Chatham County Broadband and Digital Inclusion Update

June 13th, 2024

Policy and Legislative Analyst
Brenton Hart

Overview of Issues

Infrastructure

Broadband infrastructure refers to networks of deployed telecommunications equipment and technologies necessary to provide high-speed Internet access and other advanced telecommunications services for:

- private homes
- businesses
- commercial establishments schools
- public institutions

Digital Equity & Inclusion

Digital equity, or digital inclusion, stresses that all people should be able to easily use modern information technology (IT) devices and services.

Focuses:
- Devices
- Affordability
- Digital Literacy

Infrastructure

Legal Information

- Counties are unable to provide high-speed Internet broadband service directly to residents.
- Counties may provide grants to ISPs for the purpose of expanding service in unserved areas. (SL 2012-86)

Technologies to Know

Wired

Fiber-Optic Cable (Fiber):
Converts electrical signals carrying data to light and sends the light through transparent glass fibers about the diameter of a human hair. Max Speed 5000 Mbps (or even higher).

Copper/DSL:
Runs over traditional copper phone lines, speed dependent technology and distance. DSL speeds range from 1.5 Mbps to 80 Mbps.

Cable:
Cable modem service enables cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV. Max speed is about 1000 Mbps.

Non-Wired

Satellite:
A form of wireless broadband connecting the customer's home or business with satellites orbiting the earth. Max speed is about 100 Mbps.

Fixed Wireless:
Fixed wireless broadband connects a home or business to the Internet using a radio link between equipment at the customer's location and the service provider's facility. Max speed is about 1000 Mbps.

4G LTE Home:
LTE Home Internet is broadband internet service delivered via a 4G LTE wireless network. Max Speed is about 1000 Mbps.

Cellular

Cellular networks are high-speed, high-capacity voice and data communication networks with enhanced multimedia and seamless roaming capabilities for supporting cellular devices.

They have become the primary means of communication for finance-sensitive business transactions, lifesaving emergencies, and life-/ mission-critical services such as E-911.

Chatham Cellular Providers:
- Verizon
- T-Mobile
- US Cellular
- AT&T

Definitions

Unserved

Unserved locations are areas with speeds less than 25 megabits per second (mbps) download, and 3 mbps upload.

Underserved
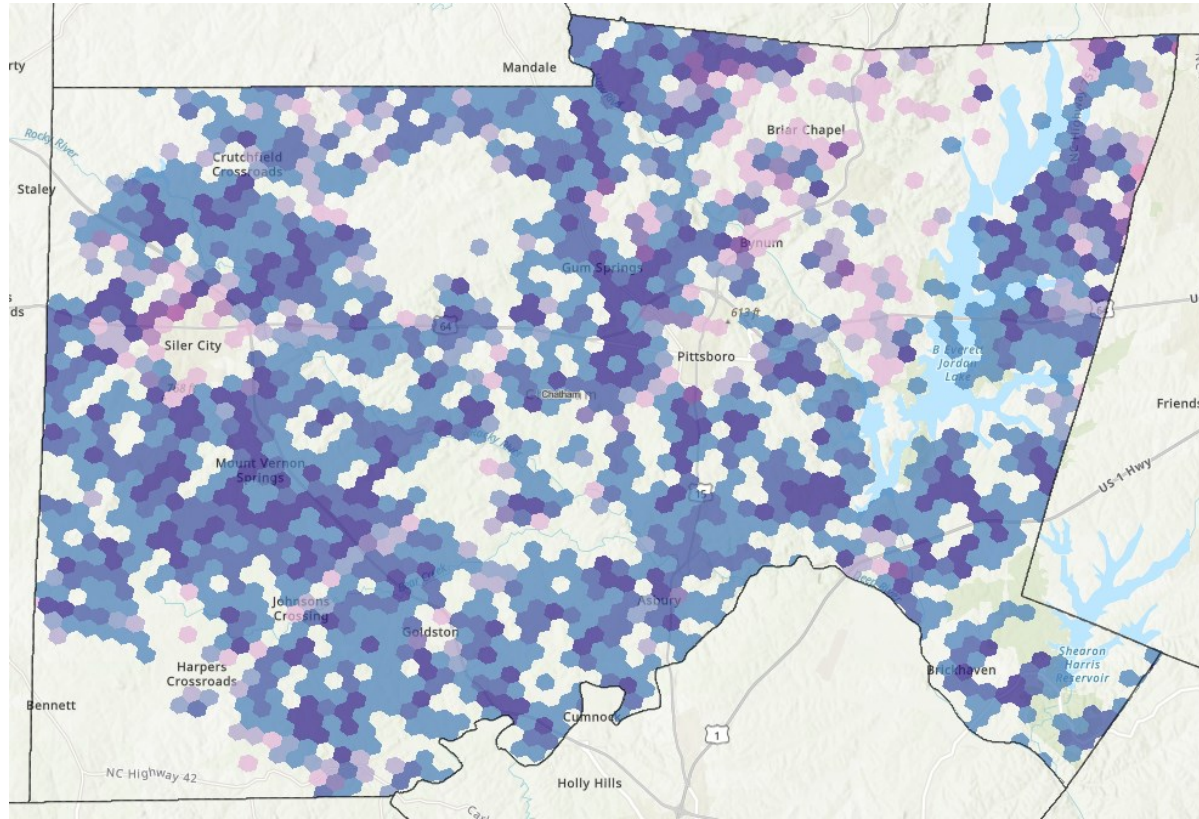
Underserved locations are areas with speeds between 25 mbps download/3 mbps upload, and 100 mbps download and 100 mbps upload.

