



CONNECTING ROCKINGHAM COUNTY

Digital Inclusion Plan

**Rockingham County Digital Inclusion Coalition
October 2021
Version 1.0**



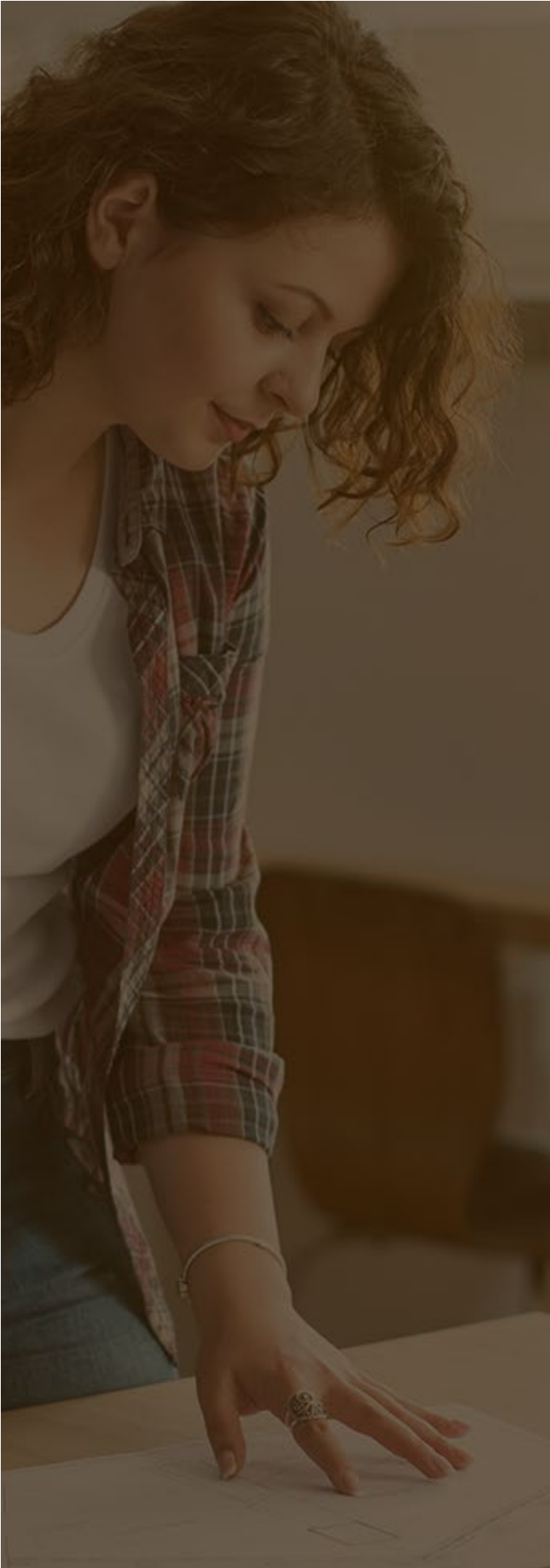


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The committee recommends prioritizing access in under-resourced communities, implementing intentional strategies and investments to reduce and eliminate barriers to access and technology.

INTRODUCTION

The COVID-19 pandemic made clear what those in the world of government, community based organizations, and businesses already knew; access to the Internet is critical to modern life, and many of our residents do not have reliable and affordable access. Through a BAND-NC grant, the Piedmont Triad Regional Council (PTRC) partnered with the Reidsville Area Foundation and many stakeholders in Rockingham County to develop a plan to evaluate and satisfy the broadband needs of the community. The purpose of the plan developed by the **Rockingham County Digital Inclusion Coalition** is to create a framework for decisions that will lead to the expansion of broadband access to all of Rockingham County and to equip and enable the people of the county to participate fully in the digital world.

The beginnings of the **Rockingham County Digital Inclusion Coalition** were a “perfect storm” – the result of various forces coming together elevating the work of numerous contributors in an ever-changing COVID environment.

Piedmont Triad Regional Council, a regional BAND-NC grant recipient, reached out and offered facilitation services to Rockingham County. Early in the pandemic, **Reidsville Area Foundation** began having conversations with grantee partners regarding gaps in internet infrastructure, as well as digital access. Connections were established with **Rural LISC** and the **National Digital Inclusion Alliance**, who established a Digital Navigator Model with accompanying strategies to roll out in communities.

