



# North Carolina Broadband Data & Mapping

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**Internet for All**  
**May 23, 2023**

**NCDIT**  NORTH CAROLINA  
DEPARTMENT OF  
INFORMATION  
TECHNOLOGY

# FCC Broadband Data Collection - Evolution

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- Since 2015, broadband availability data has been collected by the Federal Communications Commission (FCC)
- Data was granular to the census-block level, not the household level
- Census-block-level data: useful in showing us *fully* unserved blocks, but not in gaining granular information on partially served blocks
- In 2019, the FCC created the new Digital Opportunity Data Collection to collect deployment data in a more granular form
- In 2020, Congress passed the Broadband DATA Act, ratifying the FCC's new approach

# Foundation of FCC Mapping - 2 Pieces

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**Broadband  
Serviceable  
Location Fabric**



**Broadband  
Availability Data**

# FCC Broadband Data Collection Process

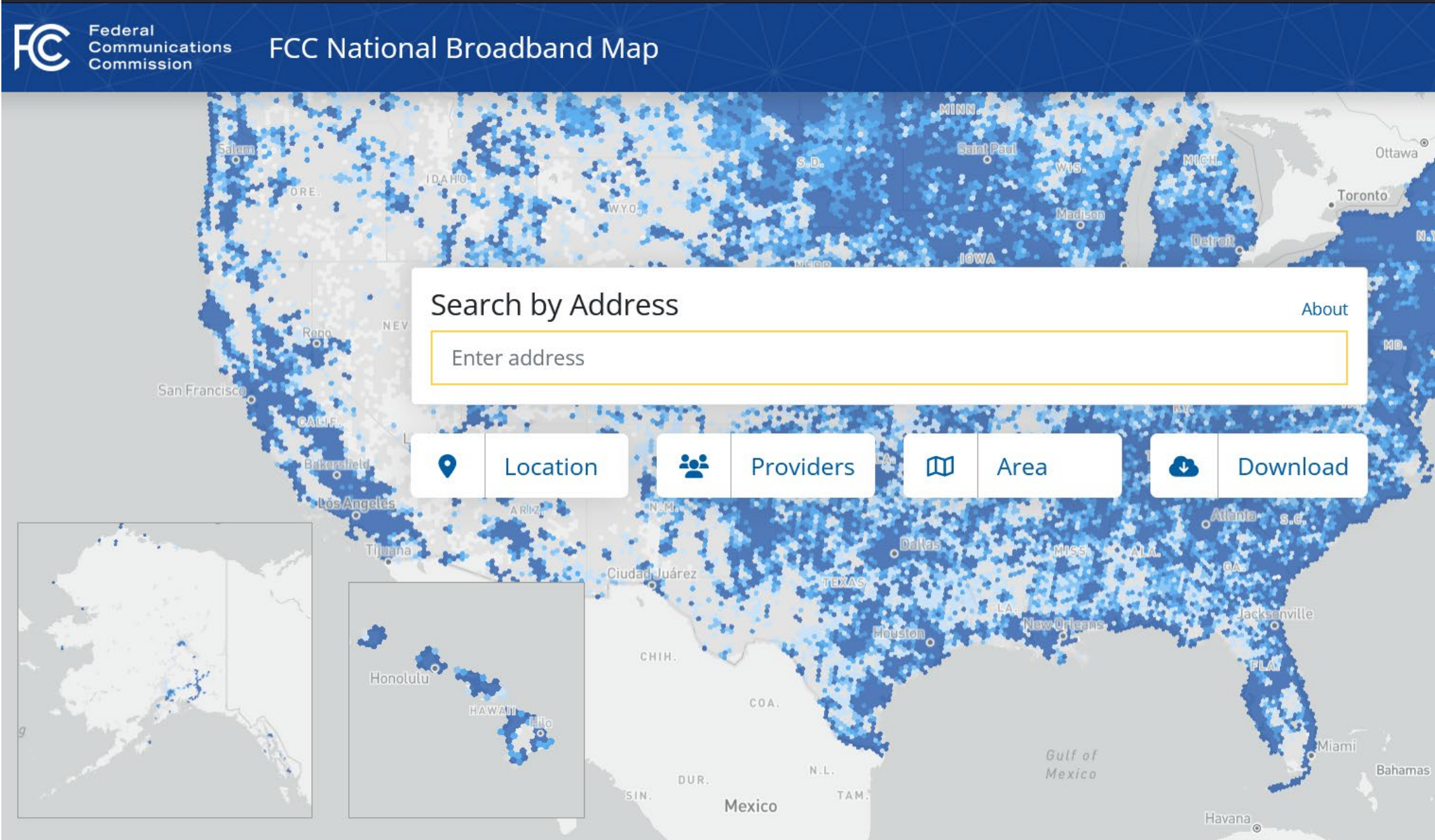
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- In Jan. 2022, the FCC released additional details on implementation of this new data approach - Broadband Data Collection
- Sept. 1, 2022: deadline for broadband providers to submit data for the first round of this new data collection process
- Oct. 31 , 2022: initial round of broadband serviceable location fabric challenges due to FCC
- Nov. 18 , 2022: FCC released the pre-production draft of its new National Broadband Map: <https://broadbandmap.fcc.gov>
- Jan. 13: initial round of availability challenges due to the FCC
- **6-month data cycles** for internet service provider data submission, FCC map refresh, fabric challenges, new fabric version releases, and availability challenges



# New FCC Broadband Map

<https://broadbandmap.fcc.gov/home>



Federal Communications Commission  
FCC National Broadband Map

Search by Address [About](#)

