Statewide Orthoimagery Program

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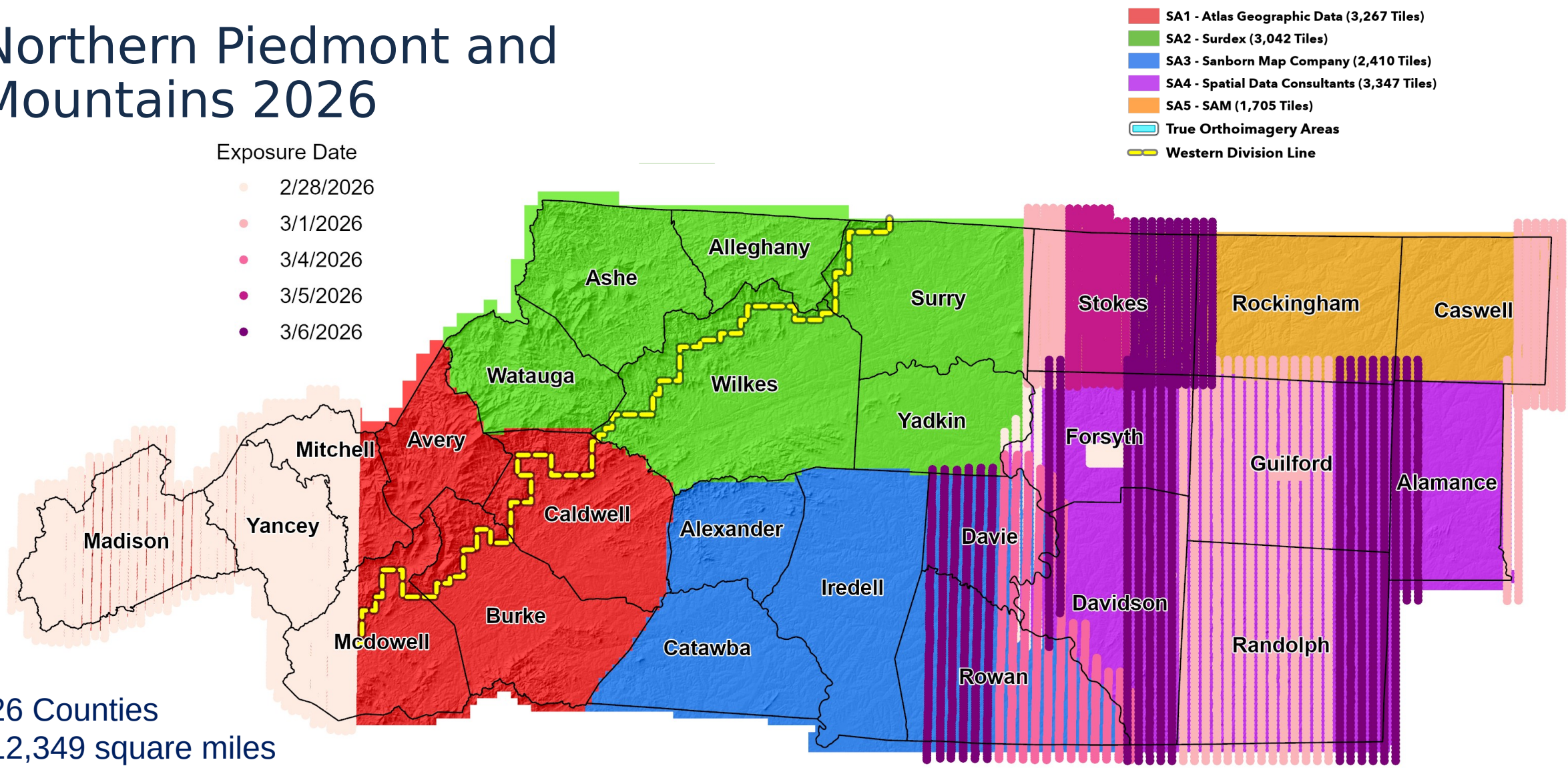
NC Center for Geographic Information and Analysis

March 13, 2026

NCDIT NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

Northern Piedmont and Mountains 2026



- 26 Counties
- 12,349 square miles
- 25% of Project Area ‘Mountain Acquisition’
- True Orthoimagery – SA4
  - Greensboro
  - Winston-Salem

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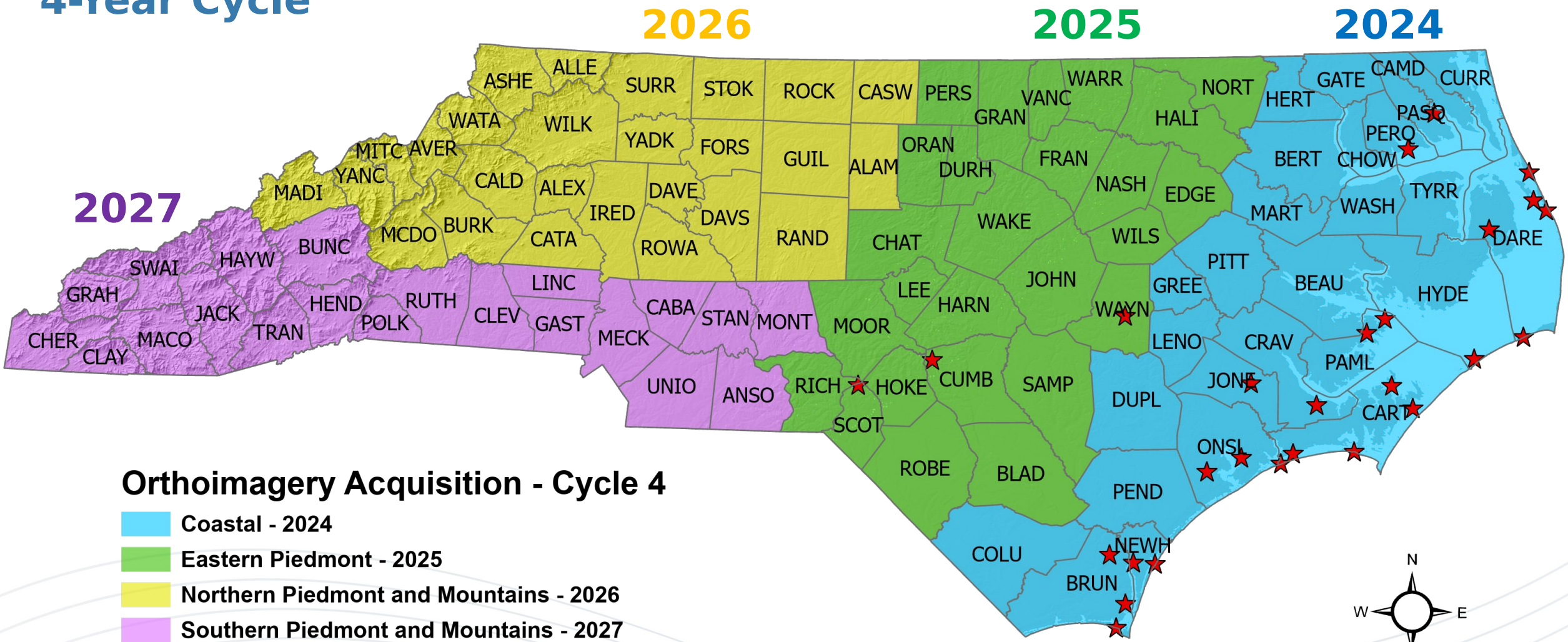
Current Orthoimagery Program Cycle