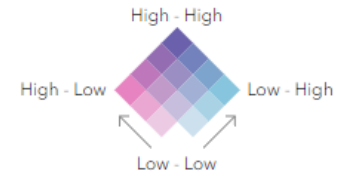*Unserved < 25/3*

Underserved = Between 25/3 and 100/100
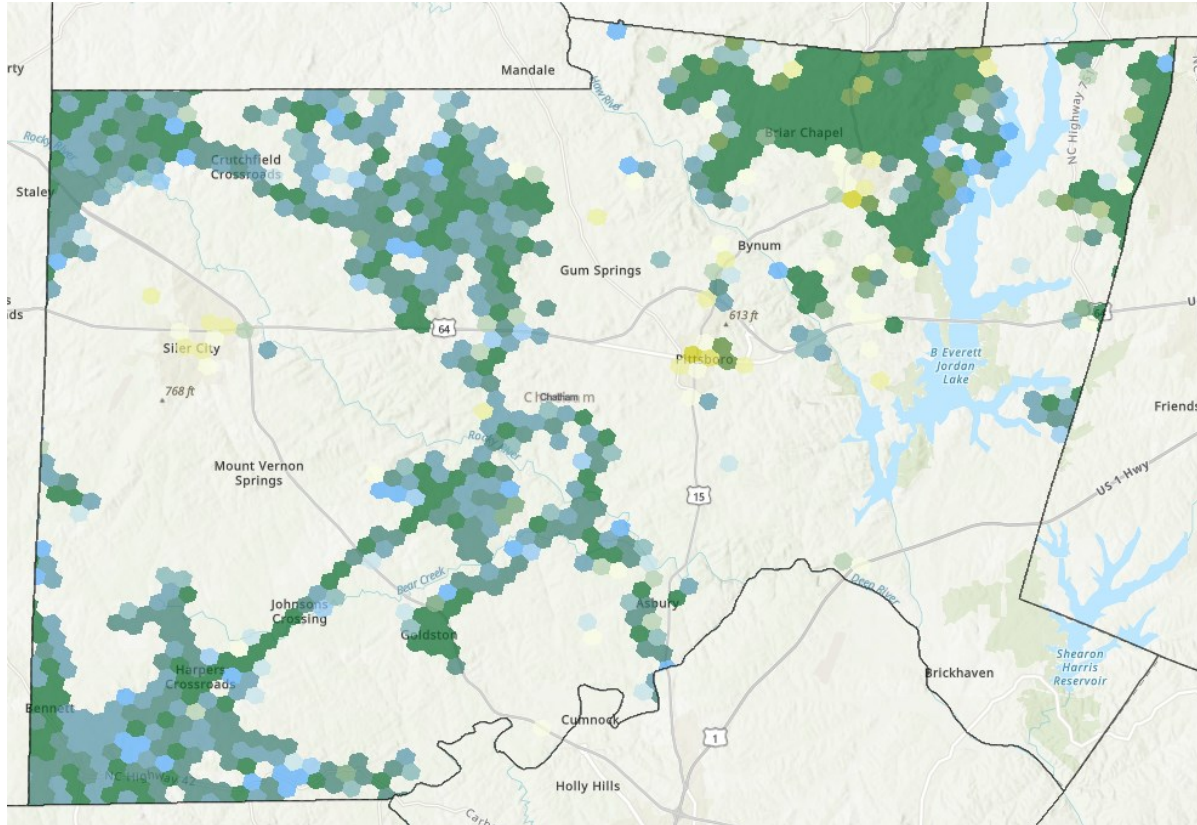
Served > 100/100

Unserved Locations
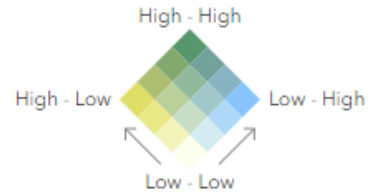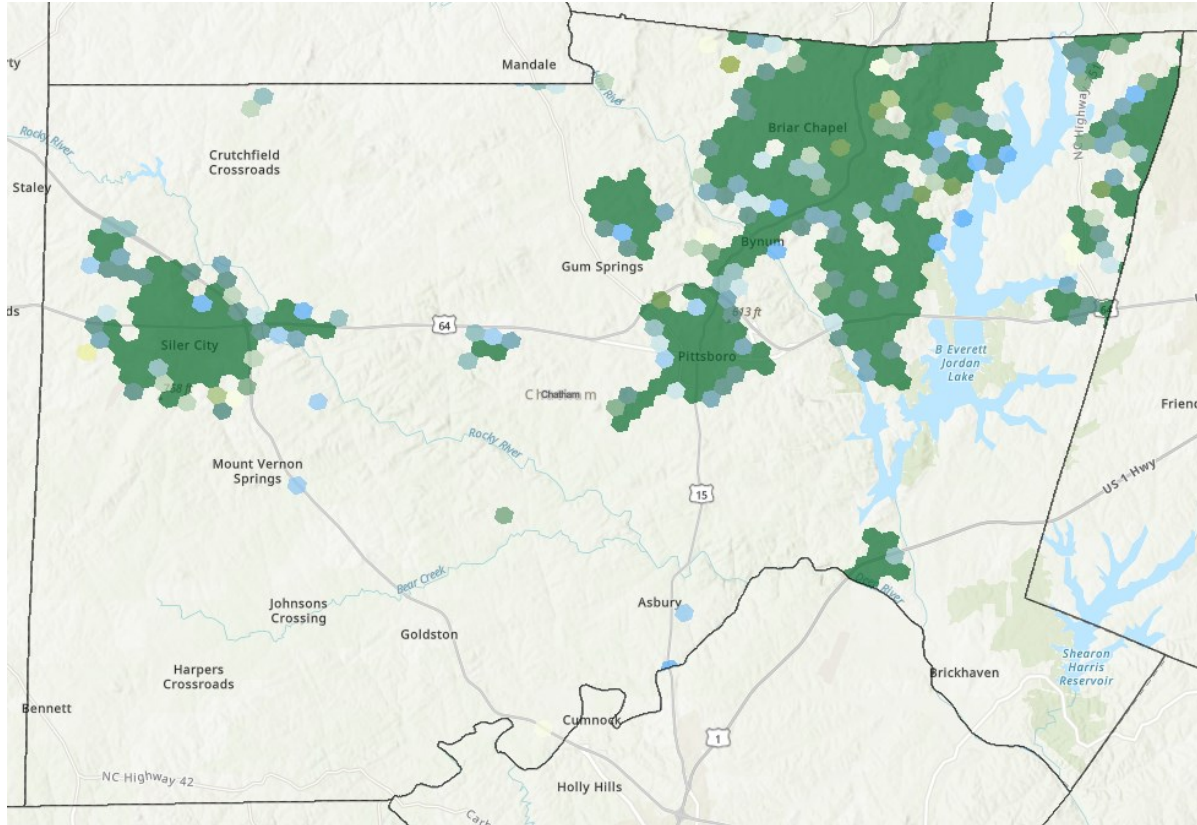
Served Locations Fiber

