

Statewide Orthoimagery Program

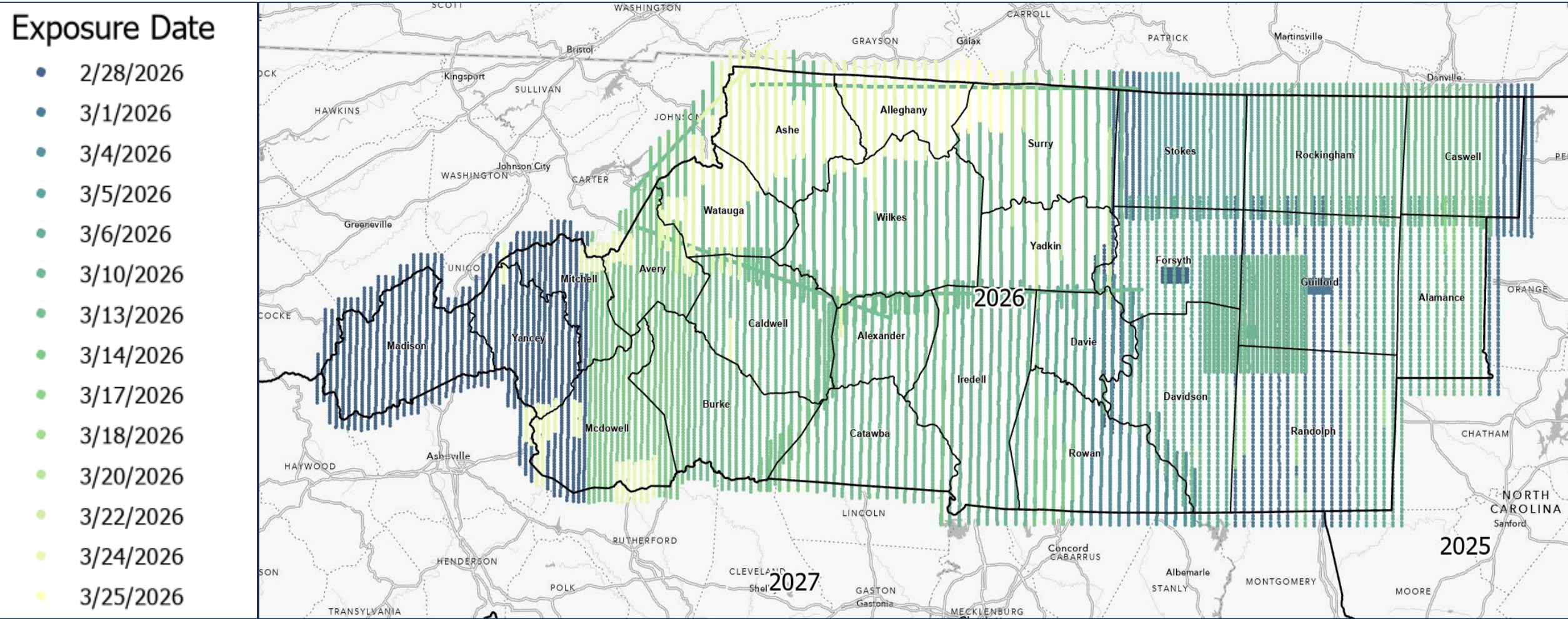
Ben Shelton

NC Center for Geographic Information and Analysis

June 11, 2026

Northern Piedmont and Mountains 2026

Acquisition Results

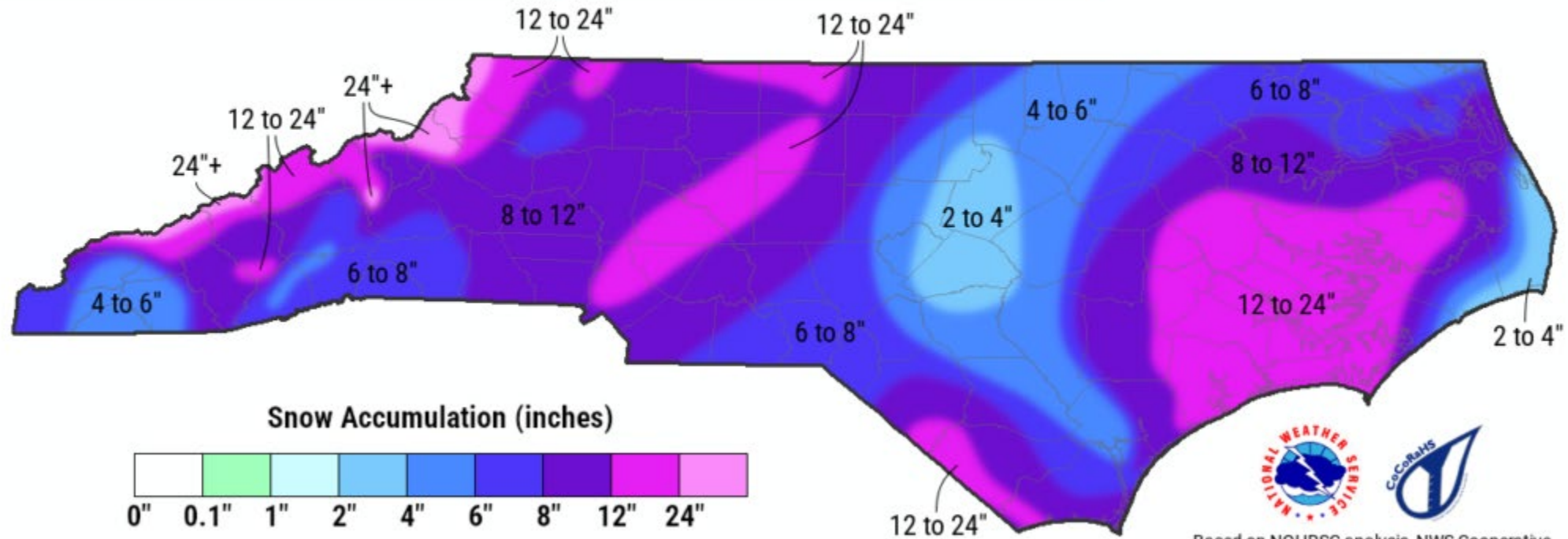


A Snowy Acquisition Season

- NC State University – North Carolina State Climate Office – Climate Blog:
 - <https://climate.ncsu.edu/blog/2026/03/winter-recap-2025-26-cool-and-dry-with-a-snowy-centerpiece/>