Simultaneously, **NC 100** began researching and also connected with **Band-NC**. The Institute for Emerging Issues in partnership with the North Carolina Broadband Infrastructure Office hosted a series of workshops on “*How to Build a Community Digital Inclusion Plan*.” This workshop walked communities through the key elements of a digital inclusion plan, why it's important, and how to evaluate digital inclusion needs in our community. Many local organizations attended the webinar sessions – Rockingham County Government, Reidsville Area Foundation, Cone Health, and **Madison Mayodan Parks and Recreation Commission**.

Rockingham County Government applied for and received Growing Rural Economies with Access to Technology (GREAT) Program Grants in partnership with Spectrum Southeast to deploy broadband services to over 800 households, businesses, agricultural operations, and community anchor institutions in Rockingham County. **Cone Health - Annie Penn Hospital** was exploring access to broadband as a social determinant of health. **NC100** received a grant from **Rural LISC** for digital navigation, followed by a collaborative Reidsville Area Foundation – **Impact Alamance** grant focused on digital inclusion and regional expansion.

On May 27th, 2021, community leaders collaboratively hosted a Broadband 101 session with the **North Carolina Broadband Infrastructure Office** focused on 1) sharing county broadband data, 2) updating the group on statewide Broadband deployments and planning efforts, 3) creating a shared understanding of digital inclusion, and 4) establishing next steps regarding countywide coalition work. 58 individuals attended the Broadband 101 session.

Beginning in July 2021, **27 individuals across 17 agencies** convened a local Digital Inclusion Coalition that met for seven workshop sessions to evaluate the assets, needs, priorities, and goals for broadband expansion and digital inclusion for the county. **Efforts were (and continue to be) specifically intended to address the issues of broadband availability, access, and the adoption.**

A special thank you and sincere appreciation goes out to the following individuals for their time, knowledge, and significant contributions to this plan.

Plan Development Funding

The Institute for Emerging Issues at NC State (IEI) in partnership with the NC Department of Information Technology, and with support from the John M. Belk Endowment¹, is addressing the digital divide across NC through a program called “Building a New Digital Economy” (BAND-NC). BAND-NC provided mini-grants to communities across the state who want to begin a digital inclusion planning process or implement digital inclusion plans. Grantees were invited to join technical assistance workshops to learn more about digital inclusion and how to build county-wide digital inclusion plans. **The ultimate goal of the program is to make North Carolina the first state in the nation where every county has a digital inclusion plan in place.**

Piedmont Triad Regional Council was a recipient of BAND-NC funding to facilitate plan development in Rockingham, Alamance, and Forsyth Counties. Reidsville Area Foundation provided printing and marketing costs for the plan.

Building a New Digital Economy in NC (BAND NC)

COVID 19 has exposed the digital divide in North Carolina and its consequences for all of us. Students and adults who don't have access to the internet, don't have a computer or laptop, or don't know how to use them – for education, work, health or connection – are at an impossible disadvantage.

Visit <https://iei.ncsu.edu/band-nc/> for more information.

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Rockingham County Economic Development

Elon University

1. MISSION, VISION, VALUES & WORK GROUPS

MISSION. Our mission is to create a strategic plan that will expand reliable, affordable high-speed internet access to all residents in Rockingham County and provide the hardware, tools, and skills needed to use that access to improve their lives and livelihoods.

VISION. Our vision is that all Rockingham County residents will have full access to quality broadband and the knowledge and skills needed to participate fully in our society, democracy, and economy regardless of socio-economic status.

VALUES. The Coalition developed five values to drive the group's work.

Accessibility - All Rockingham County residents should have robust broadband connectivity and the hardware and knowledge needed to successfully engage in the digital world.

Affordability - The quality of broadband access for residents should not depend on their level of wealth.

Dependability - Technological solutions must be reliable, sustainable, and creative to provide consistently high-quality broadband access now and in the future.

Equity - People should have access to broadband, and the technical resources they need to use it, regardless of their background, economic status, or other circumstances.

Consistency - The Digital Inclusion Coalition will remain stable in its leadership and concentrate its efforts on stimulating the development of the most up-to-date digital technologies, processes, and performance available to our community.

WORKGROUPS. Work groups were formed to focus on three main strategies:

1. *Availability Workgroup* - Focused on the technological aspects of where broadband is currently and where it is needed.
2. *Access Workgroup* - Focused on where internet connectivity may be available, but barriers exist that keep people from accessing it.
3. *Adoption Workgroup* – Focused on digital literacy, awareness of options, and engaging community leaders to share resources locally.

2. DEFINITIONS

The following definitions set a framework for group discussion, as well as plan development.

Broadband Adoption - Daily access to the internet at speeds, quality, and capacity necessary to accomplish common tasks; with digital skills necessary to participate online; and on a personal device and secure convenient network.