Location Providers Area Download

Honolulu

HAWAII

Havana

Miami

Jacksonville

Atlanta

Dallas

Houston

New Orleans

Los Angeles

San Francisco

San Diego

Madison

Detroit

Toronto

Ottawa

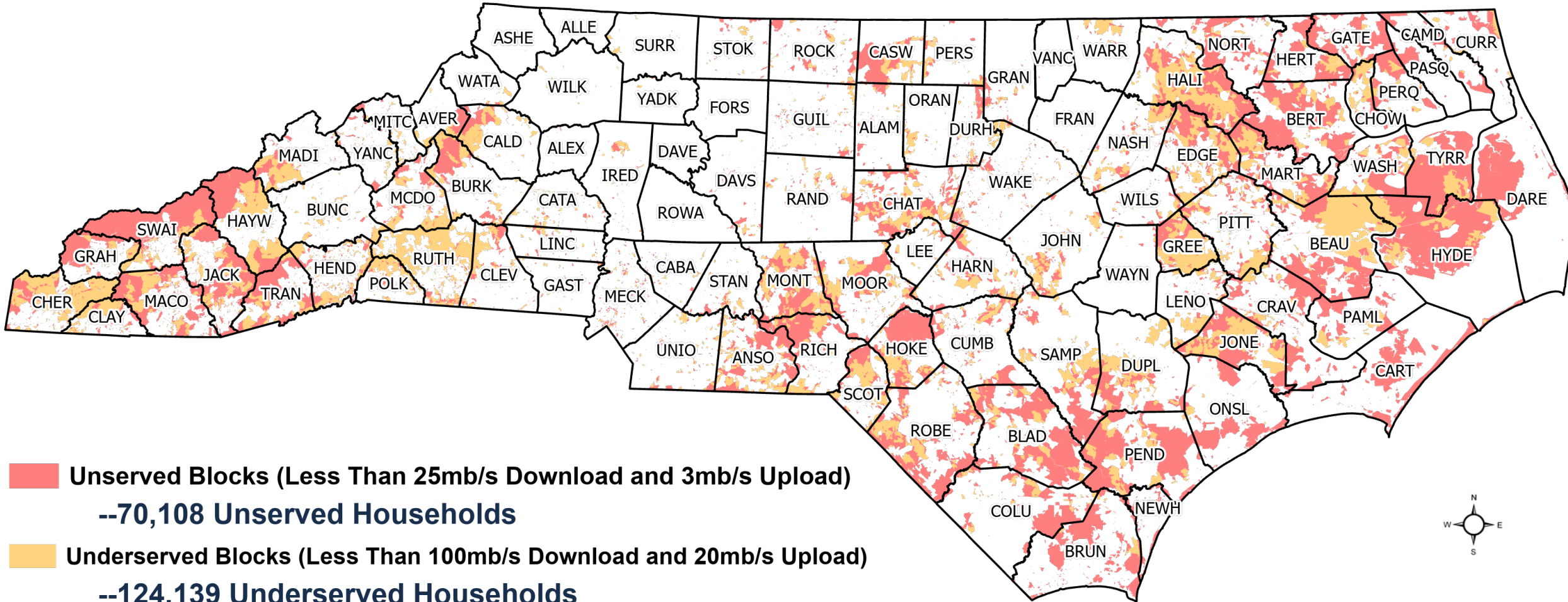
Mexico

Gulf of Mexico

# NC Broadband Profile

## Evolving identification of Unserved Locations

Form 477 - Census Block Level Reporting - December 2021

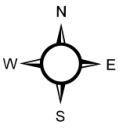
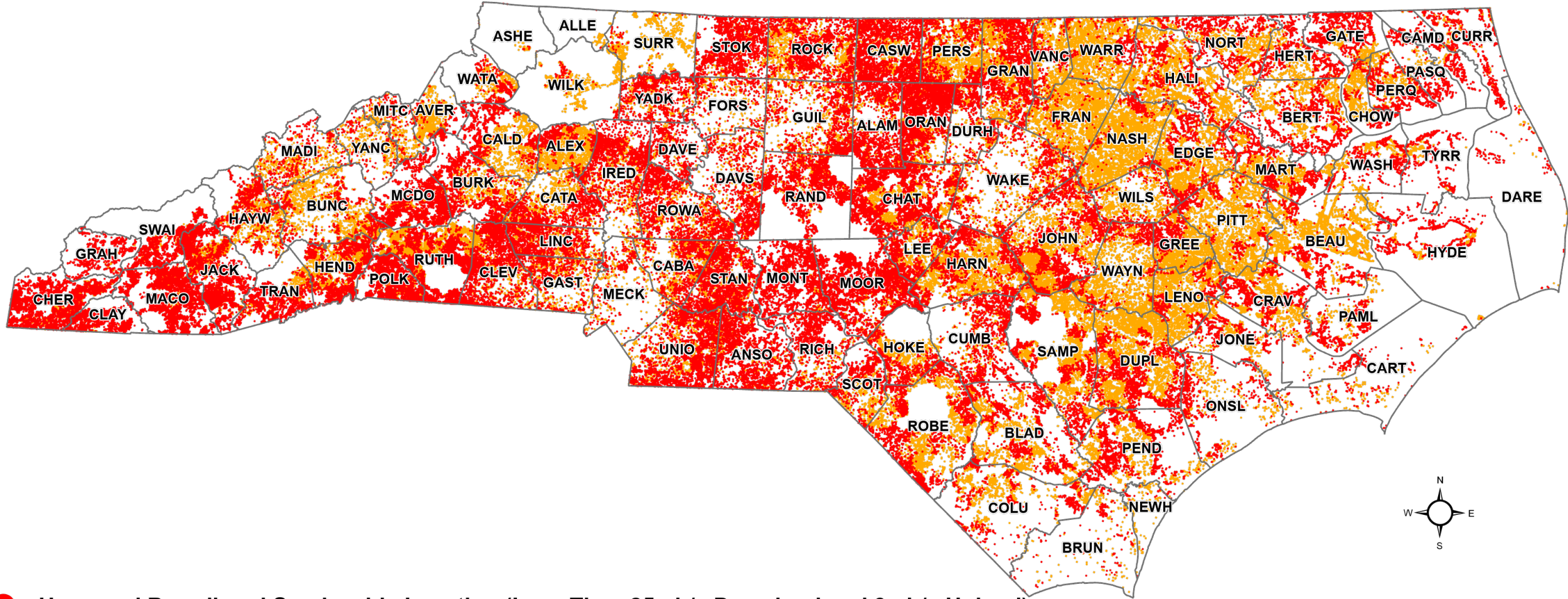




# NC Broadband Profile

## Evolving identification of Unserved Locations

New FCC Broadband Data Collection Serviceable Location Fabric - June 2022



● Unserved Broadband Serviceable Location (Less Than 25mb/s Download and 3mb/s Upload)  
--253,409 Unserved BSLs = 274,906 units (homes and businesses)

● Underserved Broadband Serviceable Location (Less Than 100mb/s Download and 20mb/s Upload)  
--266,998 Underserved BSLs = 296,269 units (homes and businesses)

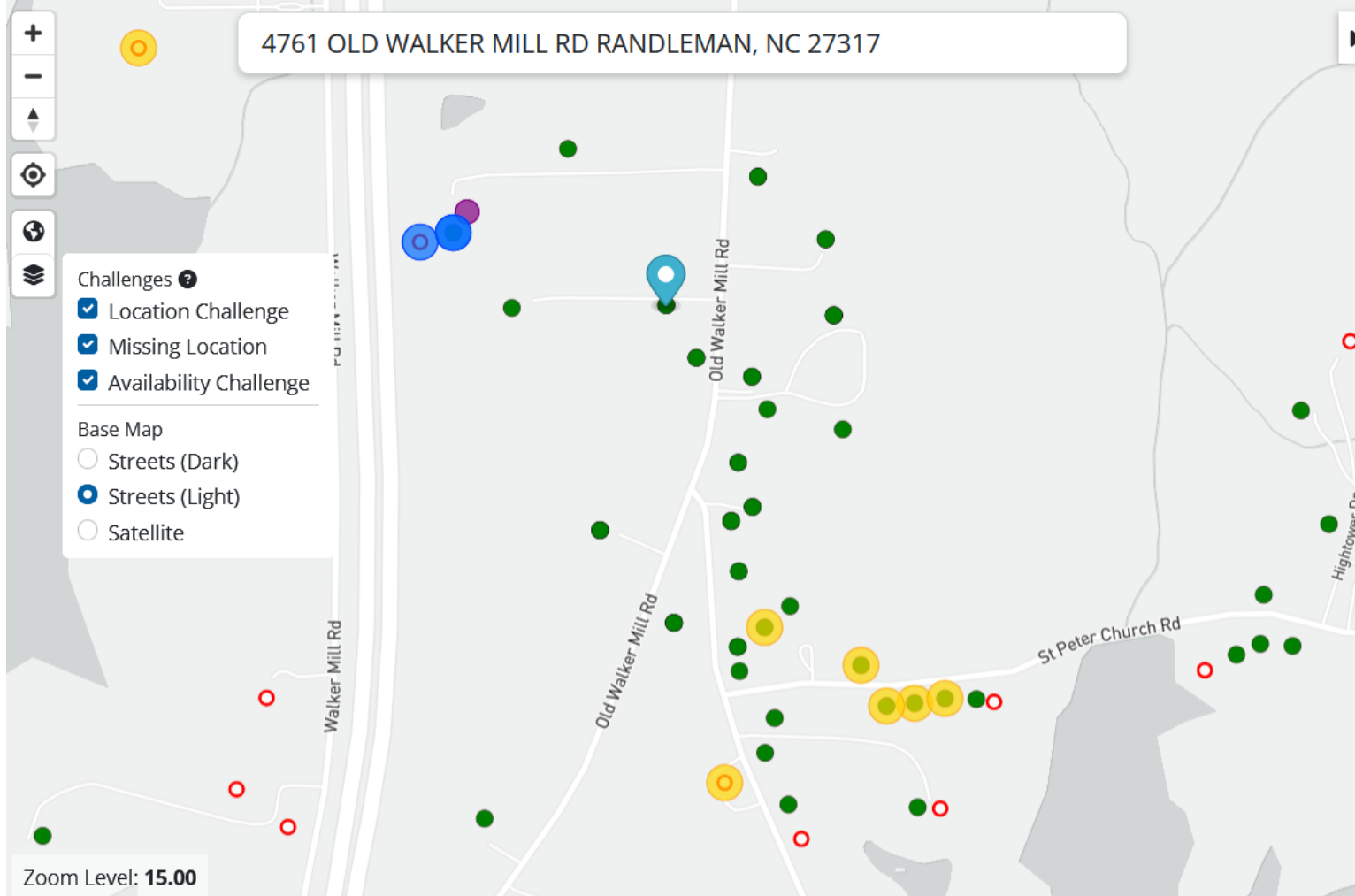
# New FCC Broadband Map

<https://broadbandmap.fcc.gov/home>



## FCC National Broadband Map

- Home
- Location Summary
- Provider Detail
- Area Summary
- Data Download
- About
- Broadband Funding Map