4-Year Cycle



Orthoimagery Acquisition - Cycle 4

- Coastal - 2024
- Eastern Piedmont - 2025
- Northern Piedmont and Mountains - 2026
- Southern Piedmont and Mountains - 2027
- ★ Military Installations

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Proposal for 5th Orthoimagery Program Cycle

Stakeholder Survey Draft Questions

Section 1: About Your Organization

What type(s) of organization do you represent? (Select all that apply)

- 911 Primary Safety Answering Point
- County or municipal GIS office
- Planning department
- Land records / tax office
- State agency
- Private sector
- Other (please describe)

How does your organization primarily use statewide orthoimagery?

- Open response

Section 2: Imagery Refresh Cycle

The current refresh cycle is four years. Does this cycle meet your operational needs?

- Yes, the 4-year cycle is sufficient
- No, a shorter cycle is needed
- No, a longer cycle is sufficient
- Not sure

If no, please describe the business case for adjusting the cycle.

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Proposal for 5th Orthoimagery Program Cycle

Stakeholder Survey Draft Questions

Section 3: Resolution Needs

The program currently provides 6-inch resolution imagery. Is this resolution meeting your needs?

- Yes
- No, higher resolution is needed
- No, lower resolution would be acceptable
- Not sure

If higher resolution is needed, please describe the use cases that require it.

Section 4: Oblique Imagery

Do you have a need for oblique imagery?

- Yes
- No
- Unsure

If yes:

- What business needs or workflows would oblique imagery support?
- Do you currently use oblique imagery in your operations?
    - What software or tools do you use to view or manage oblique imagery?

Proposal for 5th Orthoimagery Program Cycle

Stakeholder Survey Draft Questions

Section 5: Derived Products

Which derived products do you currently use? (Select all that apply)

- True ortho imagery
- Planimetric data (roads, buildings, water features, etc.)
- Impervious surface data
- Other (please specify)

Are there derived products not currently provided by the program that your organization would find useful?

- Yes (please describe)
- No
- Not sure

Section 6: Infrared Imagery

Do you currently use the infrared imagery provided by the statewide program?

- Yes
- No
- Not aware infrared imagery was available

If yes:

- What workflows or operational tasks rely on infrared imagery?

Proposal for 5th Orthoimagery Program Cycle

Stakeholder Survey Draft Questions

Section 7: Imagery Delivery and Access

Which orthoimagery delivery methods do you currently use? (Select all that apply)
- Tiled imagery files (TIFF, MrSID tiles, etc.)
- Streaming imagery services (NC OneMap image services or locally hosted services)
- Single-file countywide mosaic (MrSID)
- Other delivery methods (please describe)

Which delivery methods are most important to your daily workflows?
- Tiled imagery files
- Streaming imagery services
- Single-file county mosaic
- All methods are equally useful
- Other (please describe)

How satisfied are you with the current imagery access and download mechanisms?
If unsatisfied, please describe the issues you encounter.

Would your organization benefit from full-county imagery downloads, even if the files are large (many gigabytes)?

Do you prefer receiving imagery on physical hard drives or through online download?
Are there additional delivery options or tools that would improve your ability to access and use imagery?
Examples: cloud storage access, APIs, automated update notifications.