Served Locations Cable
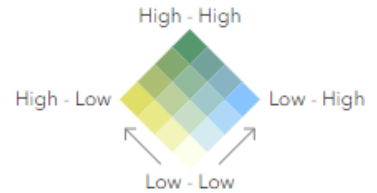
Coverage by Provider (Served)

AT&T Fiber
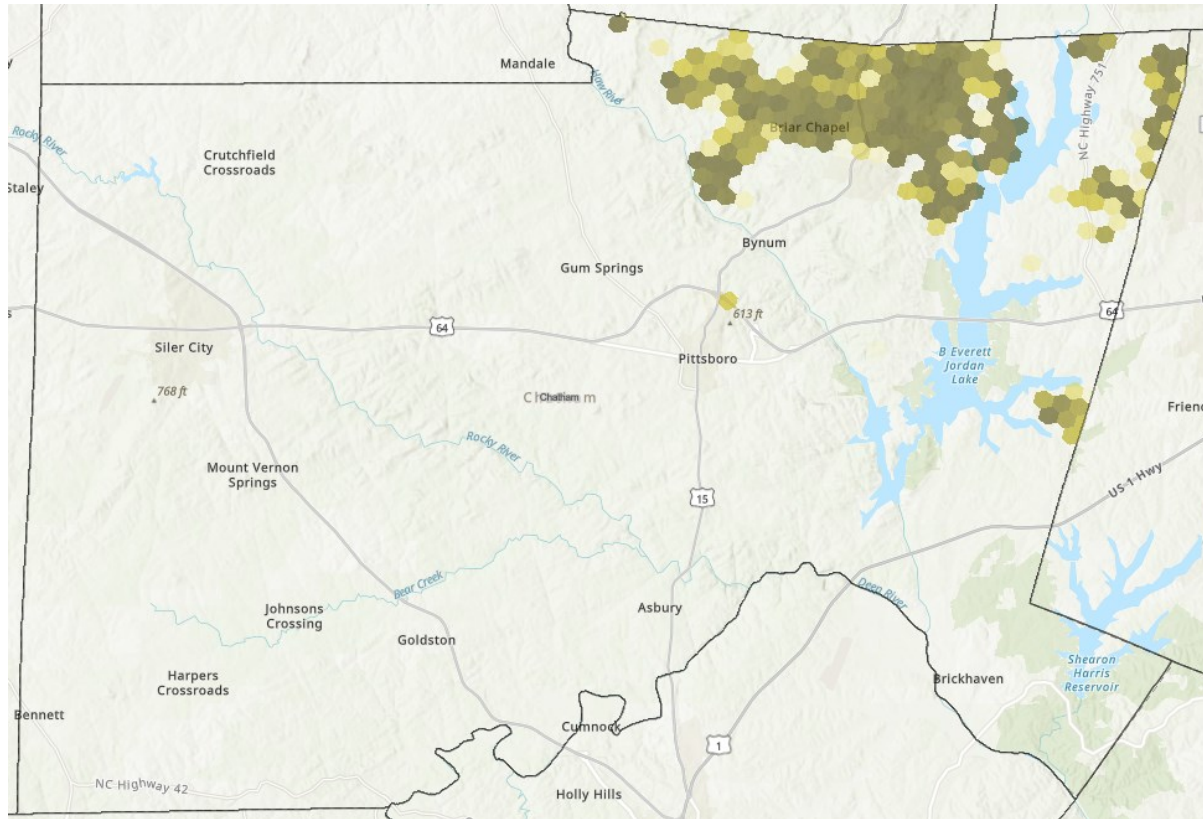
Brightspeed Fiber

Spectrum Fiber