### 4761 OLD WALKER MILL RD RANDLEMAN, NC 27317

Location Challenge

Status: **Served** | Residential | Unit Count: 1

#### Broadband

**Type** Residential  
**Technology** All Wired and Licensed Fixed Wireless  
**Speed** 25/3 Mbps or greater  
**Data As Of** Jun 30, 2022 (Last Updated: 5/10/23)

**Residential** | Business

Availability Challenge

| Provider                               | Technology              | Down (Mbps) | Up (Mbps) | Chall. |
|--|-------------------------|-------------|-----------|--------|
| ▶ Hughes Network Systems, LLC          | GSO Satellite           | 25          | 3         |        |
| ▶ North-State Telephone Co. (NC)       | Fiber to the Premises   | 1000        | 1000      |        |
| ▶ Space Exploration Technologies Corp. | NGSO Satellite          | 100         | 10        |        |
| ▶ T-Mobile USA, Inc.                   | Licensed Fixed Wireless | 25          | 3         |        |
| ▶ Viasat, Inc.                         | GSO Satellite           | 30          | 3         |        |

#### Map Legend

# FCC Broadband Map Challenges

## Availability Challenges

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**43,027**

Bulk challenge locations submitted to the FCC  
by Jan. 13 deadline  
(1,919 additional crowdsourced data locations)

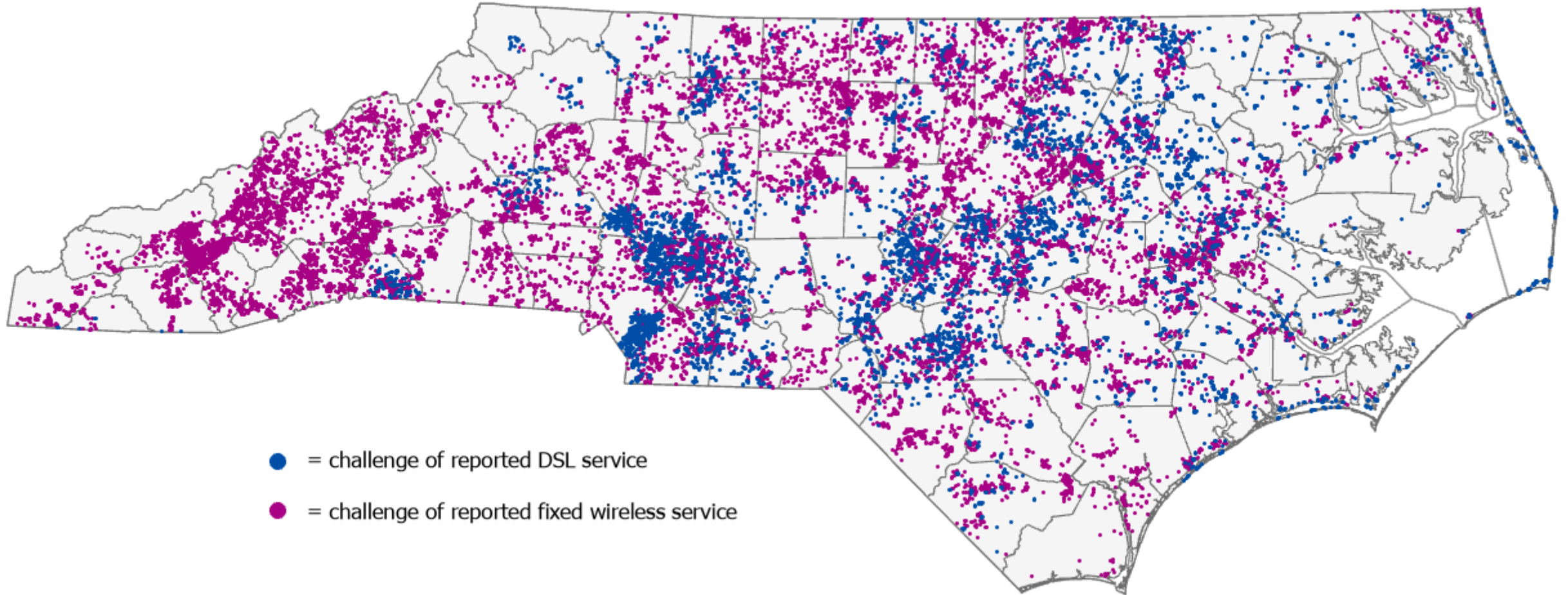
**60% (25,763)**

upheld as of 5/15/23



# FCC Broadband Map Challenges

## Availability Challenges



- Bulk challenges thus far to broadband availability data reported as of 6/30/22
- More challenges forthcoming



# Statewide GIS Datasets and the Location Fabric

## Fabric Location Challenges

Addresses, parcels, building footprints, and orthoimagery



NC can challenge missing locations, misplaced locations, and multiple types of incorrect addressing.

- FCC Broadband Serviceable Location
- Potential Fabric Challenge Location

# Fabric Challenges

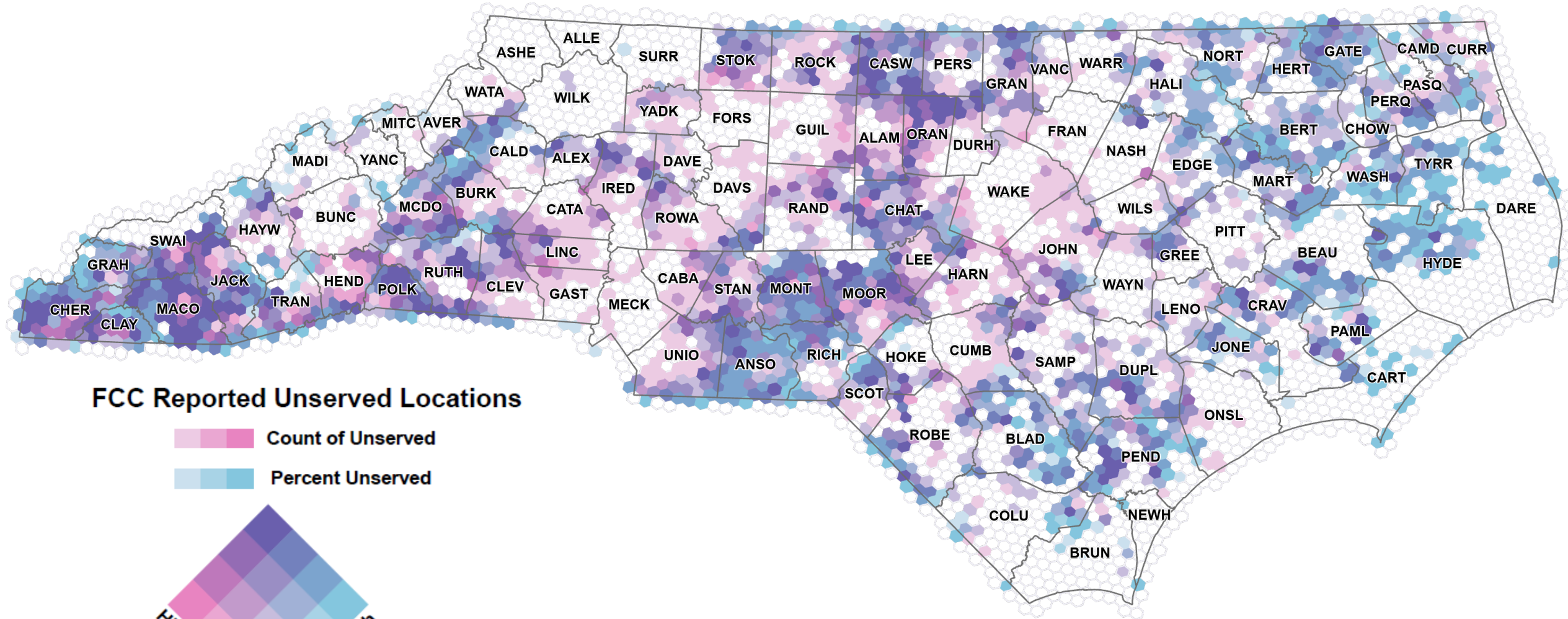
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- 5,700 locations from previously unserved census blocks analyzed by NC Center for Geographic Information Analysis
- **528** missing locations formally challenged, still under FCC review
  - **2,503 Units** at 528 locations challenged
- Gaining insight on the methods and review process
- Next step: scaling up to statewide analysis of 150,000 NC address locations potentially missing from FCC map