Digital Equity is achieved when all communities and residents have the information technology needed to participate entirely in society, economy, and democracy. (digitalinclusion.org)

Digital Navigators - Trusted guides who assist community members in internet adoption and the use of computing devices. (digitalinclusion.org)

Digital Literacy - The ability to use digital tools to find, evaluate, create, and communicate information, requiring both cognitive and technical skills.

Digital Divide - The gap between those who have access to technology, the internet and digital literacy training and those who do not.

Digital Inclusion - All activities that individuals and communities, including those most disadvantaged, carry out to access, and use Information and Communication Technologies.

Internet Speed - The rate of data transmission for connection to the Internet. These are typically referenced with Mbps, or Megabits per second. It measures how many bits (units of digital information) can be transferred each second. You will normally see speeds ranging from 10–1,000 Mbps advertised for home internet plans.

Modem (modulator-demodulator) - A modem's purpose is to convert digital information to analog signals (modulation), and to convert analog signals back into useful digital information (demodulation).

High-Speed Internet- Broadband connectivity at speeds of greater than 100 Mbps upload and 100 Mbps download.

Broadband Connectivity- According to the Federal Communications Commission (FCC), broadband connectivity commonly refers to high-speed Internet access that is always on and

faster than the traditional dial-up access and typically at speeds higher than 25 Mbps download and 3 Mbps upload. These technologies include:

- Digital Subscriber Line (DSL)- A wireline transmission technology that transmits data faster over traditional copper telephone lines already installed to homes and businesses.
- Cable Modem Service- Cable modem service enables cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV.
- Fiber- Fiber optic technology converts electrical signals carrying data to light and sends the light through transparent glass fibers about the diameter of a human hair. Fiber transmits data at speeds far exceeding current DSL or cable modem speeds, typically by tens or even hundreds of 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.
- Satellite- A form of wireless broadband connecting the customer's home or business with satellites orbiting the earth.
- Broadband over Powerline (BPL)- Uses existing low- and medium-voltage electrical power distribution networks to deliver Internet connectivity equivalent to DSL or Cable Modem speeds.

Resources for definition development include: www.digitalinclusion.org, www.literacy.ala.org, www.broadbandnow.com, and www.fcc.org



3. ABOUT ROCKINGHAM COUNTY

On the northern border of the Piedmont Triad region, Rockingham County has a population of approximately 91,000, of which 38.1% is urban and 61.9% is rural. The population is 77.5% White, 19% African American or Black, and 3.5% other, with 6.3% identifying as Hispanic or Latinx. From 2010 to 2019, the county saw a population reduction of 2.8%. Rockingham County has five incorporated cities and towns. Eden is the largest municipality with a population of 15,421 followed by Reidsville with 14,583, Mayodan with 2,418, Madison with 2,129, and Stoneville with 1,257.

Figure 3.1: Poverty Level Map of Rockingham County.