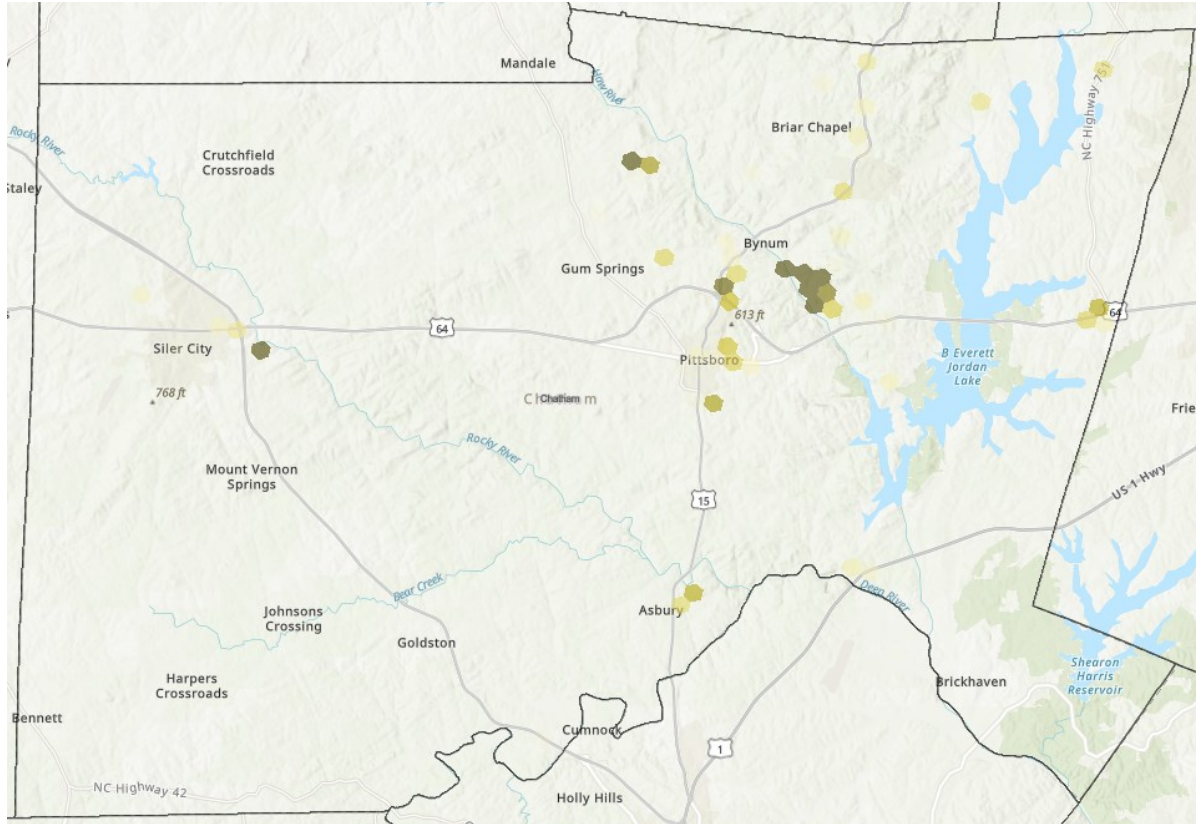
Spectrum Cable
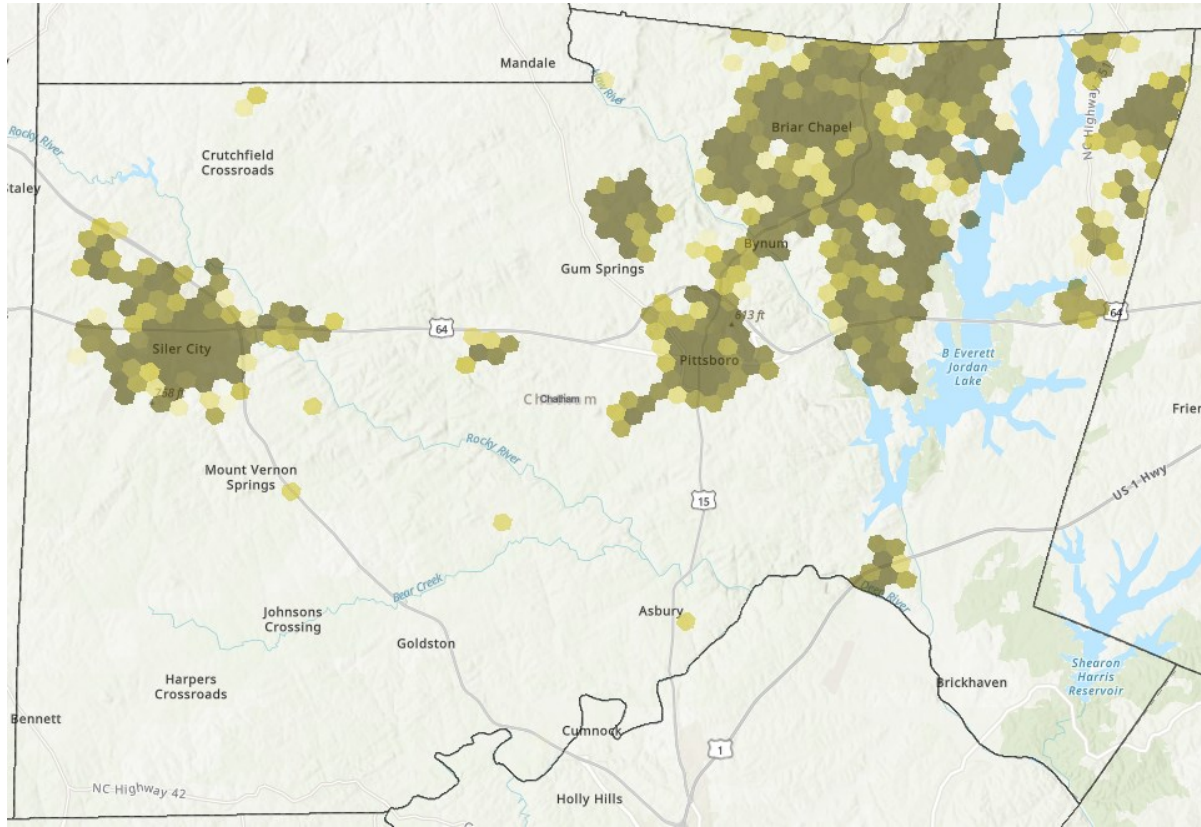
Randolph Telephone Fiber
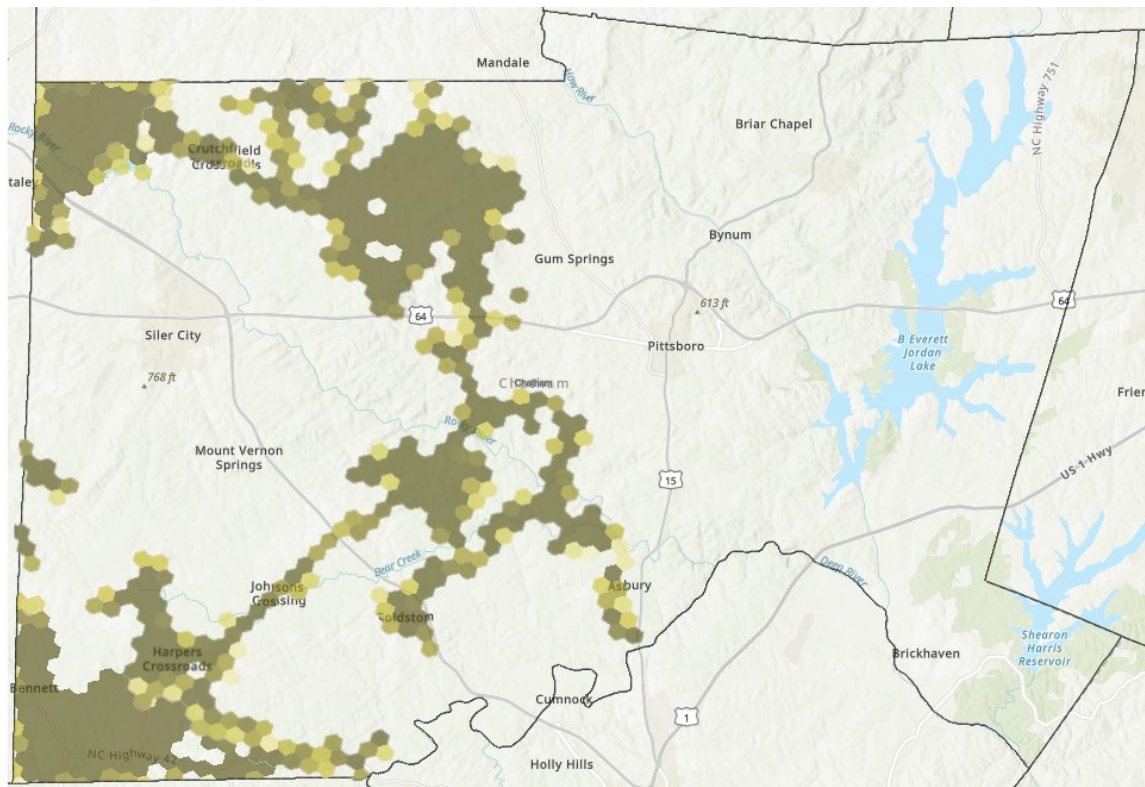
Unserved Location Funding