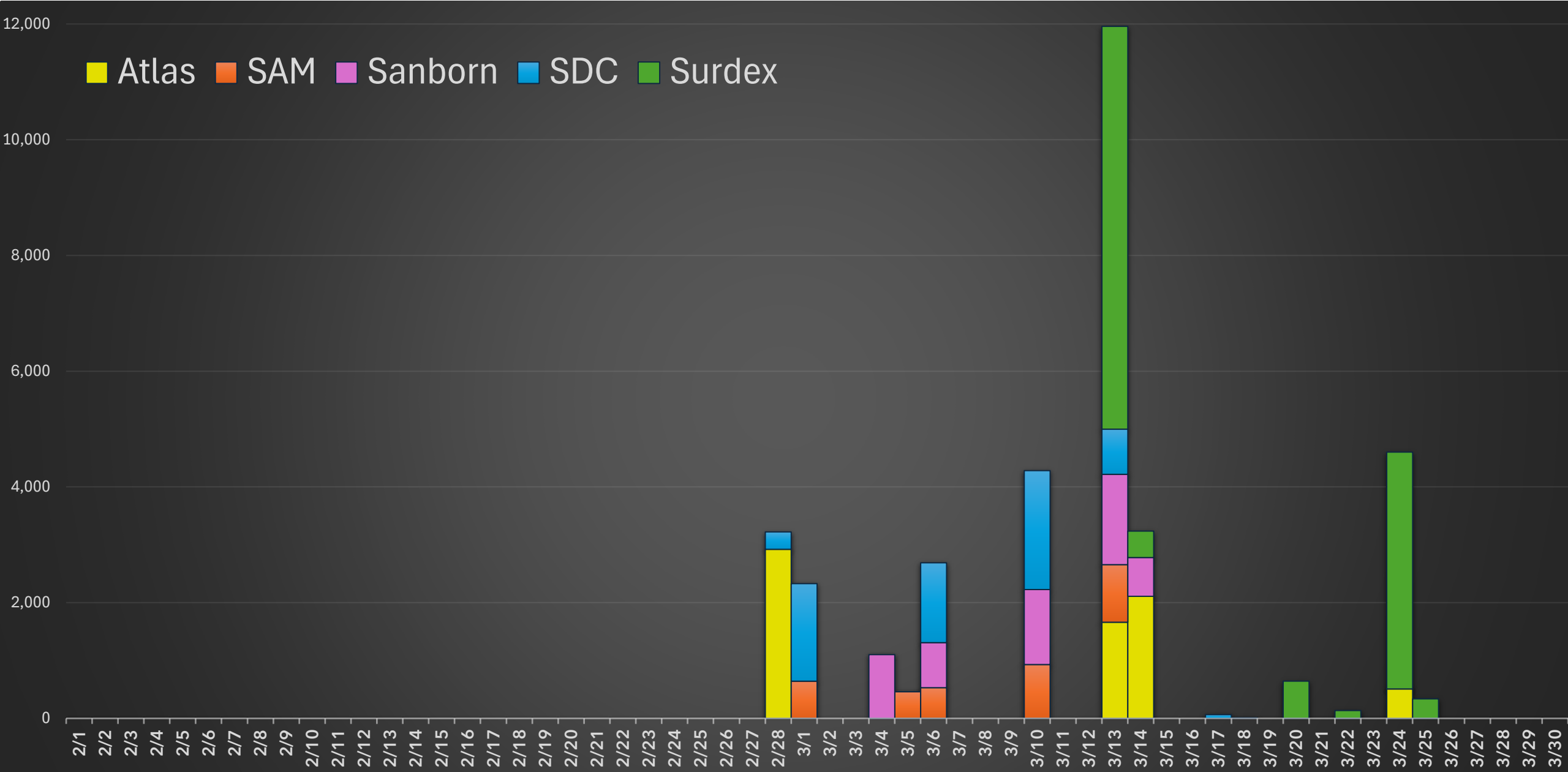
Total Snowfall

Nov. 2025 to Mar. 2026

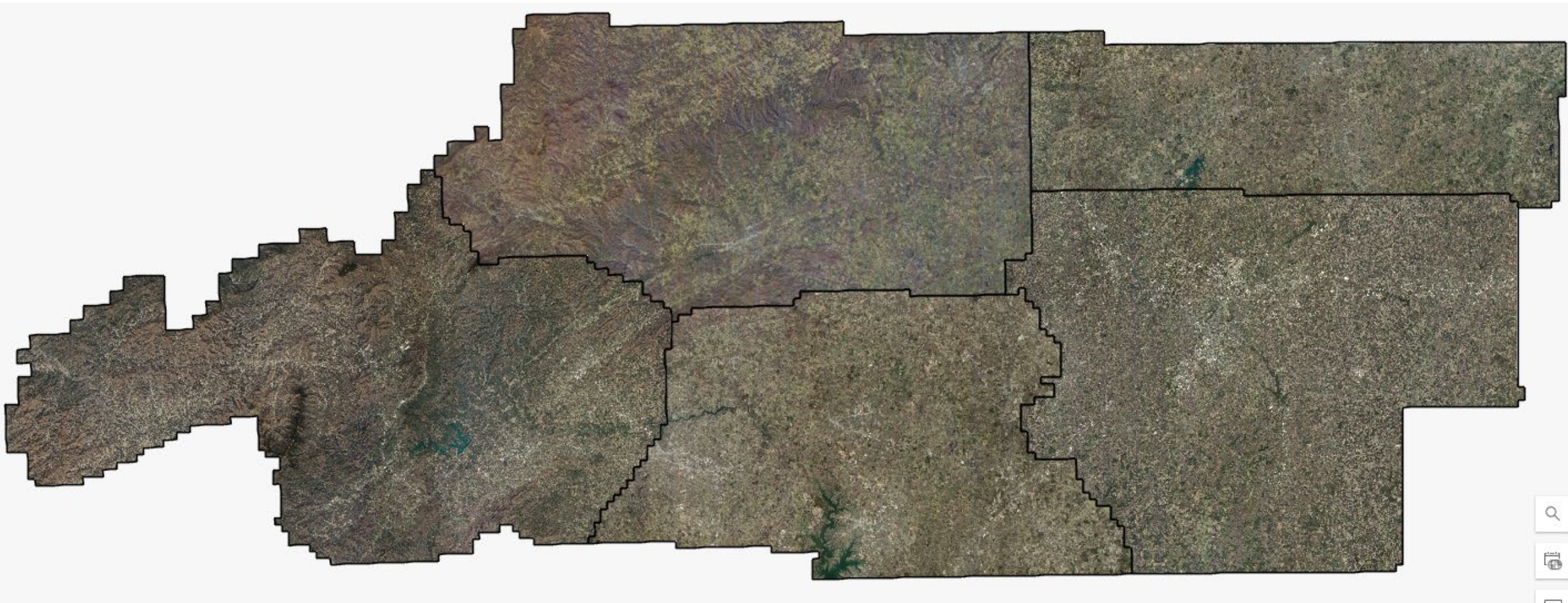


Based on NOHRSC analysis, NWS Cooperative Observer data, and CoCoRaHS observations

