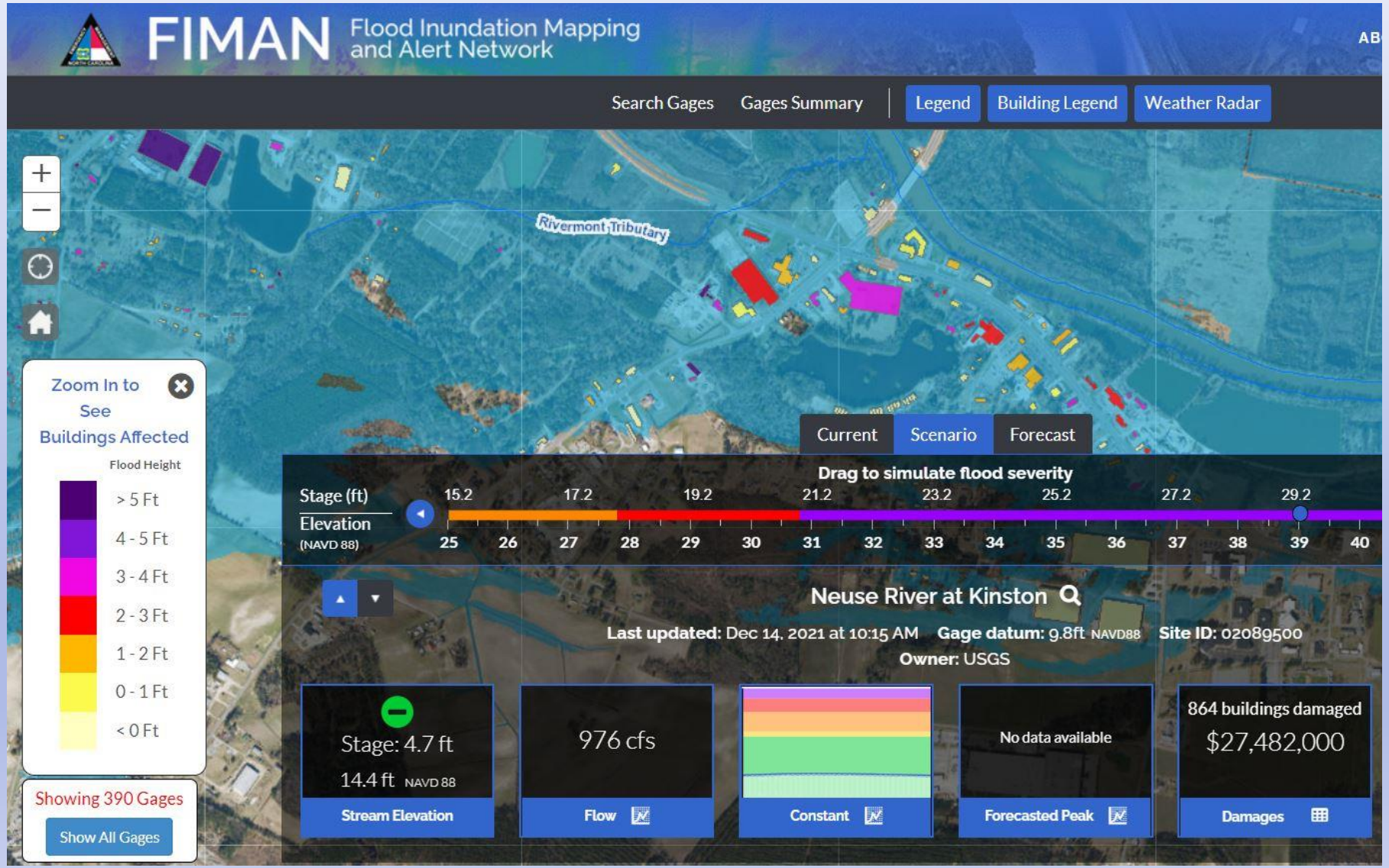
Effective Index Map

DFIRM



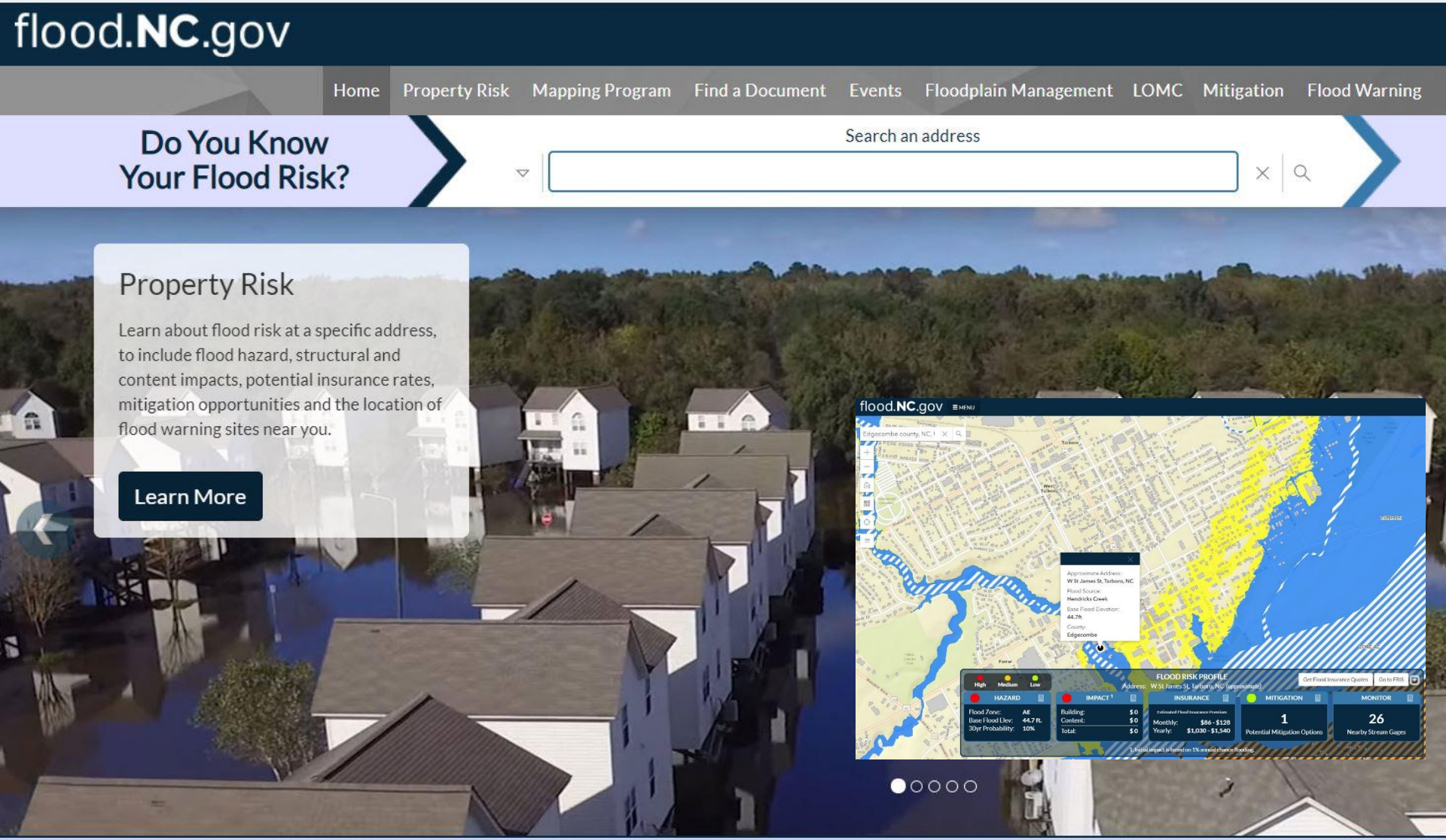


FIMAN
https://fiman.nc.gov/



flood.NC.gov

NC's Flood Information Center



Questions?

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