RDOF

The Rural Digital Opportunity Fund will provide $20.4 billion in funding over a ten-year period to support the construction of broadband networks in rural communities across the country.

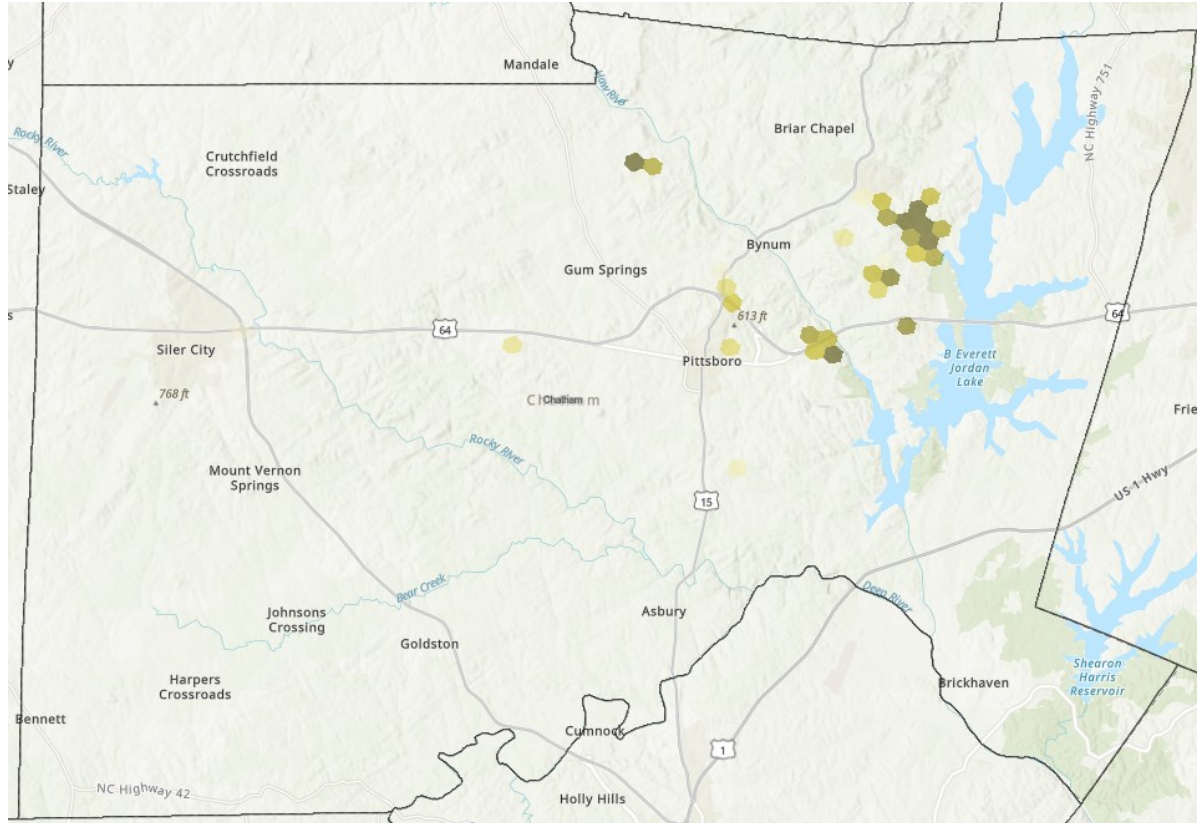Eligible areas include those without current (or already funded) access to adequate broadband service, defined as 25 Mbps downstream and 3 Mbps upstream (25/3).

Additional Info:

- Chatham County RDOF grant is through Charter Communications (Spectrum).
- 6 Year Build Window. (Entering 3rd Year of Grant)
- Additional federal funding unable to be used in these areas.
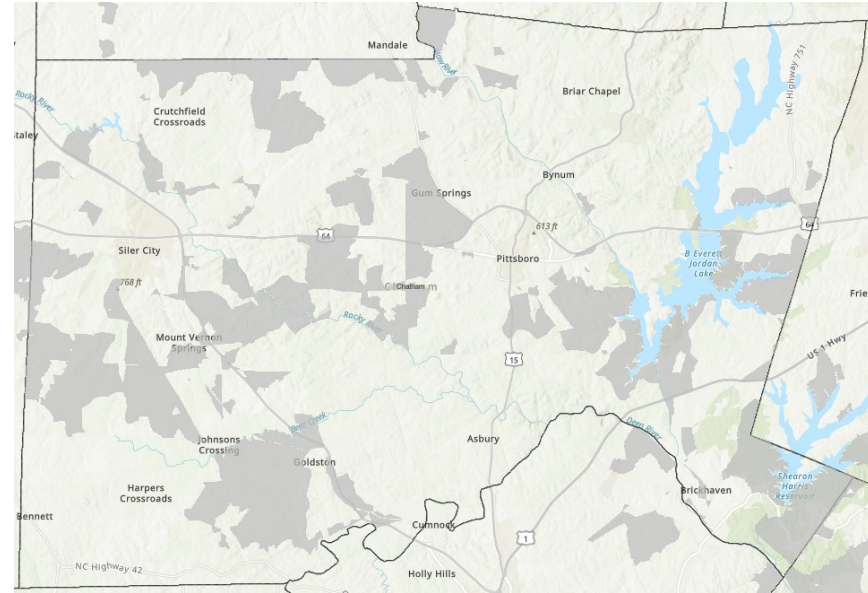
GREAT Grant