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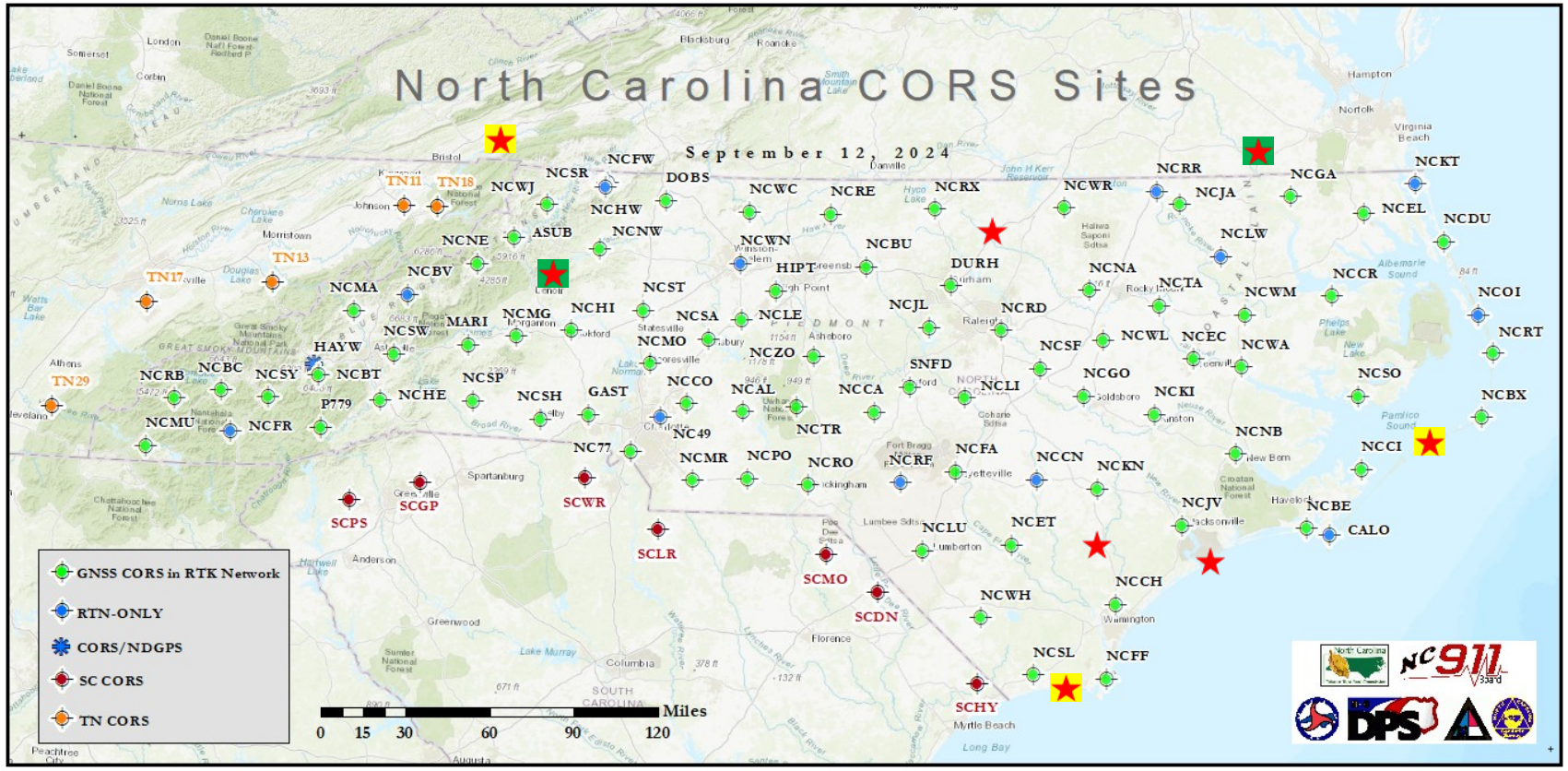
https://www.nconemap.gov/pages/imagery

North Carolina (NC) Continuously Operating Reference Stations (CORS) Network 2025