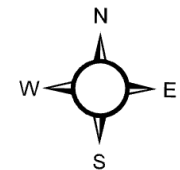
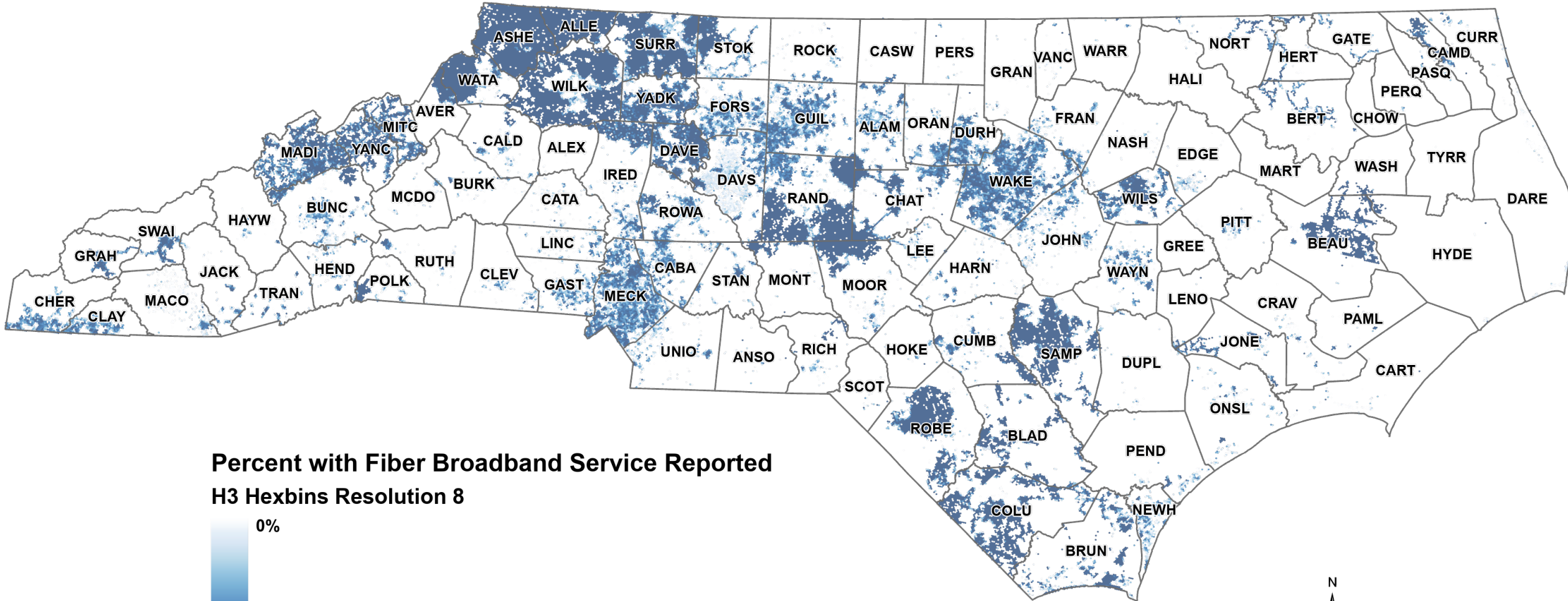


# NC Broadband Profile

## Defining Eligible Project Areas

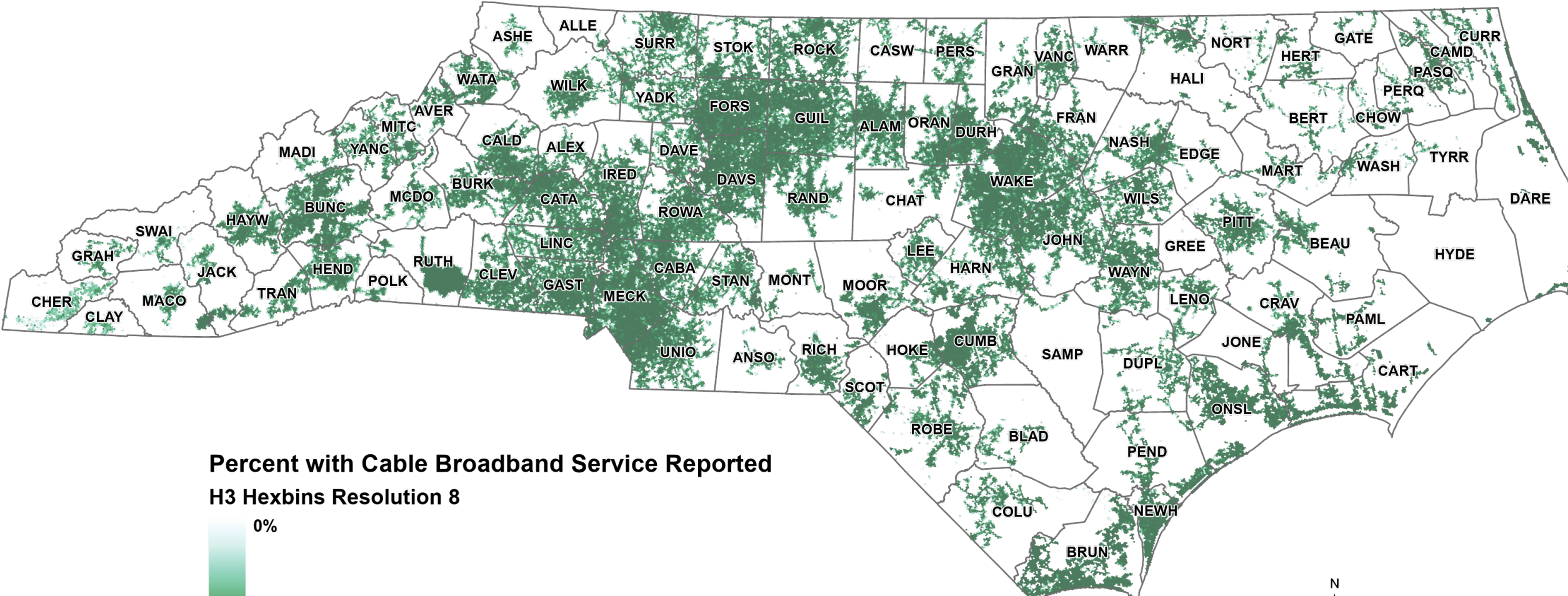


# Reported Service by Technology Type: Fiber as of 6/30/22



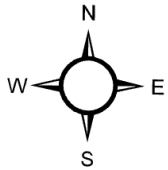
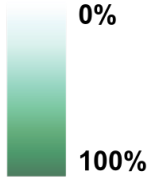