The **Growing Rural Economies with Access to Technology (GREAT) Grant** is a competitive grant program that provides funding to private sector broadband providers to deploy last-mile broadband infrastructure to unserved areas of North Carolina. The original GREAT Grant program was initiated in 2018 and launched in 2019, and subsequently became a recurring state-funded grant program within the NCDIT Broadband Infrastructure Office.

Additional Info:

- Chatham County has received two GREAT grants. (AT&T and Brightspeed)
- Total Project Cost: $8.1M
- Total Grant Amount:$5.9M
- Total Match Amount (State & County): $2.2M
- County Match: $519,228.20
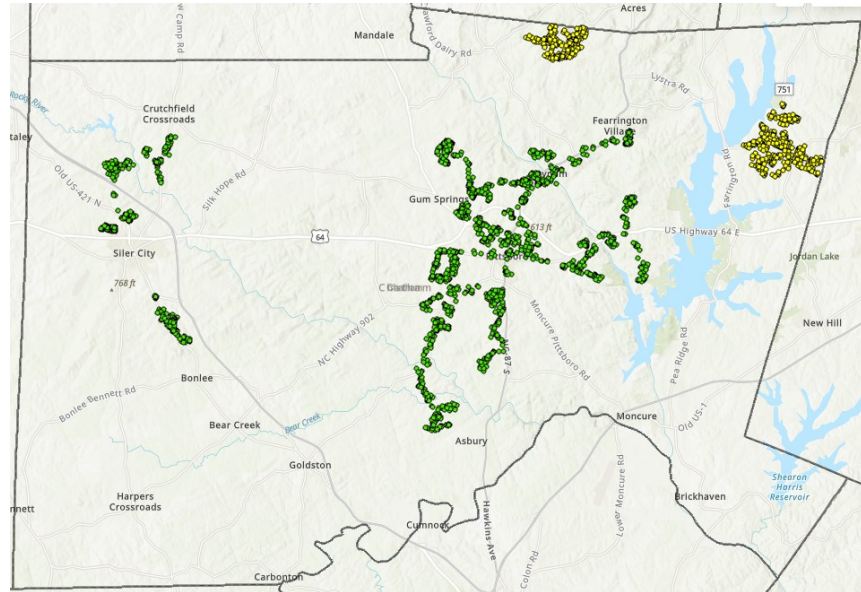
CAB Grant

The **Completing Access to Broadband (CAB) Program** provides an opportunity for individual N.C. counties to partner with NCDIT to fund broadband deployment projects in unserved areas of each county. N.C. Session Law 2021-180 appropriates $400 million from the American Rescue Plan Act for this new program.
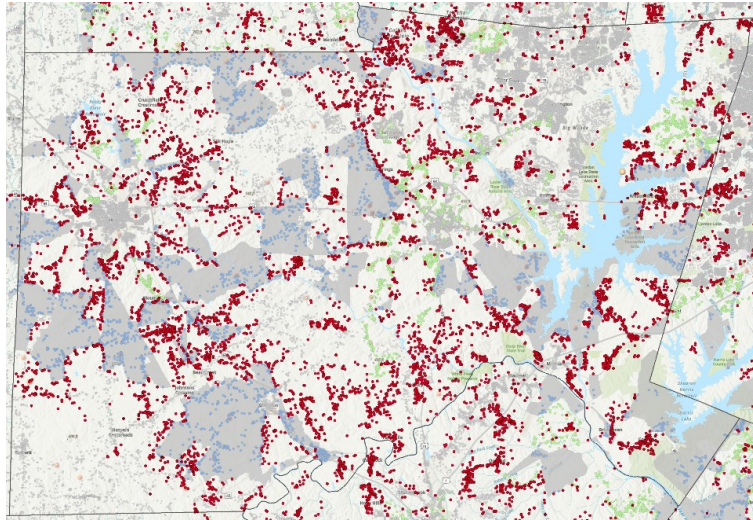
Additional Information:

- Counties must work with NCDIT to develop projects
- 35% County Match
- Chatham County Board of Commissioners directed 2.5M to this program.

Stop-Gap Grant

The **Broadband Stop Gap Solutions Program** provides funding for areas unserved or underserved with broadband following investment from the GREAT Grant Program and the CAB Program. This program may provide grants to internet service providers, local government entities and nonprofits for the provision and installation of broadband infrastructure to unserved and underserved households.
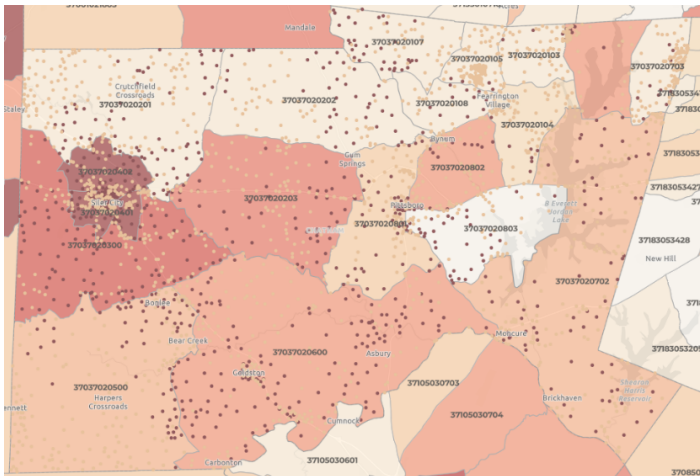
Additional Info:

- Program guidance still under development.
- Long Driveways, farms in very rural areas, etc.