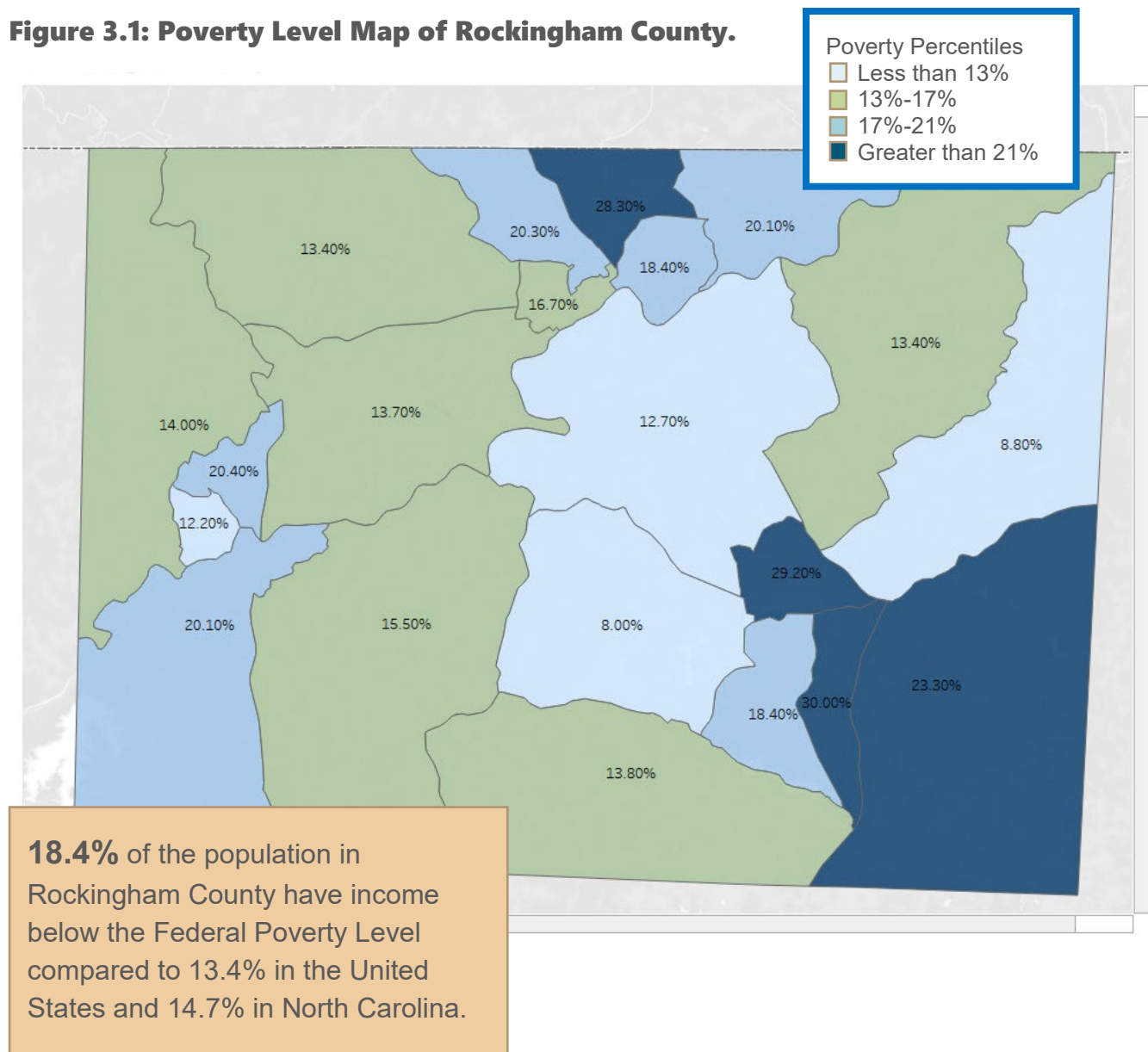


Figure 3.2: Median Household Income in Rockingham County.

	North Carolina	Median Income Rockingham County	United States
All Households	\$46,868	\$38,126	\$65,712
Non-Latinx White	\$53,157	\$42,047	\$71,664
Black	\$32,798	\$27,470	\$43,862
Asian	\$68,866	\$23,359	\$93,759
Latinx	\$34,708	\$28,031	\$55,658
Other Groups	\$32,544	\$20,556	\$53,097

Other Groups consist of American Indian, Alaska Native, Hawaiian, Pacific Islander, and any other groups not specified.

Rockingham County households that do not have consistent or easily accessible internet – due to availability, affordability or digital literacy level – are at a distinct disadvantage in today’s global world. The COVID-19 pandemic has disproportionately impacted individuals and families living in poverty. In order to significantly impact change and create lasting solutions, policymakers must gain an understanding of the large role poverty plays in digital inequality.

Rockingham County is designated as a Tier One County by the North Carolina Department of Commerce, making it one of the 40 most distressed areas. A comprehensive digital inclusion plan can aid in encouraging economic activity and boosting prosperity.

4. AVAILABILITY

PRIORITY AREAS

- 1.Improved Maps
- 2.Increase Connectivity
- 3.Improve Connectivity

The Availability Workgroup considered issues revolving around physical broadband infrastructure, including all supporting technology needed to deliver Internet service at broadband speeds.

Digital infrastructure forms the building blocks of a digitally equitable community. Investing in broadband networks is essential for our future. High speed,

reliable, and affordable internet is critical to economic competitiveness and improving the quality of life for Rockingham County residents.