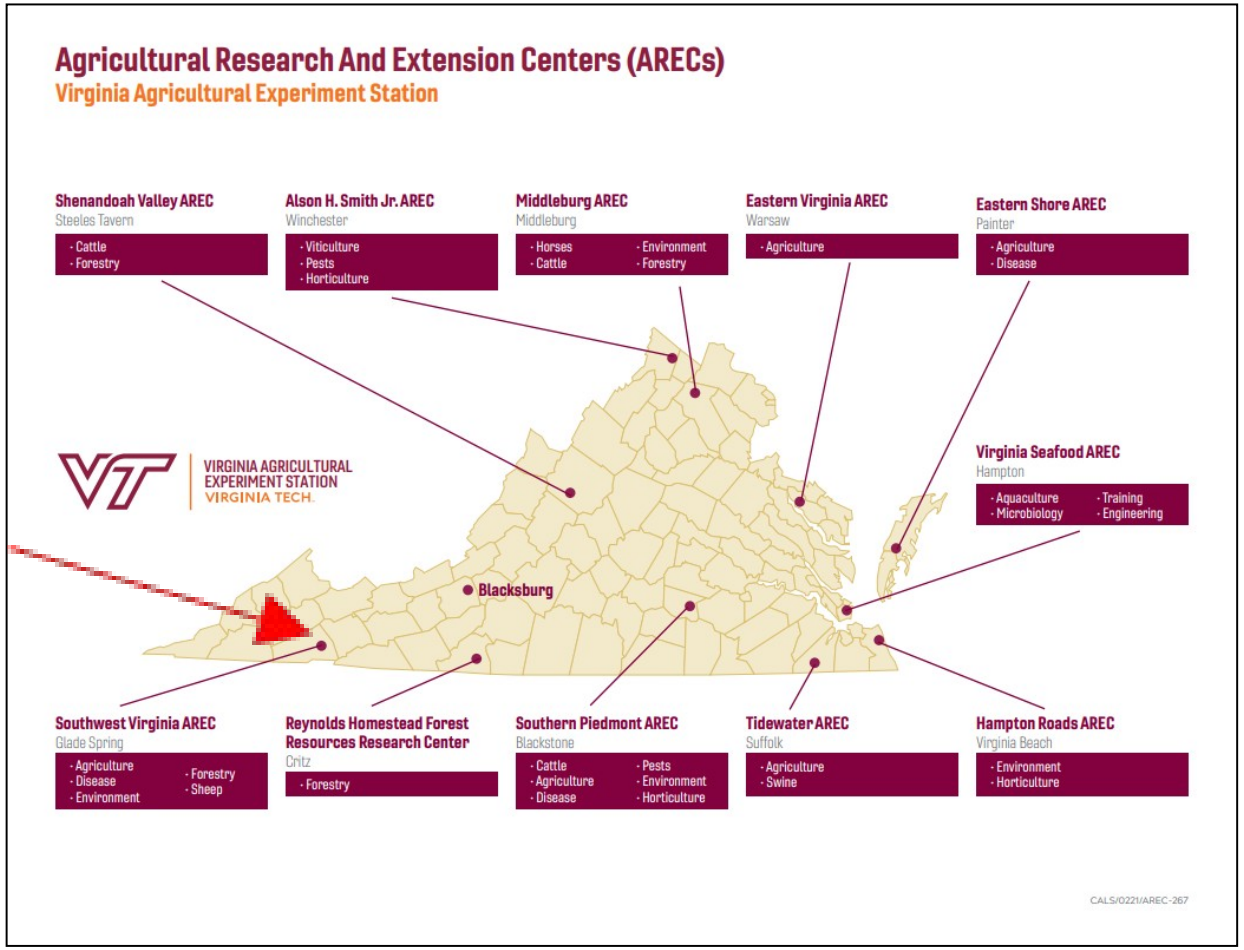


Future CORS location = ★

Installed ★

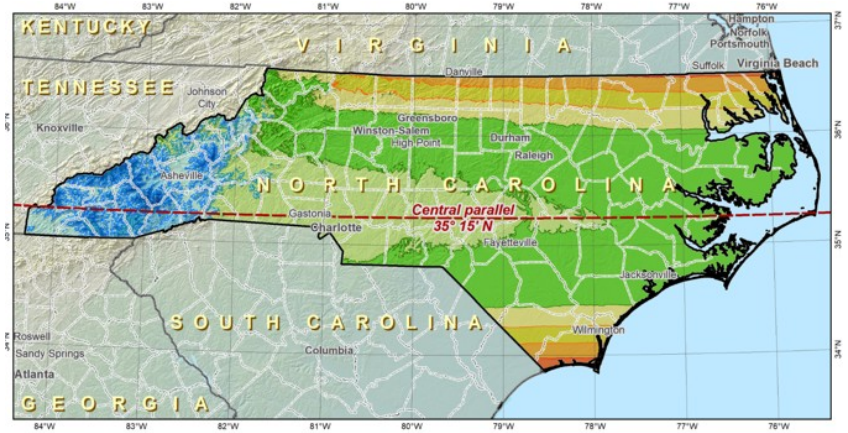
In Progress ★

NC Geodetic Survey-Virginia Tech CORS Proposed Site Southwest Virginia AREC



Changes in early 2027

- New horizontal and vertical datums
  - North American Terrestrial Reference Frame (NATRF2022)
  - North American-Pacific Geopotential Datum of 2022 (NAPGD2022)
- New state plane coordinate system
  - North Carolina and Tennessee Coordinate System of 2022
- New units
  - International foot
- New Geoid model
  - GEOID2022
- New tidal datum (2029)



NC 2022 Reference Frame Working Group

- Monthly meetings (next meeting is 3/26/2026 1-3 pm)
  - Update provided by National Geodetic Survey
    - Beta products available mid 2026
    - Adoption of new datums in early 2027
  - Includes the private sector, and state, local and federal agencies
  - Developing a guidance document for local governments to use to prepare for the datum change in early 2027
    - Need your assistance in what information you need to prepare for the datum change
  - Developing a new 2022 datum tile layout for statewide imagery and lidar projects.
  - Developed Survey123 questionnaire

Rules on Foot Conversion Standards

NOTICE OF TEXT
[Authority G.S. 150B-21.2(c)]

OAH USE ONLY
VOLUME: 40
ISSUE: 08

CHECK APPROPRIATE BOX:

- [ ] Notice with a scheduled hearing
- [x] Notice without a scheduled hearing
- [ ] Republication of text. Complete the following cite for the volume and issue of previous publication, as well as blocks 1 - 4 and 7 - 14. If a hearing is scheduled, complete block 5.
  Previous publication of text was published in Volume: Issue:

1. Rule-Making Agency: Department of Public Safety

2. Link to agency website pursuant to G.S. 150B-19.1(c): www.ncdps.gov

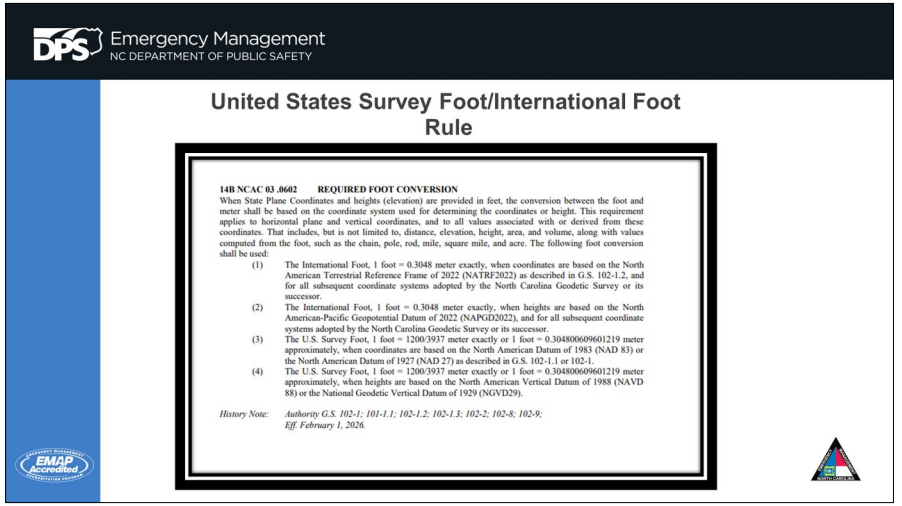
3. Proposed Action -- Check the appropriate box(es) and list rule citation(s) beside proposed action:

- [x] ADOPTION: 14B NCAC 03 .0601-.0602
- [ ] AMENDMENT:
- [ ] REPEAL:
- [ ] READOPTION with substantive changes:
- [ ] READOPTION without substantive changes:
- [ ] REPEAL through READOPTION:

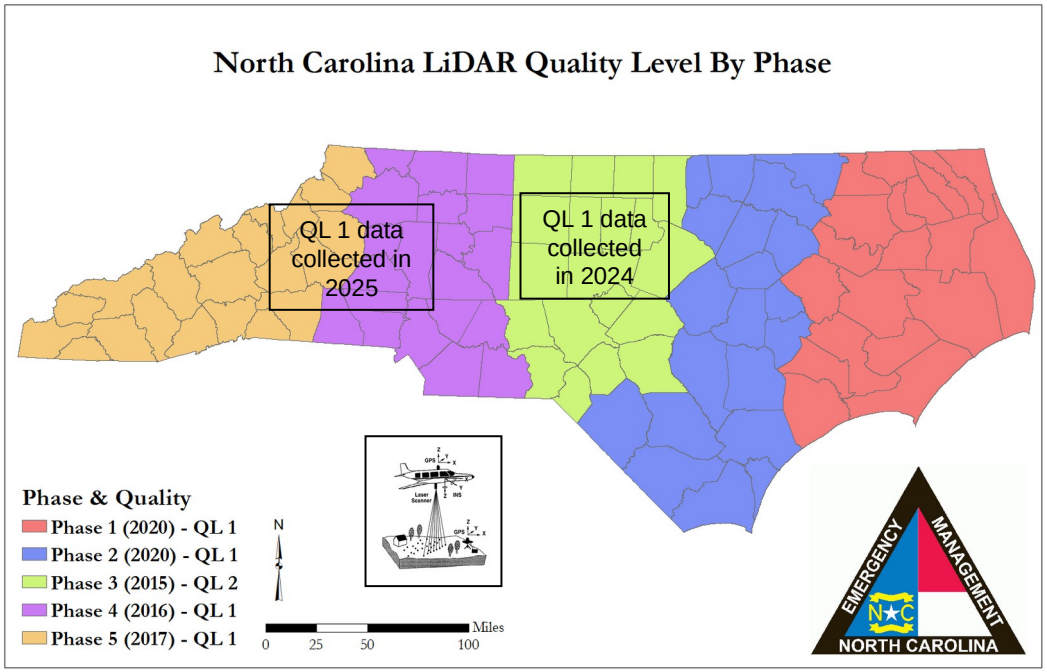
4. Proposed effective date: 02/01/2026

5. Is a public hearing planned? No
   If yes:
   Date Time Location

7. Explain Reason For Proposed Rule(s):
The purpose of the proposed rules is to clarify the appropriate usage of the U.S. Survey Foot and International Foot. This change is in accordance with the decision by the National Institute of Standards and Technology (NIST) and the National Geodetic Survey (NGS) to phase out the U.S. Survey Foot. It also aligns with recent amendments to North Carolina General Statute 102-1.2, which adopted the International Foot as the state standard. The clarification provided by the proposed rules should reduce confusion arising from having multiple measurement standards, helping to prevent costly errors and improve consistency in project execution.



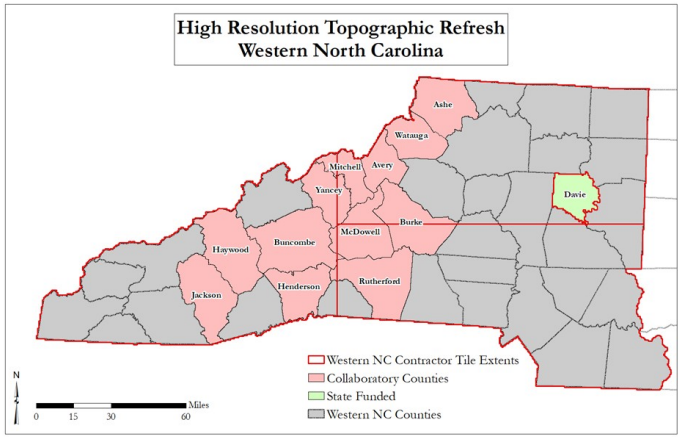
NC Light Detection and Ranging (LiDAR) Elevation Data



QL = Quality Level

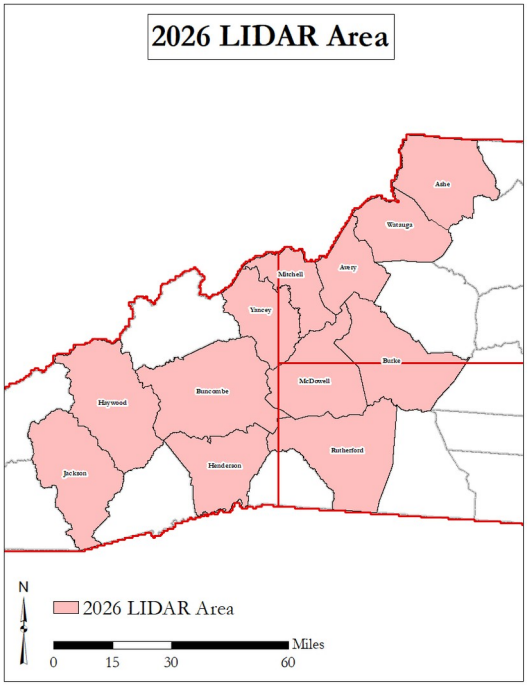
The Phase 3 lidar data is available on Spatial Data Download