BEAD Program

The **Broadband Equity, Access, and Deployment (BEAD) Program**, provides $42.45 billion to expand high-speed internet access by funding planning, infrastructure deployment and adoption programs in all 50 states, Washington D.C., Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Additional Info:

- North Carolina received: $1,532,999,481.15
- Money assumed to be funneling to GREAT and CAB Grant programs.
- NCDIT Plan approved by NTIA.

Figure 2
NTIA Expects BEAD Implementation to Take Roughly 4 Years
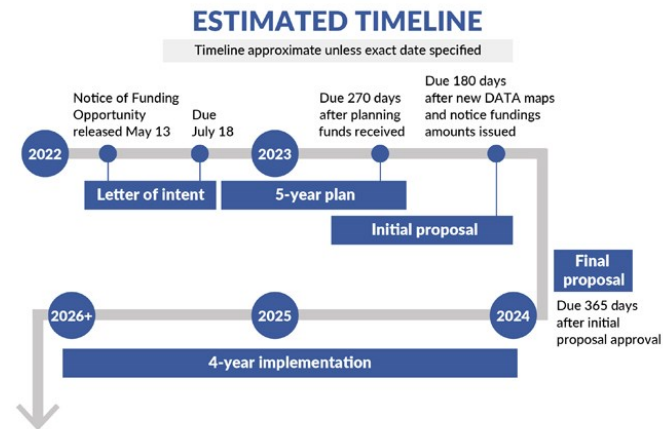Estimated timeline for proposal development and funding allocations

ESTIMATED TIMELINE

Timeline approximate unless exact date specified

Notice of Funding Opportunity released May 13

Due July 18

Due 270 days after planning funds received

Due 180 days after new DATA maps and notice fundings amounts issued

2022 — 2023

Letter of intent

5-year plan

Initial proposal

Final proposal
Due 365 days after initial proposal approval

2026+ — 2025 — 2024

4-year implementation

Source: National Telecommunications and Information Administration, "The Broadband Equity, Access, and Deployment Program: Program Details for Applicants" (webinar, May 2022), https://broadbandusa.ntia.doc.gov/sites/default/files/2022-06/June-1-Webinar-Presentation.pdf

© 2022 The Pew Charitable Trusts

Digital Inclusion and Equity

Definitions

Digital Equity

Condition in which all individuals and communities have the information technology capacity needed for full participation in society, democracy, and economy. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.

Digital Inclusion

Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This includes five elements:

1. Affordable, robust broadband internet service;
2. Internet-enabled devices that meet the needs of the user;
3. Access to digital literacy training;
4. Quality technical support; and
5. Applications and online content are designed to enable and encourage self-sufficiency, participation, and collaboration.

Devices

Without a desktop or laptop

| Area	%
201.06	12.6%
201.05	5.7%
201.03	9.6%
207.01	8.3%
201.04	8.7%
202	25.8%
204.02	51%
204.01	33.9%
203	29.9%
208	25.5%
207.02	21%
206	30.2%
205	42.3%
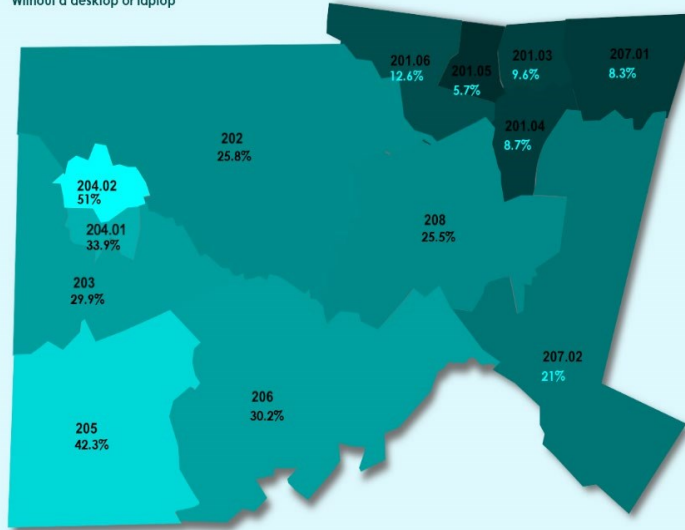
1. Need devices to participate in society: education, employment, government services, etc.

2. Laptops and Desktops vs. Phones

3. Affordability of Devices

4. SVI Index helps to track areas struggling with device access.

5. Programs through partners.

Affordability

1. Affordability of Internet Service

2. Affordability of Devices

3. Affordable Connectivity Program – Discontinued if Congress does not provide additional funding after May 2024

4. Lifeline Program
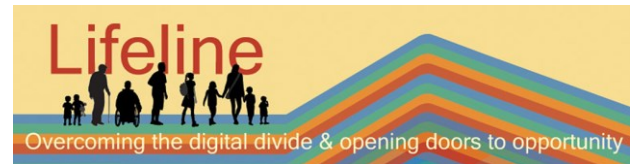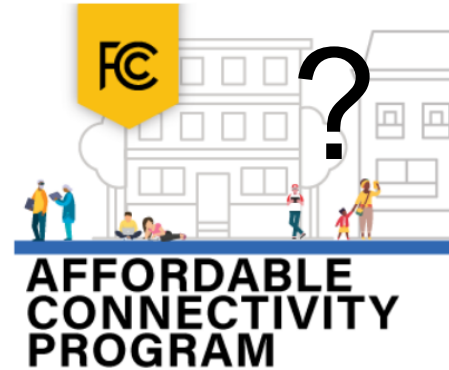
Digital Literacy

- Skills for locating and using digital information in ways that utilize critical thinking to determine the value of resources.

- Digitally literate residents operate digital tools with flexibility to create, collaborate, and communicate with others.

Chatham Ongoing Efforts

MAY & JUNE 2024:

All classes take place in person at Chatham Community Library except where noted.