# Reported Service by Technology Type: Cable as of 6/30/22

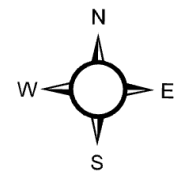
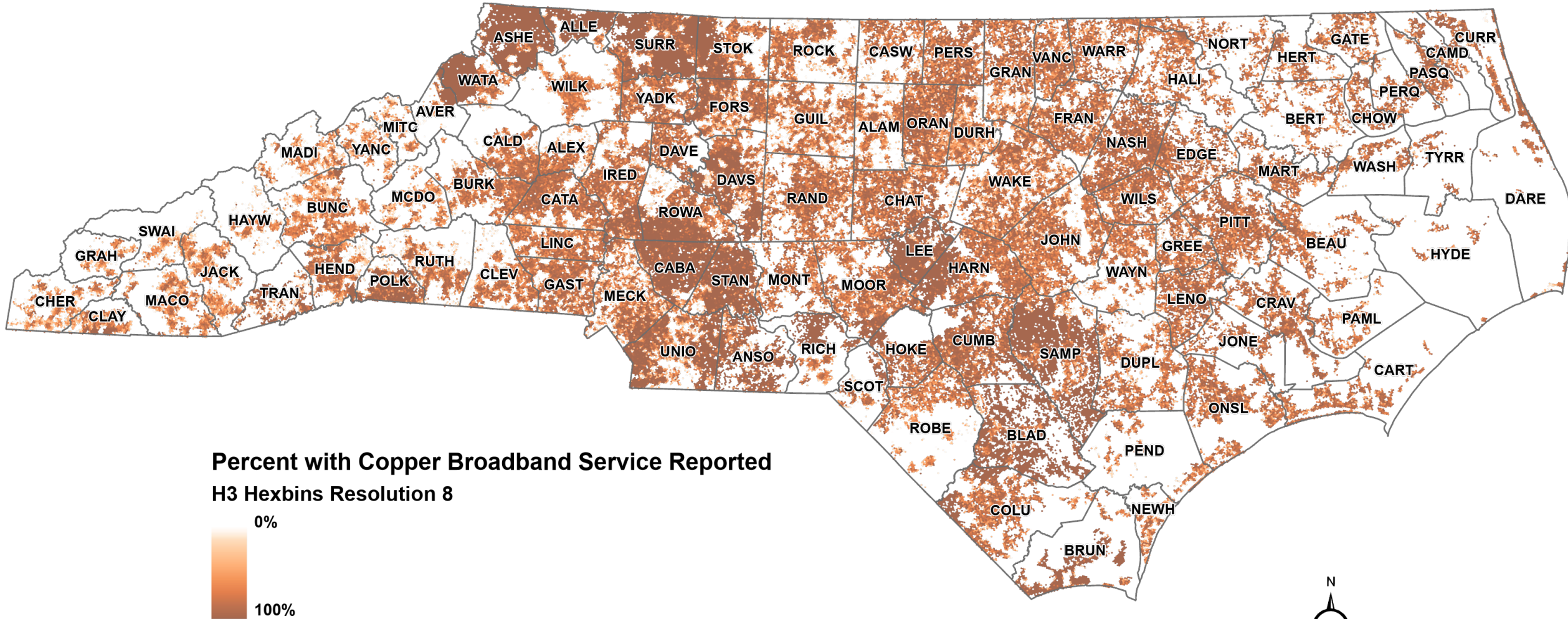