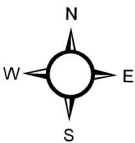
Exposures Collected per Day



NPM26 Radiometry



2026 End User Quality Review

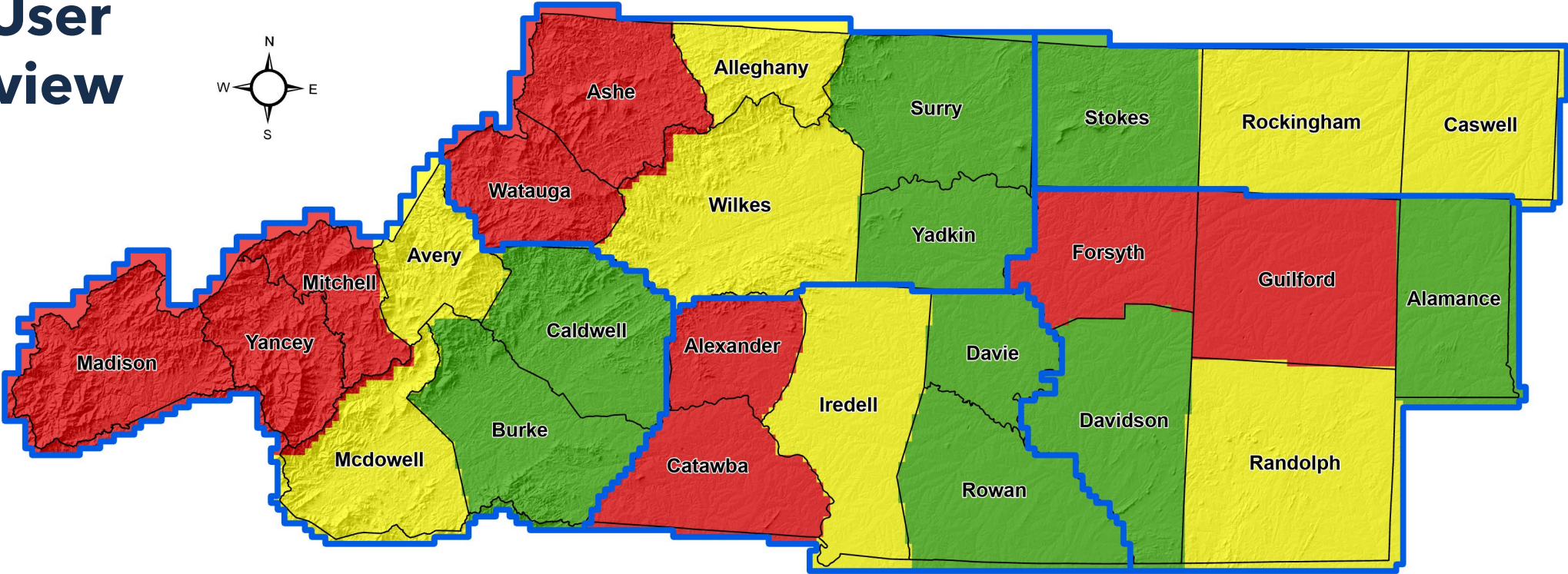


DO

1

2

3



2026 Orthoimagery Review Schedule								
DO1			DO2			DO3		
County	Review Start	Review End	County	Review Start	Review End	County	Review Start	Review End
Burke	20-Jul	14-Aug	Avery	3-Aug	28-Aug	Madison	17-Aug	11-Sep
Alamance	20-Jul	14-Aug	Alleghany	3-Aug	28-Aug	Alexander	17-Aug	11-Sep
Caldwell	20-Jul	14-Aug	Caswell	3-Aug	28-Aug	Ashe	17-Aug	11-Sep
Davidson	20-Jul	14-Aug	Iredell	3-Aug	28-Aug	Catawba	17-Aug	11-Sep
Davie	20-Jul	14-Aug	McDowell	3-Aug	28-Aug	Forsyth	17-Aug	11-Sep
Rowan	20-Jul	14-Aug	Randolph	3-Aug	28-Aug	Guilford	17-Aug	11-Sep
Stokes	20-Jul	14-Aug	Rockingham	3-Aug	28-Aug	Mitchell	17-Aug	11-Sep
Surry	20-Jul	14-Aug	Wilkes	3-Aug	28-Aug	Watauga	17-Aug	11-Sep
Yadkin	20-Jul	14-Aug				Yancey	17-Aug	11-Sep

Current Orthoimagery Program Cycle

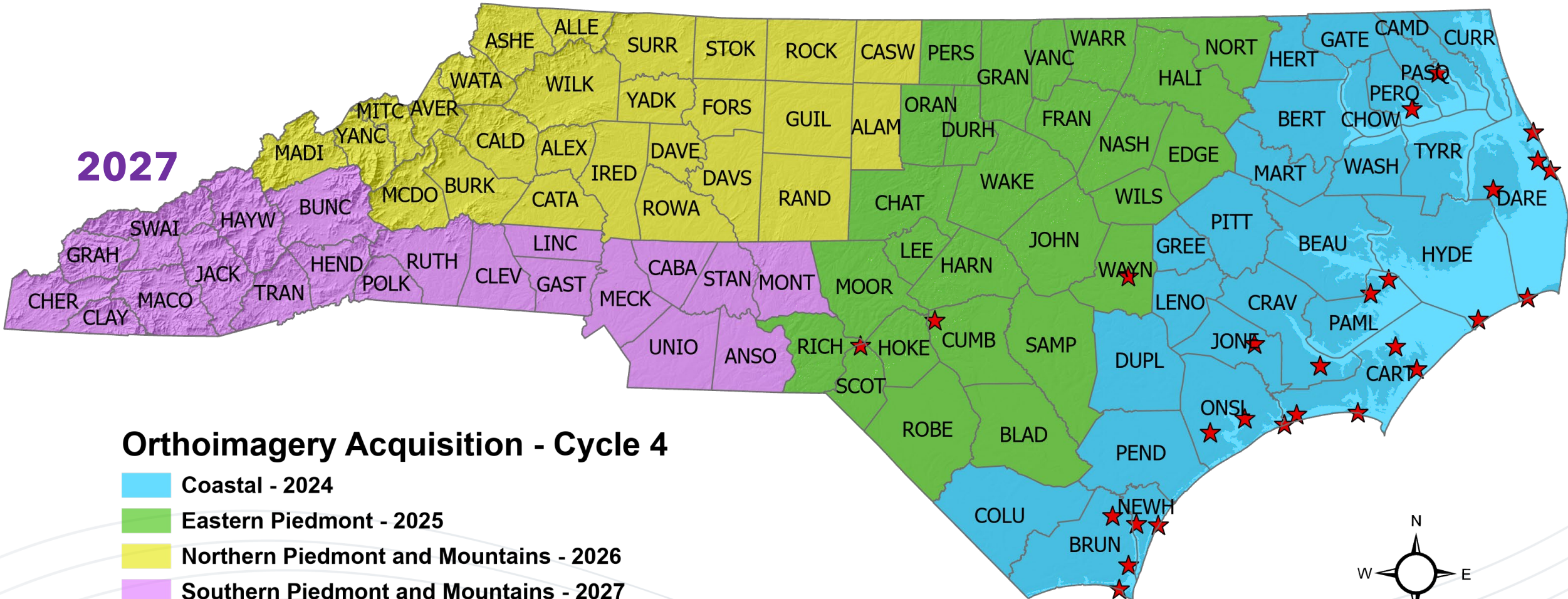
4-Year Cycle

2026

2025

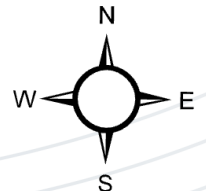
2024

2027



Orthoimagery Acquisition - Cycle 4

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



Orthoimagery Needs Assessment Survey

NC Orthoimagery

Discover and Access Imagery Across the State

Since 2010, the North Carolina 911 Board has funded the collection and production of high resolution orthoimagery for North Carolina. Approximately a quarter of the state is flown each year and used as a mission critical tool for emergency planning and response. The imagery is also made freely available to the public and commonly used by a number of public and private efforts, including engineering, urban and regional planning, economic development, environmental assessment, and land surveying.