Google Apps: May 16, Thursday, 3:00 pm [CLASS FILE]

NEW! eBook Basics with the Libby App: May 23, Thursday, 3:00 pm

Drop-in Computer & Tech Assistance @ Wren: June 12, Wednesday, 10:30 am to 12:00 pm

Drop-in Computer & Tech Assistance: June 13, Thursday, 3:00 to 4:30 pm

Online Privacy & Security: June 20, Thursday, 3:00 pm

Microsoft Word: Beyond Basics: June 27, Thursday, 3:00 pm

- Library Classes

- Community Partner Programs

- Outstanding Digital Literacy Grant Applications

- Digital Inclusion Plan

Chatham County Digital Inclusion Plan

What is a Digital Inclusion Plan?

Digital inclusion plans assess:

- Tools and resources counties currently have.
- Areas and populations of people who do not currently have access to broadband service (or insufficient, slow connections).
- Resources or strategies needed to fully connect everyone in the region.
- How to make internet-enabled devices more accessible.
- How to increase availability of digital literacy training.
- Availability of technical support.

Availability	Access	Adoption
Availability in the context of digital inclusion refers to <u>digital broadband infrastructure</u>.	Access refers to the ability for someone to gain <u>access to available broadband</u>. The barriers to access include affordability concerns and lack of access to computing devices.	"Broadband adoption" means <u>adopting broadband internet in everyday life</u>, or in essential ways such as for government services, schooling, or work.

Chatham County Digital Inclusion Plan

1. Began as Innovate Chatham Draft Plan using community input.

2. Partnered with County Government to work to facilitate further plan development.

3. Engaged Digital Inclusion Plan Coalition partners.

4. Internal Chatham County Government review and edits.

5. Presented Draft plan for review by community partners and non-profits.

6. Digital Coalition Draft review.

7. Edits Post Digital Coalition review. ⟵——————— We are here

8. Present to Board of Commissioners

9. Solicit community input on plan through Chatham Nexus

10. Make edits based on community feedback

11. Present to Board of Commissioners for Adoption

Chatham County Digital Inclusion Plan Coalition

- Chatham County Government
- Chatham County Public Libraries
- Chatham County Schools
- Central Carolina Community College
- Innovate Chatham
- Right Here Right Now Project
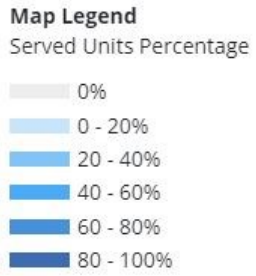- Chatham Literacy
- Cooperative Extension

FCC National Broadband Map - Wired

Map Legend
Served Units Percentage

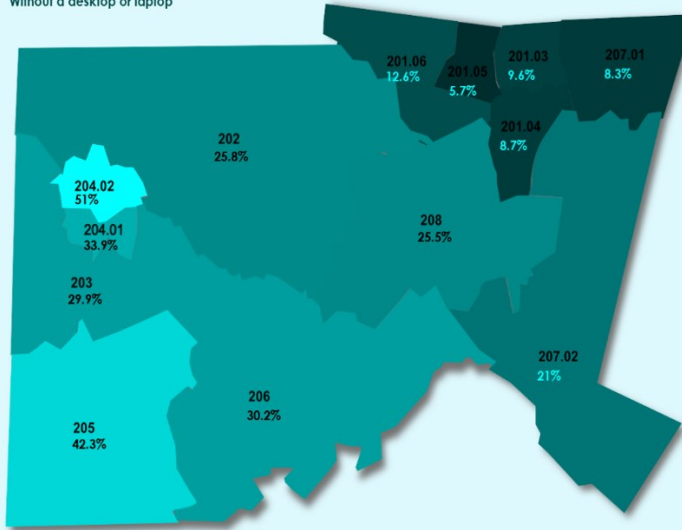|	
	0%
	0 - 20%
	20 - 40%
	40 - 60%
	60 - 80%
	80 - 100%

Availability

- Broadband Infrastructure
    - Mobile
    - Wired
    - Satellite
    - Fixed Wireless
- Asset Inventory
- On-Going Efforts
    - Grant Funding
    - Federal and State Initiatives

BI Driven Percent of Residents Without a Desktop or Laptop

Access

- Access to Devices
- Affordability
- On-Going Efforts
    - Public Broadband Access Points
    - Digital Devices
    - Public Computer Access Points
    - Discount Programs

Adoption

Digital Literacy and Ongoing Efforts

Central Carolina Community College

- Computer Literacy Classes
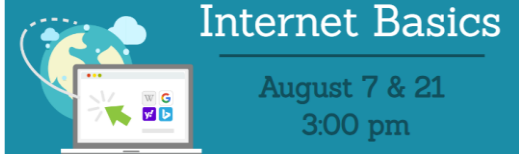- Student laptop lending program

Chatham County Public Schools

- Computer Literacy Classes
- Take-home computers for students

Chatham Community Library

- Adult Computer Literacy Classes
- Public Computers and Wi-fi

CENTRAL CAROLINA COMMUNITY COLLEGE

CHATHAM COUNTY SCHOOLS

Internet Basics
August 7 & 21
3:00 pm
Chatham Community Library

Continuing the Work

❑ Once adopted, the plan will be reviewed by Chatham County annually for updating based on the following metrics:

- o Availability:
    1. The number of preexisting homes provided internet that year.
    2. Progress on Grant oriented project development within the year.
    3. Gross growth of networks within Chatham County.
    4. Annual surveys regarding student/resident internet availability.
- o Access:
    1. Change in the number of devices provided across the county.
    2. Usership of provided programs, and determination of communities most utilizing provided services.
    3. Change in surveys indicating students access to devices.
- o Adoption:
    1. Data on utilization of basic computing classes.
    2. Establishment and performance of programs that assist with adoption of broadband technologies.

Resources for Residents

- **Chatham County Broadband Page -**

- **North Carolina One Map -** https://www.nconemap.gov/pages/broadband

- **NCDIT Funding Programs -** https://www.ncbroadband.gov/funding-programs

Questions?

Thank You!

Brenton Hart, MPA

Policy and Legislative Analyst

Chatham County Government

brenton.hart@chathamcountync.gov