Percent with Cable Broadband Service Reported

H3 Hexbins Resolution 8

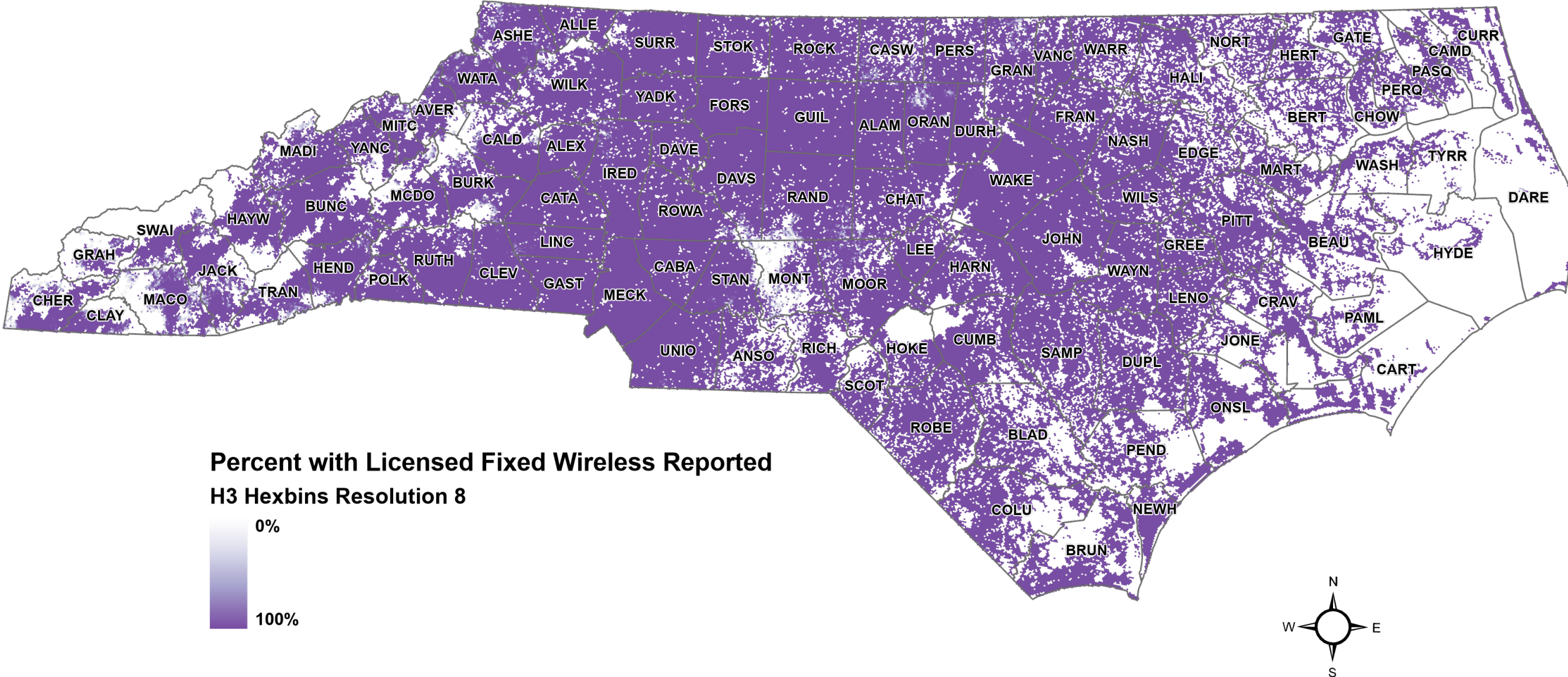


# Reported Service by Technology Type: Copper as of 6/30/22





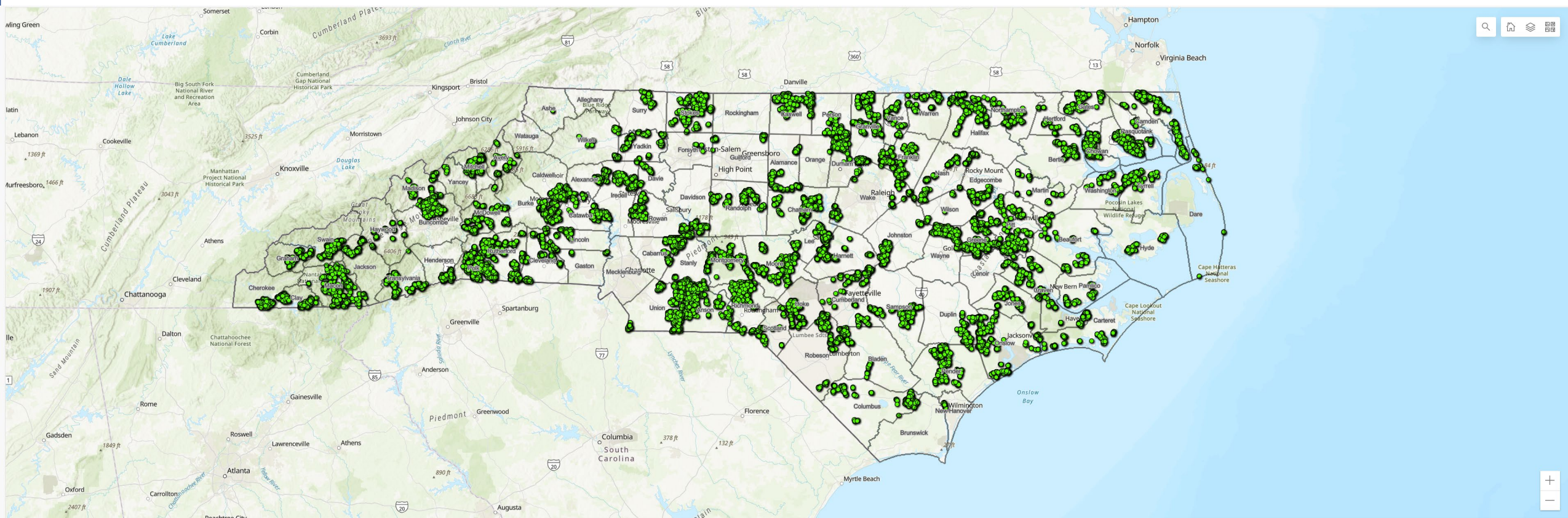
# Reported Service by Technology Type: Licensed Fixed Wireless as of 6/30/22





# GREAT Grant Program

## Federally Funded Contingent Awards



Esri, USGS | Moore County GIS (NC), Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS | North Carolina Geodetic Survey, North Carolina Department of Transportation

Powered by Esri

Contingent Award Locations

Total Project Cost  
**\$419.8M**

Total Grant Amount  
**\$272.2M**

Total Match Amount  
**\$147.6M**

Total Awarded Locations  
**113,613**

Households Served  
**109,988**

Average Cost Per Location  
**\$4.8k**

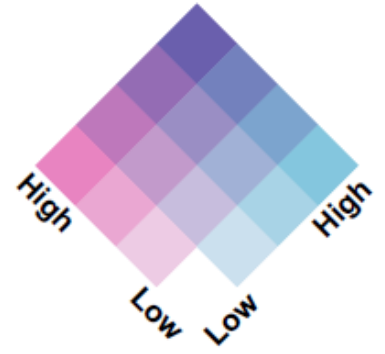
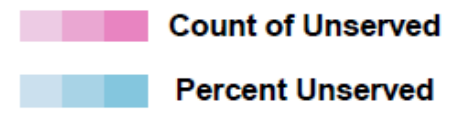
Businesses Served  
**3,626**



# Sampson County Broadband Profile

## Defining Eligible Project Areas

### FCC Reported Unserved Locations



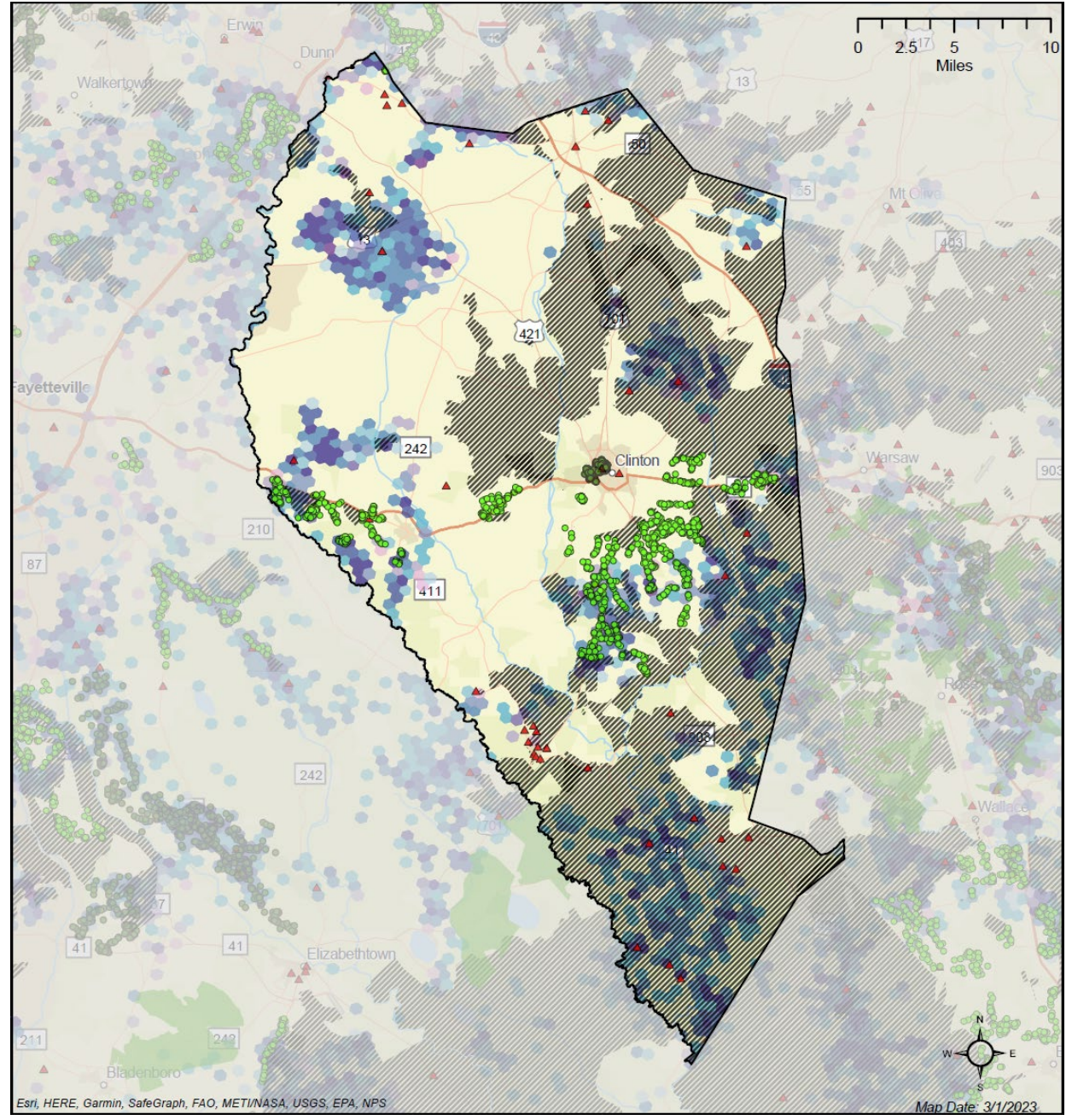
- ▲ NC Broadband Survey - Unserved Responses
- GREAT Contingent Award Locations (Federally Funded)
- GREAT Award Locations (State Funded)
- GREAT Award Areas (State Funded)
- ▨ Other Federal Grants

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

County Profiles

Overviews of broadband service and funding for each county in North Carolina.