[North Carolina Orthoimagery Needs Assessment](#)

Please take the North Carolina Orthoimagery Needs Assessment Survey to provide feedback on your current and future imagery needs. Your feedback will help evaluate how well the Statewide Orthoimagery Program is meeting those needs in its current form and identify opportunities for improvement.

[Take Survey](#)

As of 6/10 - 55 responses received





Ben Shelton

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Ben.Shelton@nc.gov

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

Address NC: Project Status

Statewide Mapping Advisory Committee
June 11, 2026

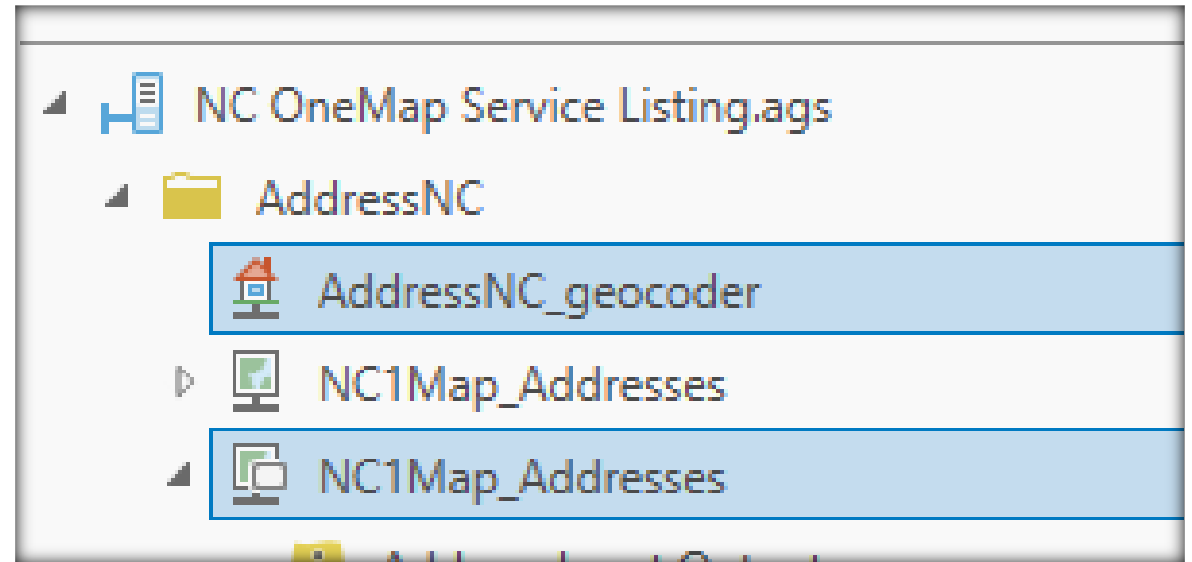


Darrin Smith, Project Manager - CGIA



Program Updates

- Current as of 04/25/2026
- 06/16/2026





Direct Data Downloads

Immediate access to some of NC OneMap's more popular data sets, pre-packaged and ready to go.

Select NC OneMap Data

Select Area

Select Version

Addresses

All Counties

04/25/2026 (946.8MB)

Get Data

Program Updates

ITEM	CHANGE
SINCE THE APRIL 2026 UPDATE	74,501 OR 1%
IN ONE YEAR	153,006 OR 3%
ONE YEAR CHANGE	25,501 Average Per Month
COUNTY SUBMITTED (LAST SMAC)	80%
MOST SUBSTANTIAL CHANGE (IREDELL, WAKE, MECKLENBURG)	93%

Darrin Smith

NC Center for Geographic Information and Analysis

Darrin.Smith@nc.gov



<https://it.nc.gov/about/boards-commissions/gicc>

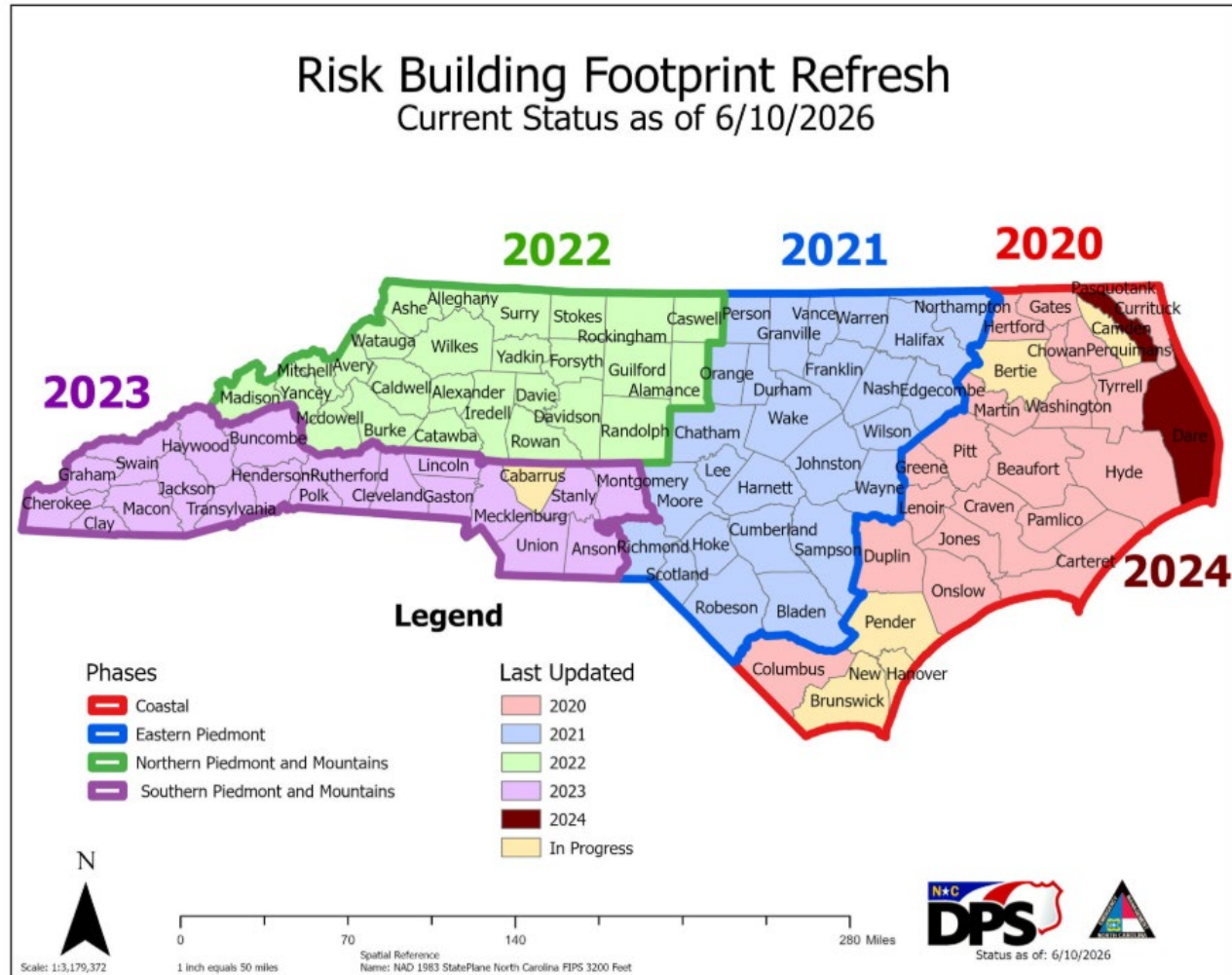
[facebook.com/NCDIT](https://www.facebook.com/NCDIT)

twitter.com/NCDIT

[linkedin.com/company/ncdit](https://www.linkedin.com/company/ncdit)