2025 Data Collection Area

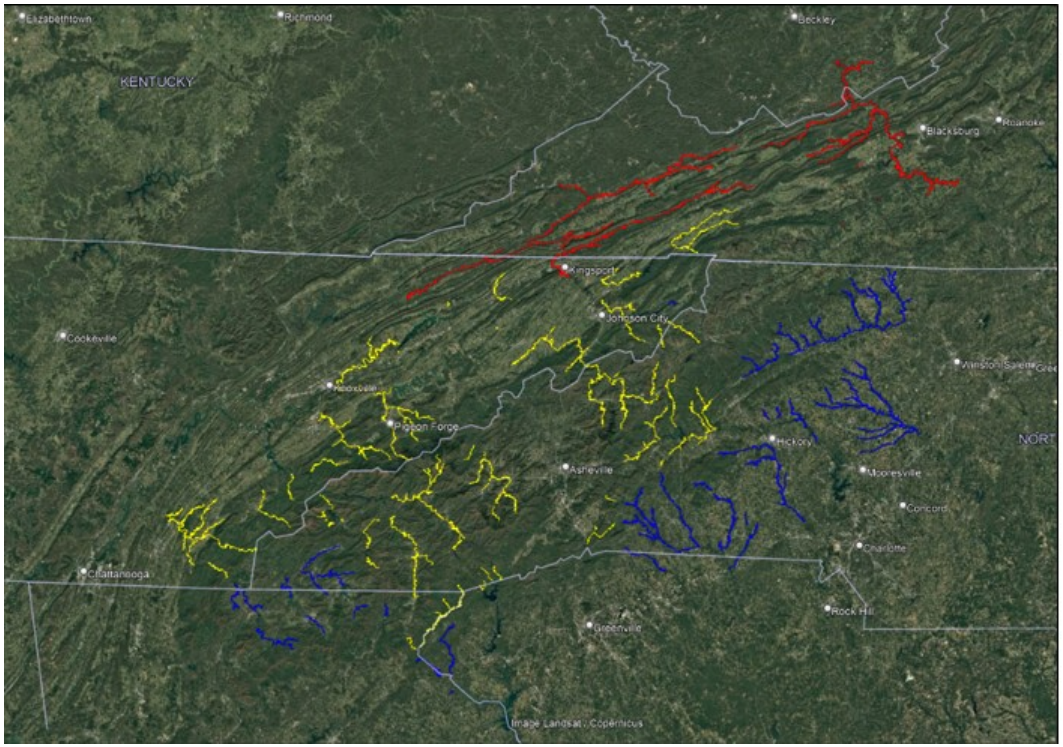


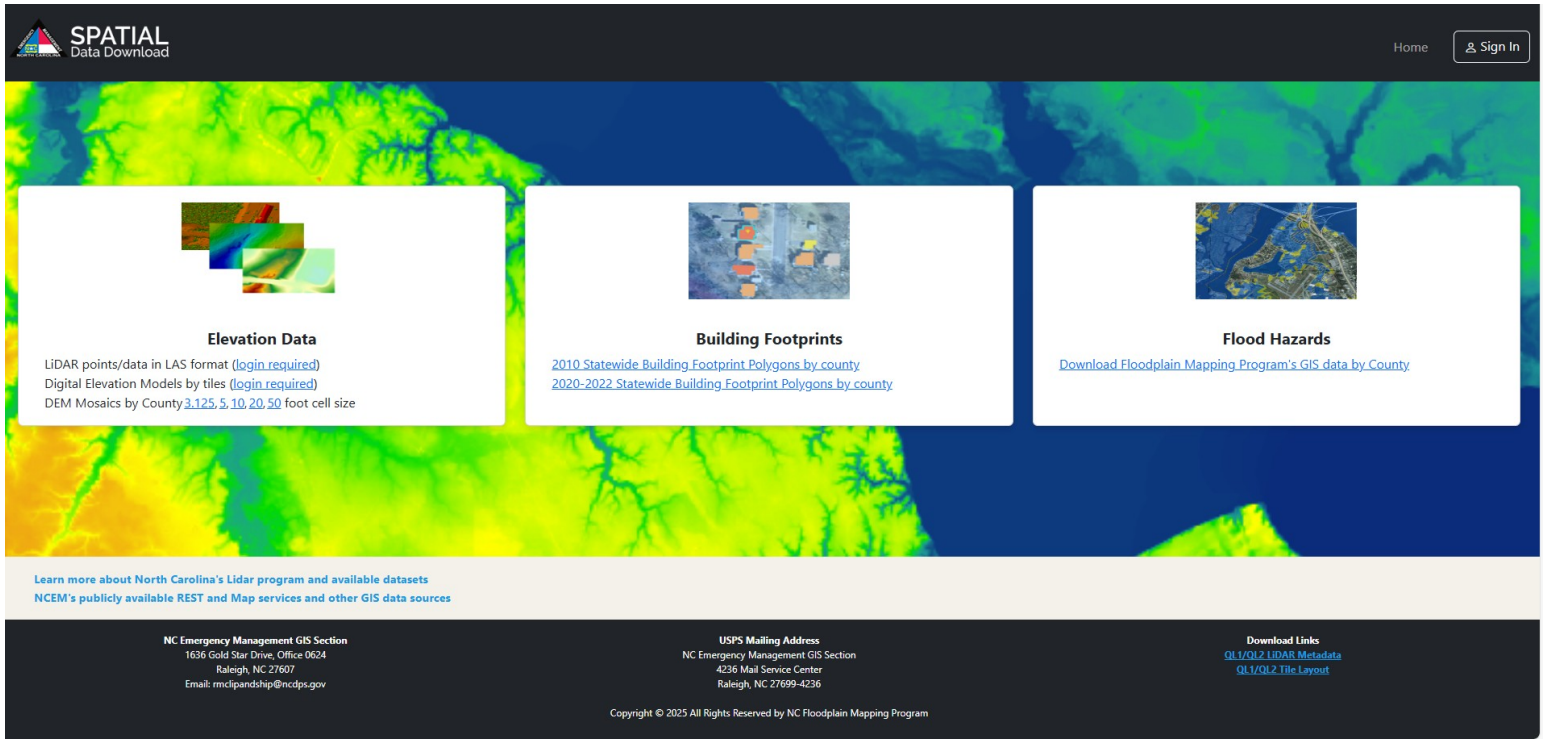
- Data currently available on Spatial Data Download
  - Aerial imagery (Collaboratory counties only + Alexander County)
    - NC OneMap
    - ESRI World Imagery
  - LiDAR (All Collaboratory counties)
  - LiDAR for the remaining western NC counties will be available in early 2026