Download

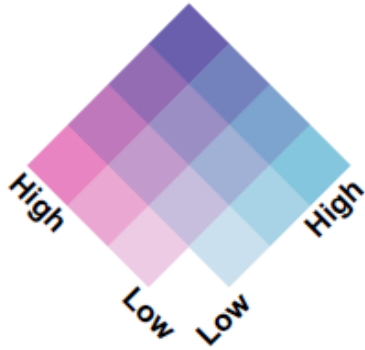
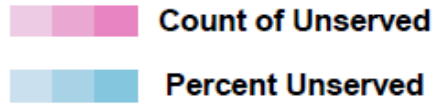




# Polk County Broadband Profile

## Defining Eligible Project Areas

### FCC Reported Unserved Locations



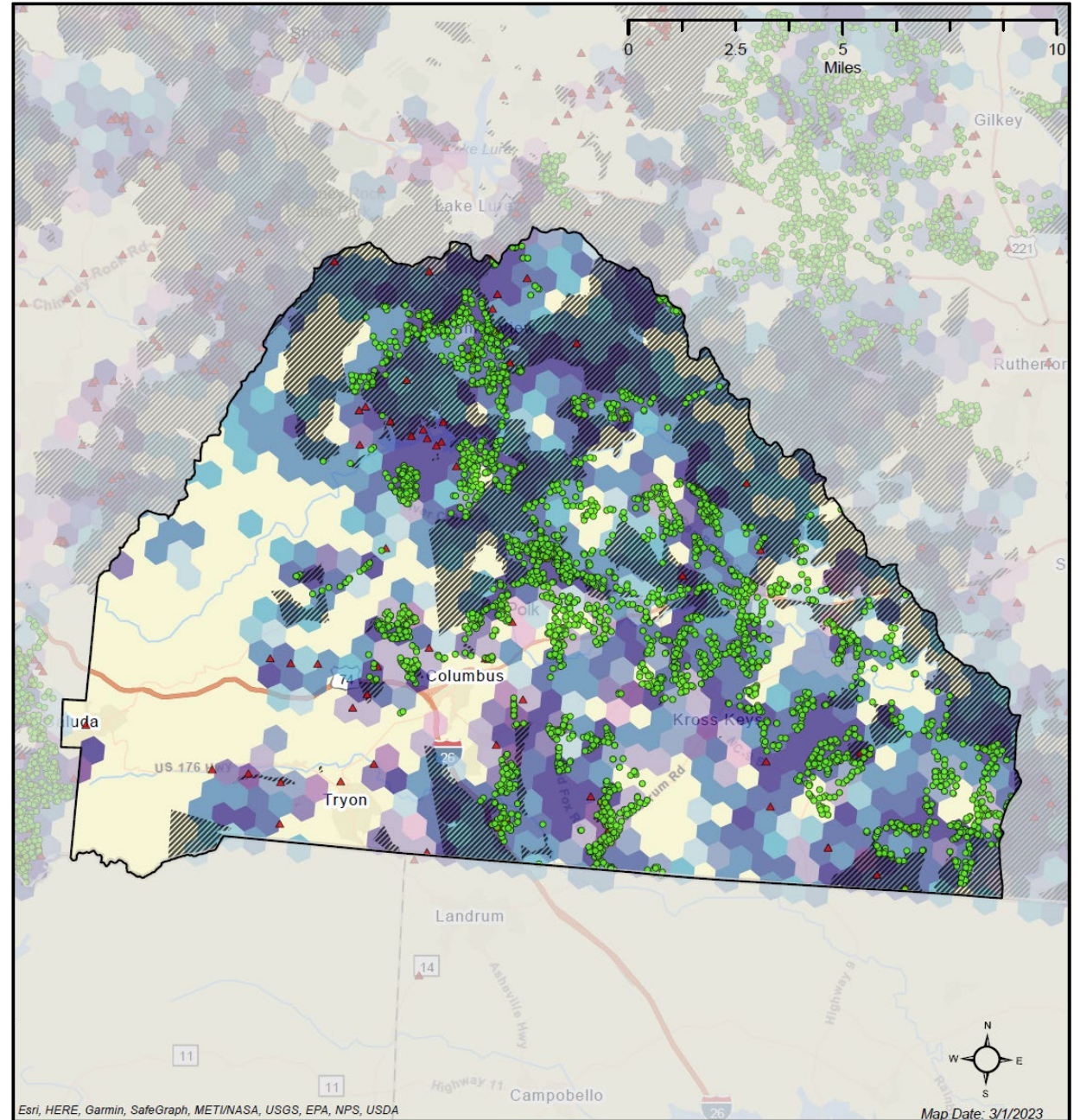
- ▲ NC Broadband Survey - Unserved Responses
- GREAT Contingent Award Locations (Federally Funded)
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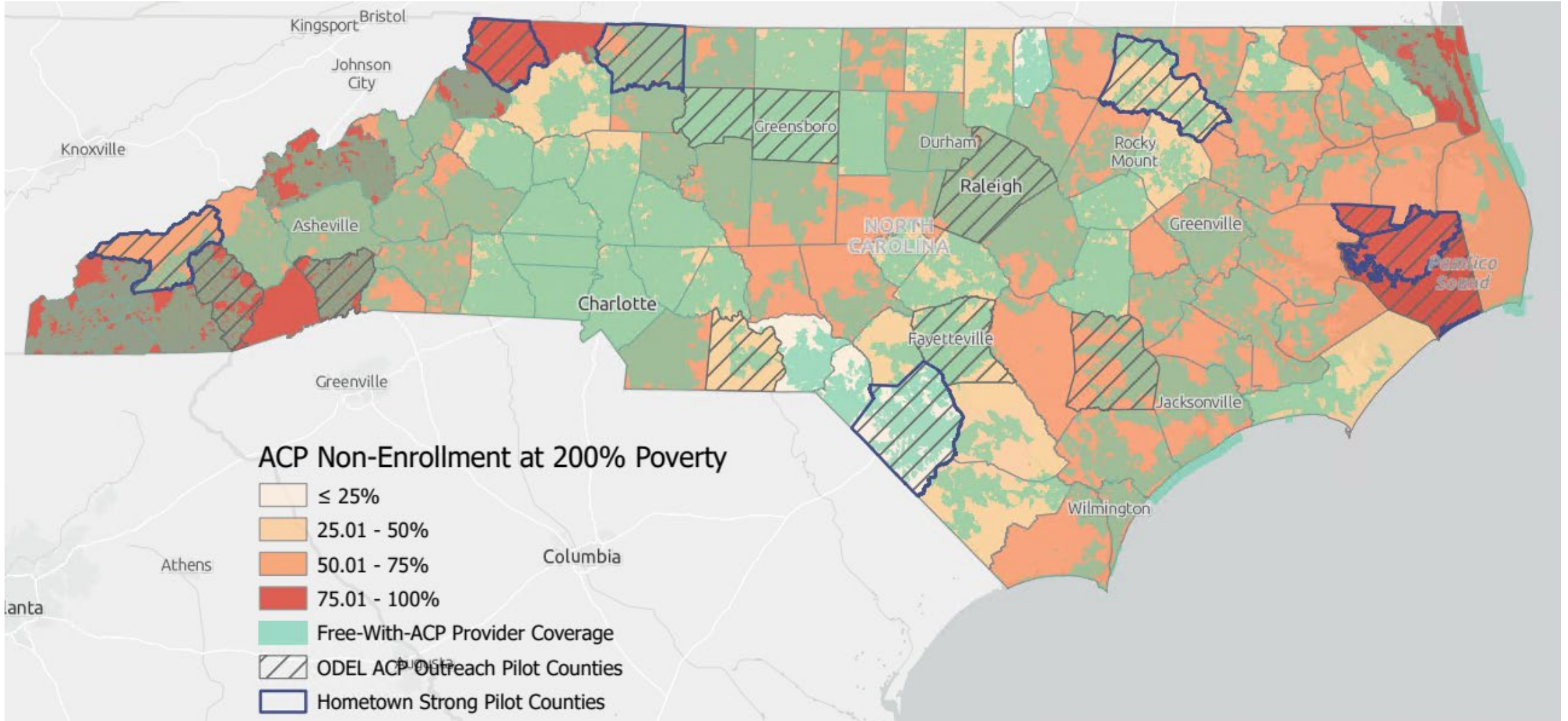
Download





# Affordable Connectivity Program

## Non-enrollment among Eligible Households Through December 2022



# Interactive Maps for Agricultural Community

## North Carolina Migrant Worker Housing Connectivity

SELECT A COUNTY:

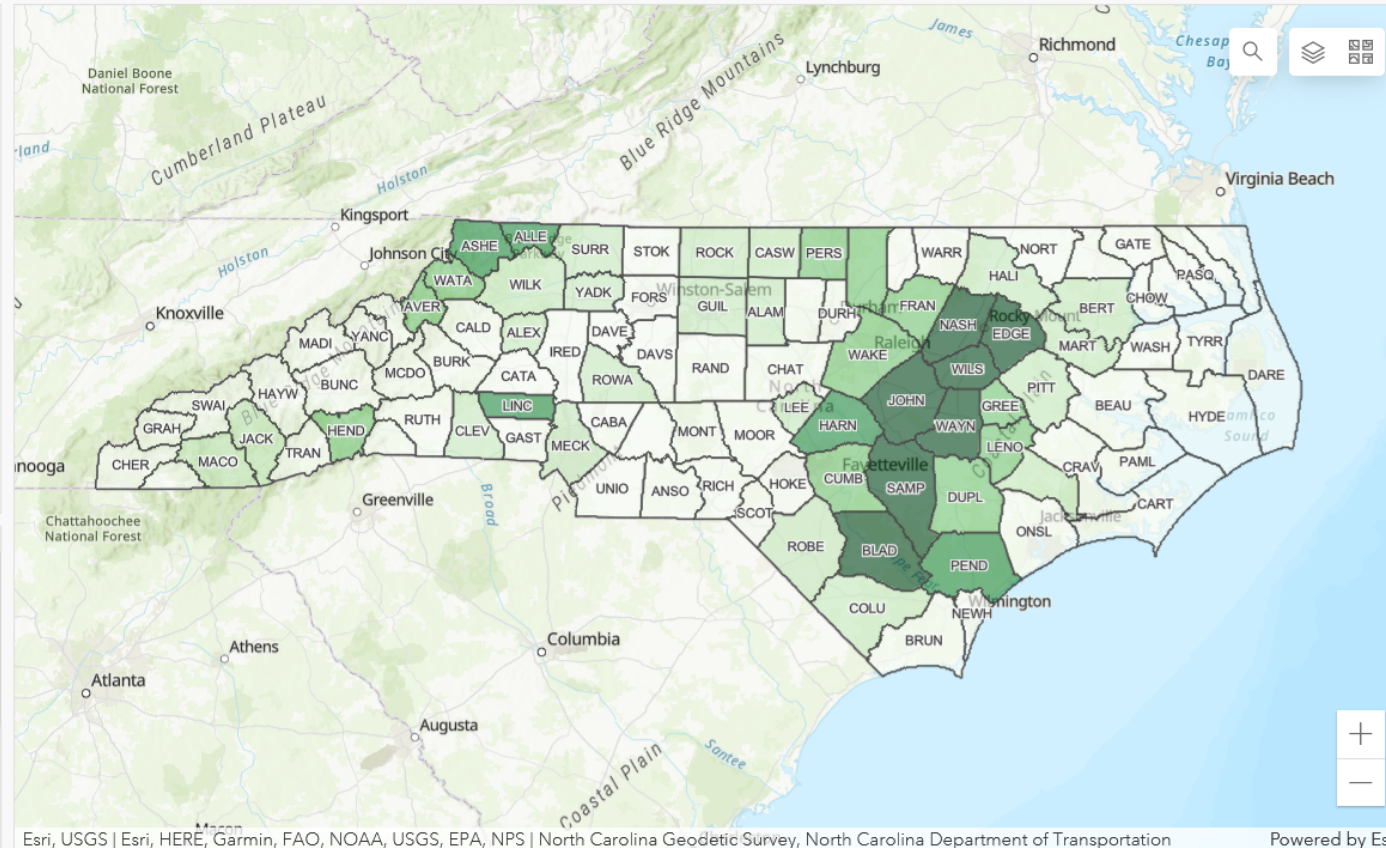
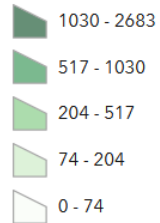
All Counties

BROADBAND PROVIDER:

No data

### H2A Workers Per County

H2A



### ABOUT

This map displays data on farms and migrant workers in relation to broadband connectivity. The data is visualized in the map as layers that will turn on or off as a user zooms in/out to display the data at different scales. Additional data can be turned on or off using the map tools (



) in the upper-right hand corner of the map window.

This additional data includes cellular provider coverage areas, number of farms per census tract, and Federal Communications Commission (FCC) Form 477 fixed broadband data. The FCC data is derived from provider-reported lists of census blocks in which

| County   | Site Name                               | Site OC First Name | Site OC Last Name | Site OC Email              | Site OC Phone |             |
|----------|---|--------------------|-------------------|----------------------------|---------------|-------------|
| Alamance | Piedmont Health Services: Prospect Hill | Nahu               | Palacios          | palacion@pedmonthealth.org | 336-583-1004  | 322 Main St |

MIGRANT HEALTH CENTER CONTACTS

COUNTY COOPERATIVE EXTENSIONS



# NC OneMap - Broadband Apps & Data

NC OneMap DATA PROJECTS ANNOUNCEMENTS TERMS CONTACT US ABOUT

## North Carolina Broadband

Discover and Access Geographic Data related to Broadband availability, adoption, and related topics.

The NC Broadband Infrastructure Office serves as statewide resource for broadband access, first responder communications and classroom connectivity initiatives led by the State of North Carolina. Mapping data serves an integral role in identifying current broadband access and adoption in an effort to identify the pockets of unserved or underserved areas around the state.

Questions or comments about Broadband in NC? Please visit <http://www.ncbroadband.gov/contact>.

For broadband-specific mapping questions, please email: [Broadbandmapping@nc.gov](mailto:Broadbandmapping@nc.gov).

NC GREAT Grant 2022  
(Contingent Award Locations as of 9-29-22)

NCDIT NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY

FILTER BY COUNTY:  
ALL COUNTIES

[www.nconemap.gov/pages/broadband](http://www.nconemap.gov/pages/broadband)

## Planning

Data and applications related to Broadband Project Planning for grant efforts by Federal and State government organizations aimed at expanding broadband access across North Carolina.

Take the North Carolina Broadband Survey and get added to the map!  
<https://www.ncbroadband.gov/broadband-nc/north-carolina-broadband-survey>.

### NC GREAT Grant Awards

NC GREAT Grant Online Mapping Tool

Online Mapping Tool to assist in identifying possible project areas for the GREAT Grant Program.

[Data](#) [View](#)

### Broadband Planning

#### CAB Planning Tool

Completing Access to Broadband (CAB) planning dashboard provides many datasets useful for project planning purposes.

[Data](#) [View](#)

### Survey Results Map

NC Broadband Survey

The NC Broadband Survey is designed to gather information on locations in the state without adequate internet access and speeds.

37.8k  
10.1k  
1.6k

[Data](#) [View](#)

## County Profiles

Downloadable maps of broadband service and funding for each county in North Carolina.

Select county  [Download](#)

# BEAD State Challenge Process

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- Will finalize locations eligible for BEAD funding
- States define Community Anchor Institutions
- NTIA released draft guidance and model plan, NC submitted feedback, NTIA is reviewing public comments
- New FCC map of federally funded areas: <https://fundingmap.fcc.gov>

# Metrics in Development

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- BEAD and Digital Equity baselines on access, barriers, assets, covered populations, etc.
- Program evaluation (GREAT; eventually CAB, Stop-Gap Solutions)
- Affordability: Affordable Connectivity Program Dashboard
- Context maps and metrics: Health, Education, Agriculture, etc.
- Groundwork for tracking access *to* and *through* community anchor institutions

# Broadband Call to Action

## What can broadband advocates do to improve broadband in our communities?

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- **Help get the word out, share feedback**  
Surveys, map challenges, Affordable Connectivity Program
- **Local mapping work for Addresses & Parcels that funnel into statewide efforts**  
Mapping offices, share data for: Land Use, Improved Value, Structures, CAI's
- **Give input on Completing Access to Broadband (CAB) program, advocate for participation**  
Evaluate Eligible Areas for GREAT grant, CAB, and other infrastructure programs
- **Use, Share, and Contribute To Data/Maps:**  
Distribute NC OneMap maps/data
  - County Profile MapsShare ideas and items to include in mapped inventories
- **Keep this Conversation Going!**  
[Broadbandmapping@nc.gov](mailto:Broadbandmapping@nc.gov)



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