Building Footprint Update Status





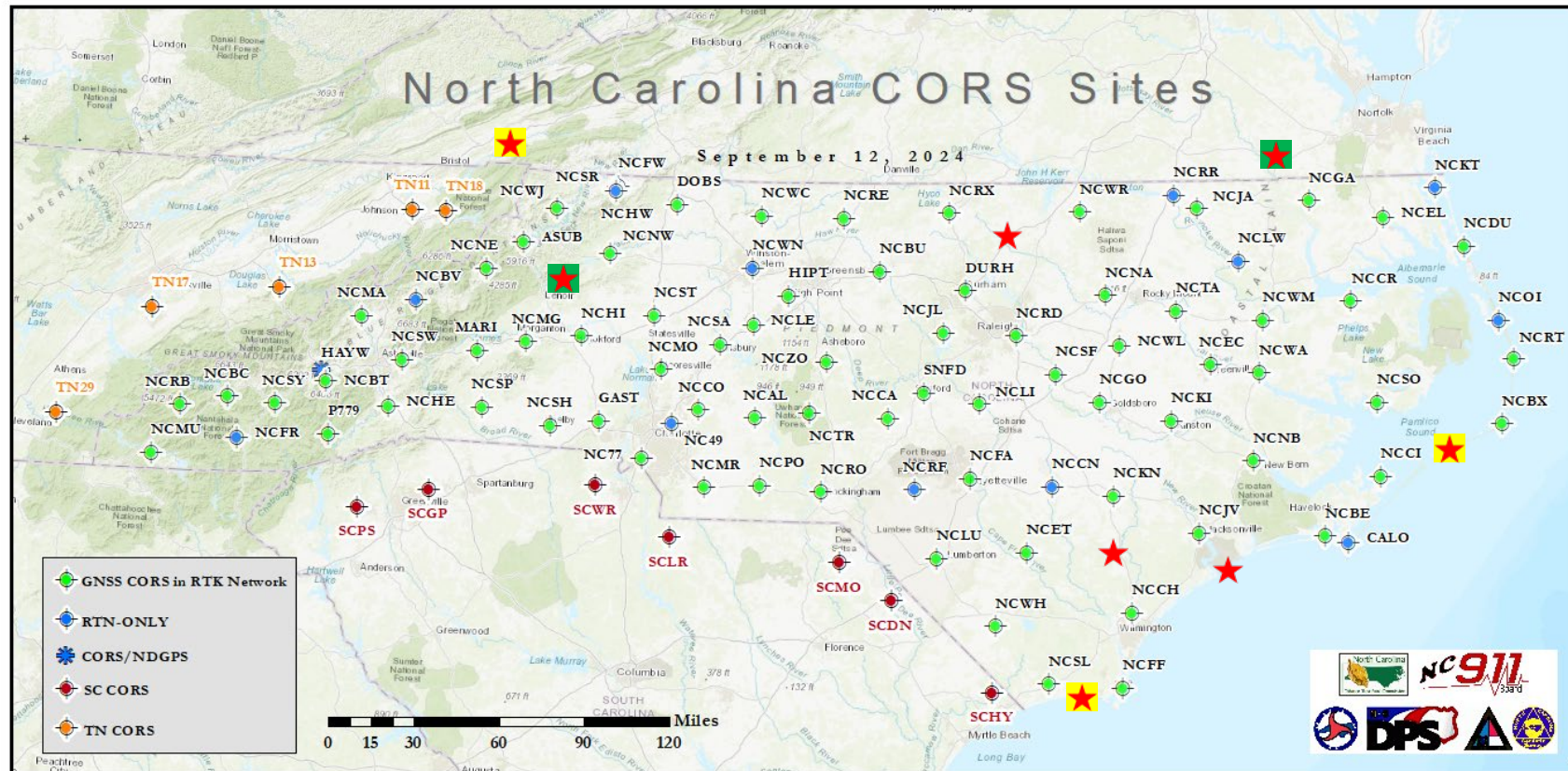
County Boundary Surveys in Progress

Projects in progress

- Caswell – Person (plats will be recorded in September 2026)
- Polk – Rutherford (research phase in progress)
- Burke-McDowell (field work in progress)
- Carteret – Onslow (findings report submitted to the counties)
- Guilford – Randolph (scheduling project kick off meeting)
- Chowan – Perquimans
- Harnett – Johnston
- Beaufort-Pitt
- Caldwell - Watauga
- Mitchell – Yancey
- Cumberland - Harnett
- Bladen – Columbus – Brunswick
- Buncombe – Henderson



North Carolina (NC) Continuously Operating Reference Stations (CORS) Network 2026



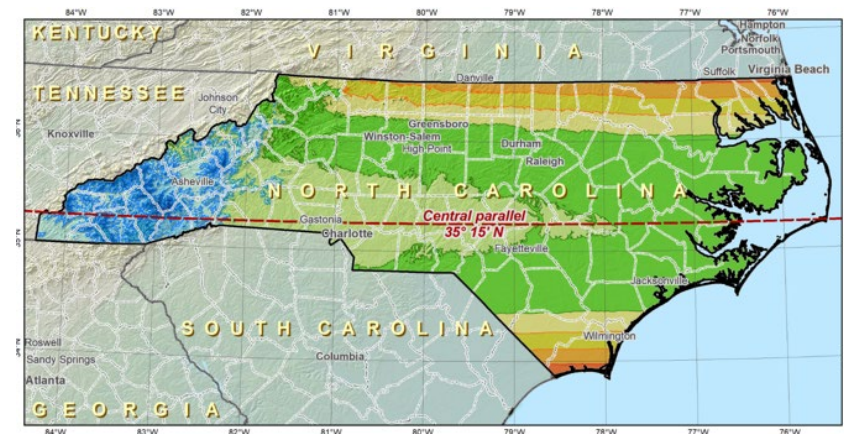


- Monthly meetings (next meeting is 5/25/2026 1-3 pm)
 - Update provided by National Geodetic Survey
 - Beta products available mid 2026
 - Adoption of new datums in early 2027
 - Includes the private sector, and state, local and federal agencies
 - Developing a guidance document for local governments 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
 - Developed a new 2022 datum tile layout for statewide imagery and lidar projects.
 - Developed Survey123 questionnaire
 - (<https://survey123.arcgis.com/share/e5403072c4b7439d9876573506dd1723/result>)
 - 2022 Datum help email (ncem2022datumhelp@ncdps.gov)