2026 Data Collection Area



National Geodetic Survey 2026 Bathymetric Lidar Project




SPATIAL
Data Download
Home
Sign In
Elevation Data
LiDAR points/data in LAS format (login required)
Digital Elevation Models by tiles (login required)
DEM Mosaics by County 3.125, 5, 10, 20, 50 foot cell size
Building Footprints
2010 Statewide Building Footprint Polygons by county
2020-2022 Statewide Building Footprint Polygons by county
Flood Hazards
Download Floodplain Mapping Program's GIS data by County
Learn more about North Carolina's Lidar program and available datasets
NCEM's publicly available REST and Map services and other GIS data sources
NC Emergency Management GIS Section
1636 Gold Star Drive, Office 0624
Raleigh, NC 27607
Email: rmclipandship@ncdps.gov
USPS Mailing Address
NC Emergency Management GIS Section
4236 Mail Service Center
Raleigh, NC 27699-4236
Download Links
QL1/QL2 LiDAR Metadata
QL1/QL2 Tile Layout
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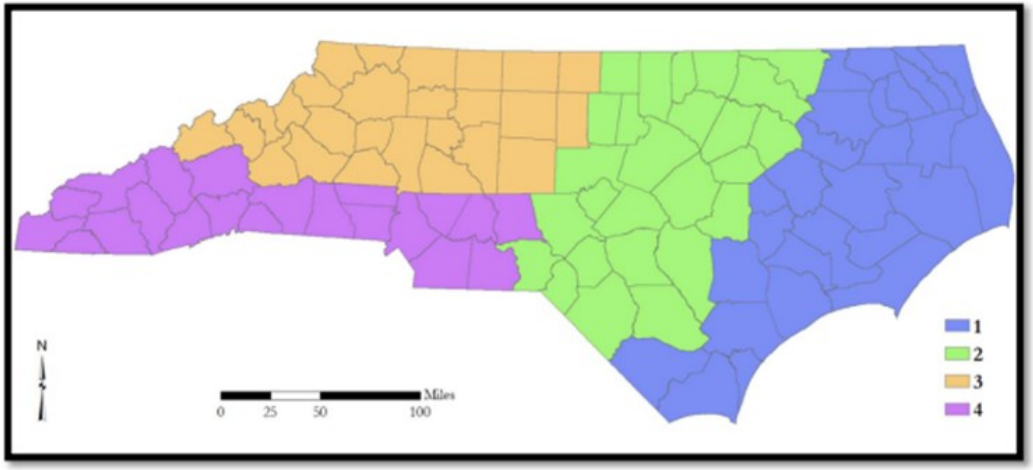
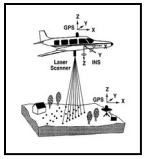
NC Light Detection and Ranging (LiDAR) Elevation Data
4th Statewide Phase





The new datums and the International Foot will be used when we start the 4th phase of statewide LiDAR data collection.

County Boundary Surveys in Progress

Projects in progress

- Caswell – Person (plats will be recorded in September 2026)
- Polk – Rutherford (research phase)
- Burke-McDowell (research phase)
- Carteret - Onslow
- Chowan – Perquimans
- Harnett – Johnston
- Beaufort-Pitt
- Caldwell - Watauga
- Mitchell – Yancey
- Cumberland - Harnett
- Bladen – Columbus – Brunswick
- Buncombe – Henderson

Address NC:

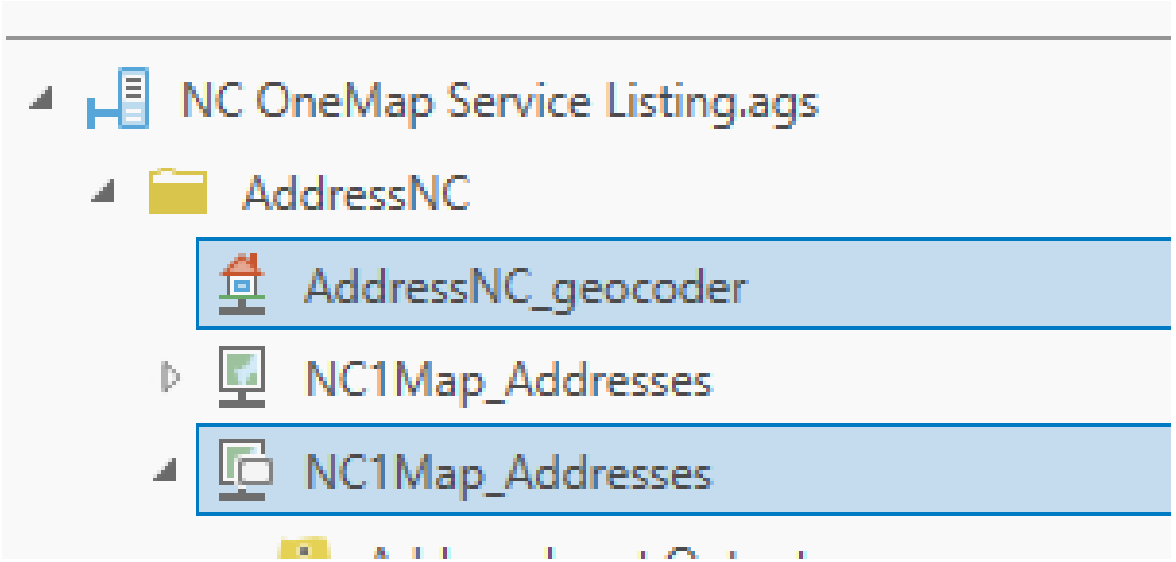
Project Status

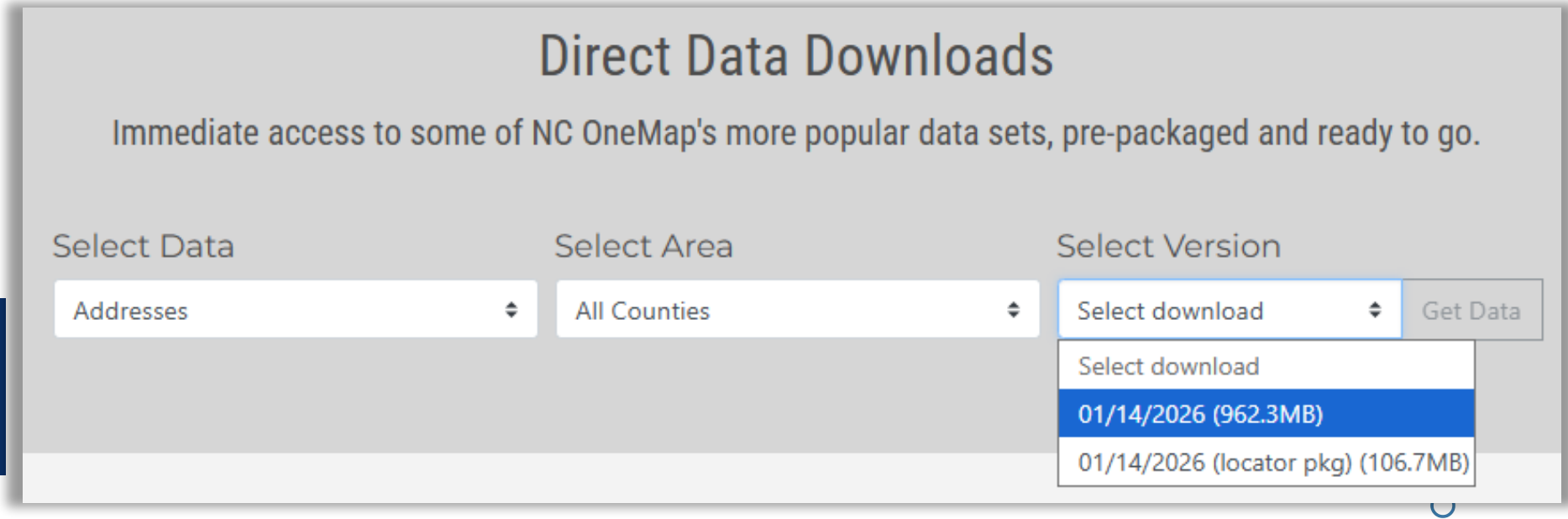
Statewide Mapping Advisory Committee
March 13, 2026

Darrin Smith, Project Manager - CGIA

Program Updates

- Current as of 01/14/2026
  - New Set
  - Locator
  - Offline Locator
  - QC Results (20 layers)





NC OneMap

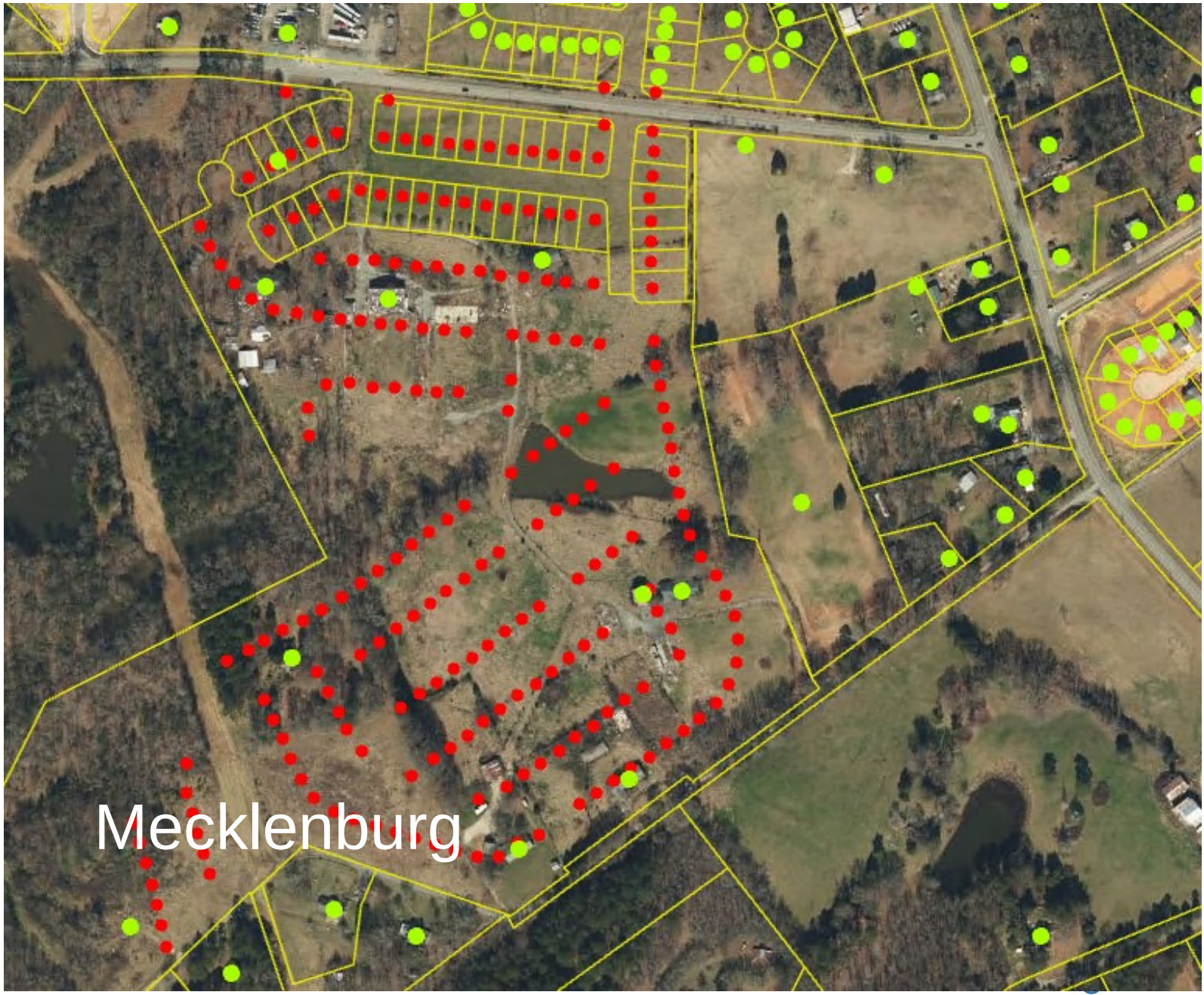
Program Updates

ITEM	CHANGE	NOTE
SINCE LAST SMAC (October 2025)	19,752	Raw counts
IN ONE YEAR	113,330	Raw counts in one year
ONE YEAR CHANGE	2% OR 17,663 Average Per Month	
COUNTY SUBMITTED (LAST SMAC)	70%	A county had at least one change in raw counts
CHANGE (NEW OR PRECISION)	45,368	• Either a new point OR • Existing change OR • Existing moved • Intuitive visual indicator of new subdivisions

Growth Example

Last SMAC

New



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Building Footprint Update Status