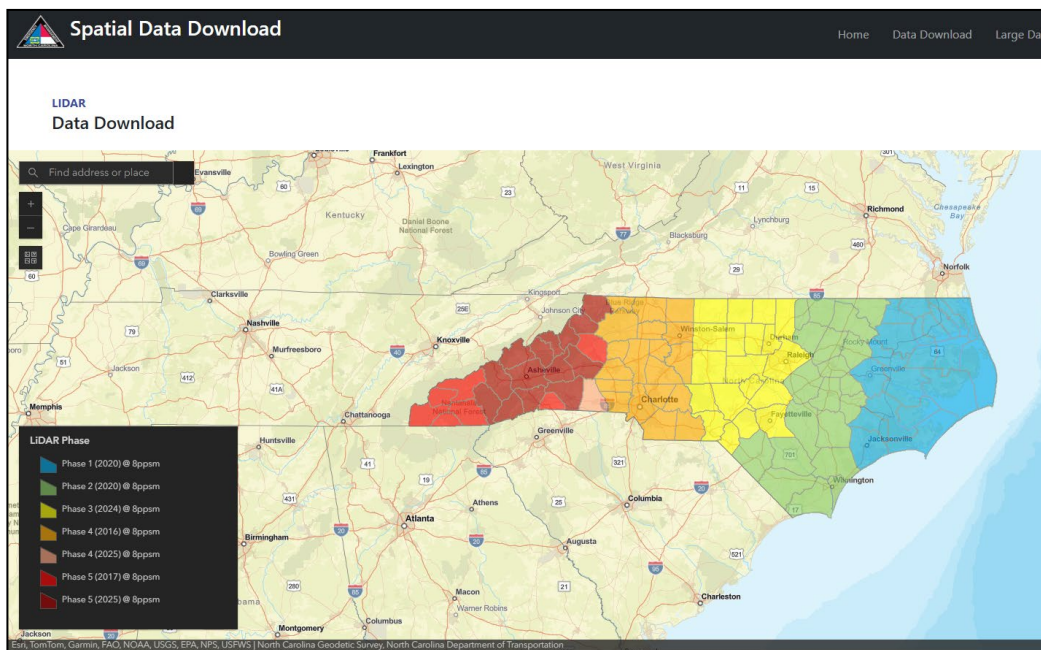
Changes in early 2027

- 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 Coordinate System of 2022
- New units
 - International foot
- New Geoid model
 - GEOID2022
- New tidal datum (2029)





NC Light Detection and Ranging (LiDAR) Elevation Data

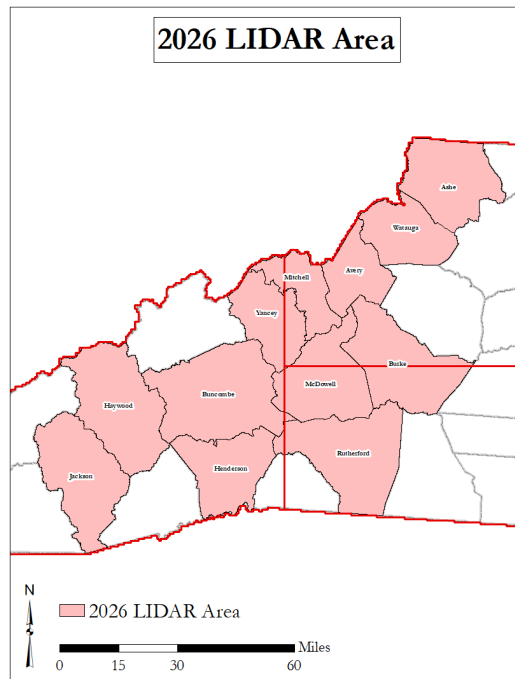


The Phase 3 (2024)
lidar data is available
on Spatial Data
Download

Working with USGS
to incorporate the
Phase 3 data into the
3DEP database

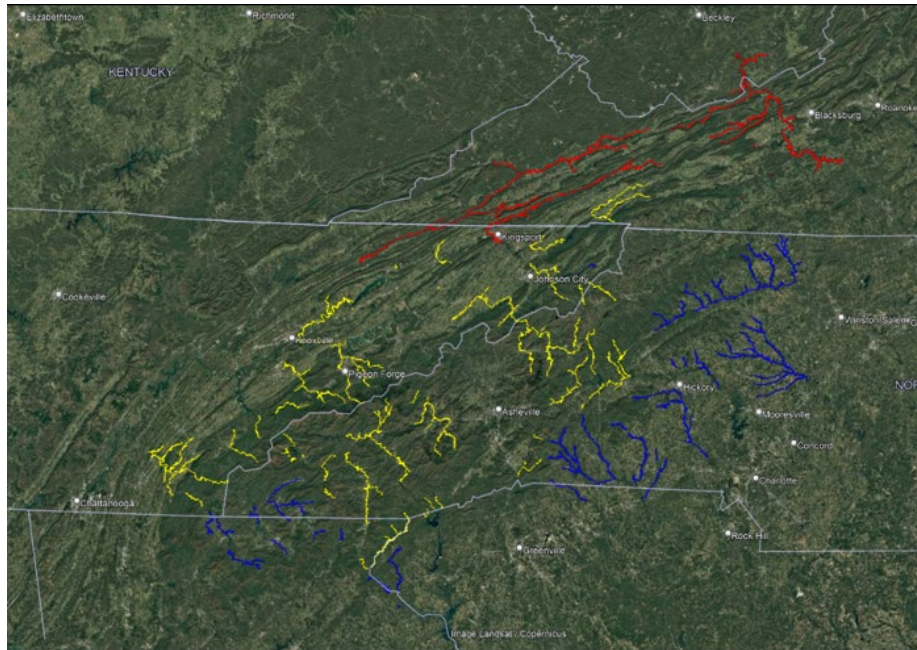


2026 Data Collection Area



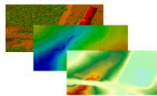


National Geodetic Survey 2026 Bathymetric Lidar Project



Working the National Geodetic Survey to obtain preliminary data for:

- Cane River
- Toe River
- Nolichucky River



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

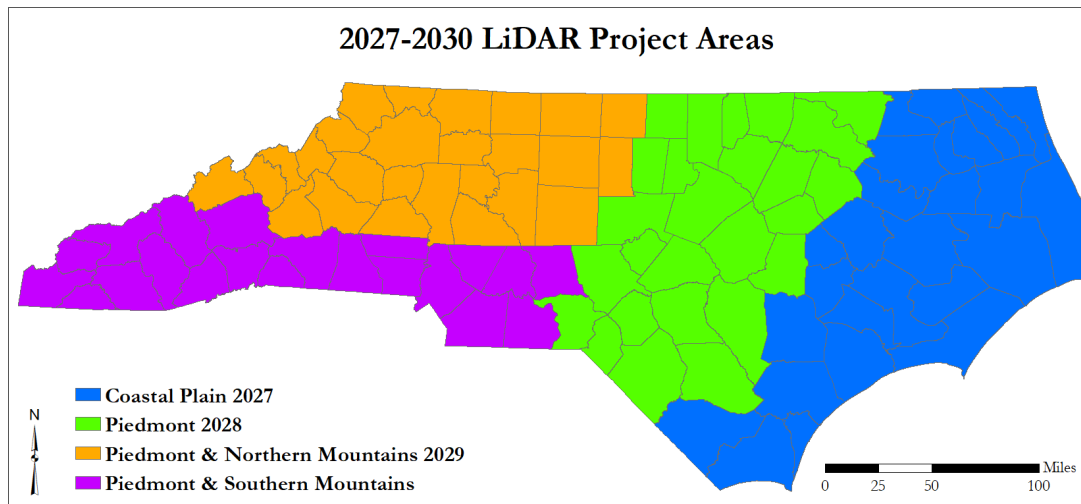
Download Links
[QL1/QL2 LIDAR Metadata](#)
[QL1/QL2 Tile Layout](#)

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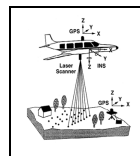




NC Light Detection and Ranging (LiDAR) Elevation Data 4th Statewide Phase Starting in 2027



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



Updates to the North Carolina Seamless Parcel Program

Elizabeth Daniel

Data Analyst and Seamless Parcel Project Manager

Center for Geographic Information and Analysis (CGIA)

North Carolina Department of Information Technology (NCDIT)

SMAC Summer Meeting 2026

Updating the NC Seamless Parcel Transformer:

- *But the overall process remains the same*

NC Seamless Parcel Update Process

- 1 Local government GIS and tax offices create and maintain the parcel data. Data ownership is maintained
- 2 Parcel data is provided to CGIA. CGIA works with the county to match local government parcel attributes to the state standard.
- 3 The transformed parcels are made available on NC OneMap Geospatial Portal.

Updates to the NC Seamless Parcels Program

- The **Carbon Cloud Transformer** for the Seamless Parcel Program has been replaced by an in-house **FME transformer** maintained by CGIA.
- *Why update the transformer?*
 - This new transformer allows for multiple data format uploads such as REST services, shapefiles, and geodatabases.
 - It allows for more robust data quality checks of the uploaded parcels.
 - It can be modified for future projects to handle many to one and many to many relationships.
 - It will grow with the parcel program enabling CAMA vendor data to be incorporated with parcel polygons, building footprints, and sales data from across the state.
 - It easily allows counties to update their parcel field mappings by simply uploading a CVS or excel file with the updated field names.

Updates to the NC Seamless Parcels Program

With implementation of the new **FME transformer**:

- ***What will change for the county GIS and tax offices providing the data?***
 - The simple answer is ***very little***.
 - Instead of having the option to load parcels directly to a parcel transformer, CGIA will do the heavy lifting of processing the parcels for the counties.
 - Counties will have **three options** for providing updated parcel information:
 - Email a **REST service** or **download link** to elizabeth.daniel@nc.gov
 - Upload a zip file of parcel data to a **CGIA File Transfer** site
 - Upload a zip file of parcel data to an ***AWS bucket** (requires **NCID**) –
***Available in Q3 2026**
- ***How can a county make changes in its field mappings?***
 - Counties can email or upload csv with the updated fields and CGIA will update the mappings in the FME transformer

Parcel Workflow



Counties



FME



NC OneMap
Seamless
Parcel Layer



REST service

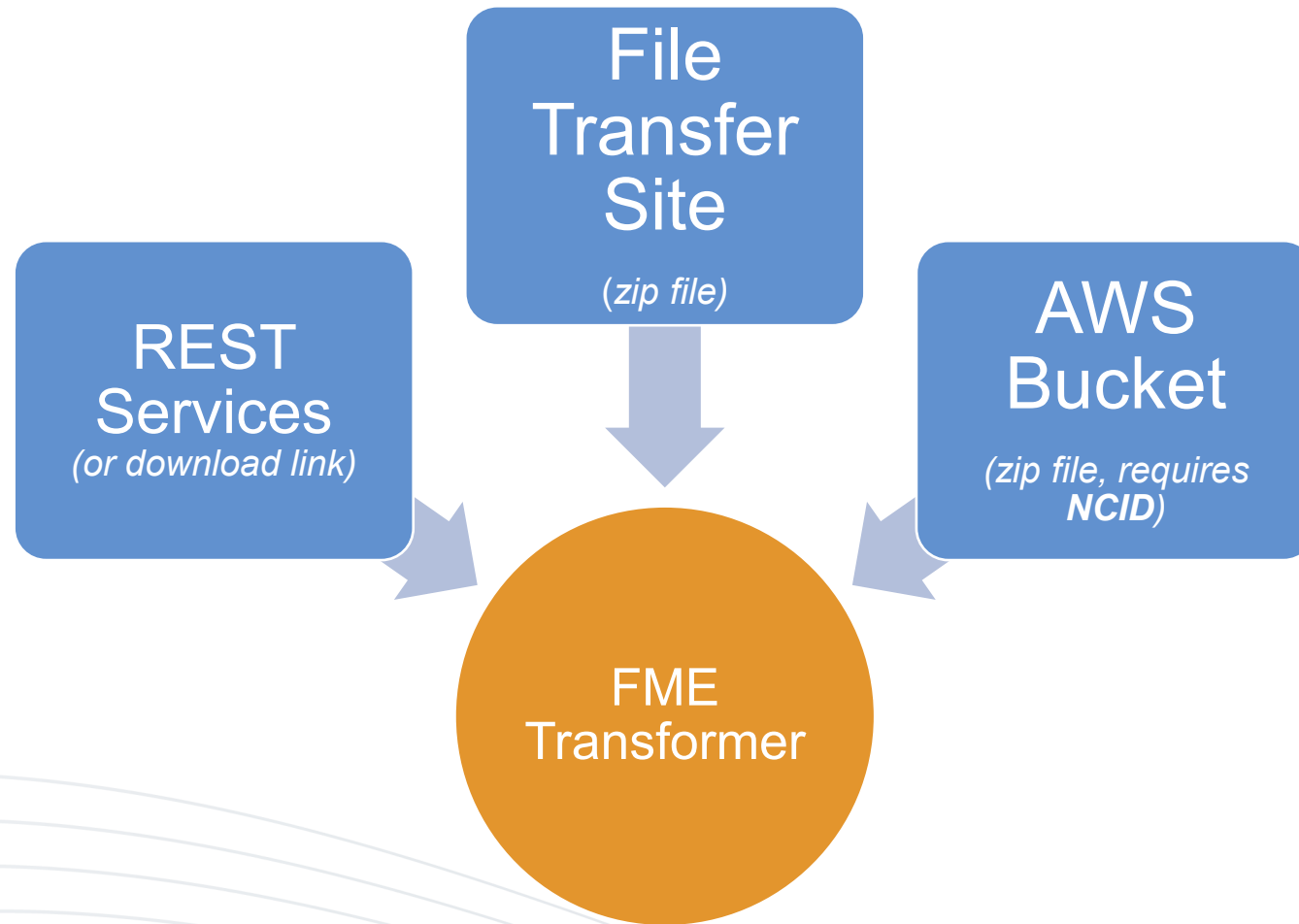


FTP (zip file upload)



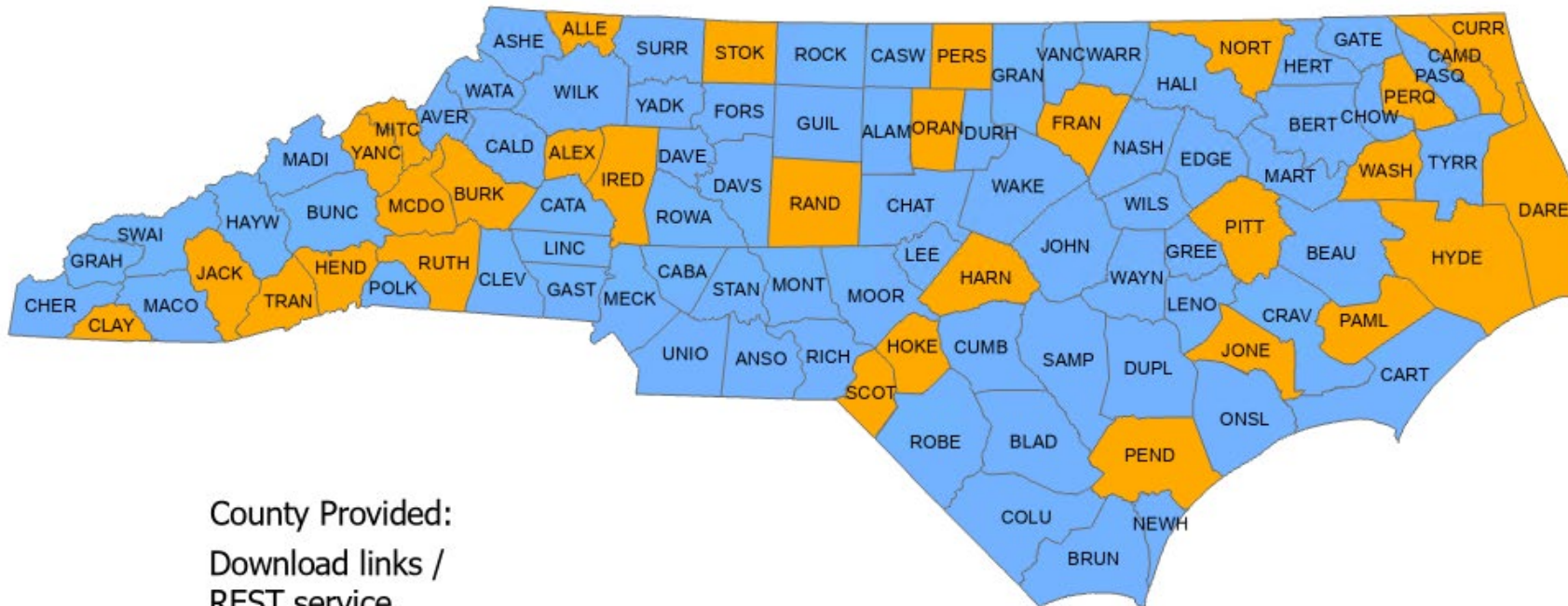
AWS Bucket (zip file upload)

Parcel Upload Options



Parcel Upload Options: *REST service or Download link*

- Email download link or REST service link to CGIA (elizabeth.daniel@nc.gov).
 - CGIA will then process your counties quarterly.



County Provided:

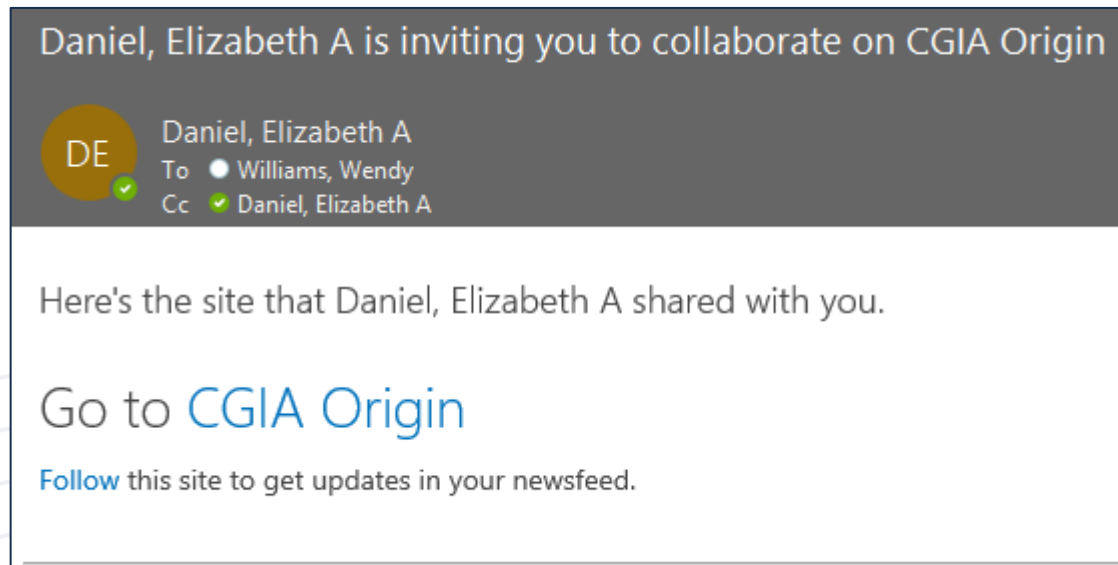
Download links /
REST service

☐ No (31)

☒ Yes (69)

Parcel Upload Options: ***CGIA File Transfer Site***

- To gain access to the CGIA, email elizabeth.daniel@nc.gov requesting access to the site.
- Once added to the site, you will receive an invitation to access the site.



Parcel Upload Options: *NCID AWS Bucket*

This option will be available in **2026 Q3**

- **NCID** will be a requirement for using the parcel upload option.
 - More information on obtaining and maintaining an NCID is found on the NCDIT website:
<https://it.nc.gov/support/accounts/ncid>
- CGIA will be sending out more information on this upload option later in June 2026.

Timeline for the Carbon Cloud Transformer replacement & 2026 Q2 Parcel Updates

- The **Carbon Cloud Transformer** was officially retired on **June 1, 2026**.
 - **For 2026 Q2:**
 - 92 counties have provided updates.
 - **For the counties that have not yet updated for 2026 Q2:**
 - Counties with REST service or download links are encouraged to email this information to elizabeth.daniel@nc.gov.
 - Counties **without** a REST service or Download links, can email (elizabeth.daniel@nc.gov) requesting access to the CGIA File Transfer site.
 - The in **June**, CGIA will be sending out additional information on how to login to the **AWS bucket** as well as information on how to access the **CGIA FTP** site for parcel updates.
- **Questions?** Email elizabeth.daniel@nc.gov