LEADING CHALLENGES

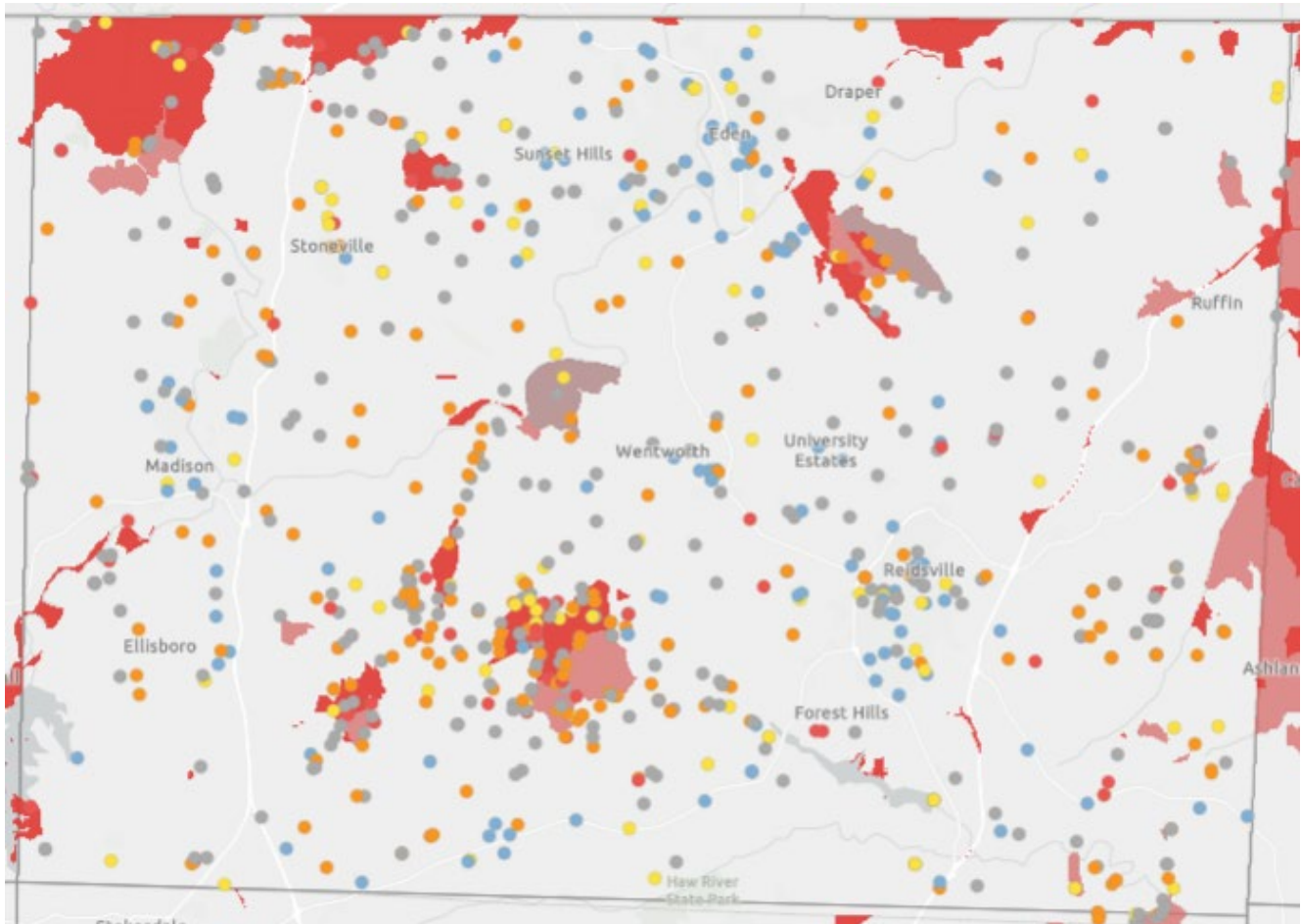
According to the US Census Bureau, 98.1% of the population in Rockingham County has access to broadband with 77.6% of the population subscribing to internet services. While that may seem impressive, it overlooks the way that the Census Bureau (and many of the federal agencies) evaluate coverage by census block. If one home in a census block has access to broadband internet service, their evaluations assume that all areas within that census block have broadband. The North Carolina Broadband Infrastructure Office survey shows that 46.6% who took the survey in Rockingham County have no wired internet access. Of those without internet access, 80.1% gave “not available” as the primary reason. (See Figure 4.1).

According to the NC Department of Commerce, 61.9% of Rockingham County’s residents live in rural areas. The Broadband Infrastructure Office states that 95% of those without internet service live in rural communities. Broadband USA maps show the areas where providers have indicated that they provide no service (see Figure 4.2), but as discussed, those are not a true reflection of the households with internet access. The maps indicating areas where households self-report that they have no internet access is much greater (see Figure 4.3). It should be noted that pockets exist within municipalities where internet connectivity is absent or at less than broadband speeds.

62%

Of Rockingham County residents live in areas deemed “rural. Statewide, 95% of households without internet service live in rural communities.

Figure 4.1: NC Broadband Infrastructure Office Survey Map



46% - 60+%

We do not have a complete picture of internet availability. Of the 1500 households who completed the North Carolina Broadband Infrastructure Office survey in Rockingham County, 46% reported having no wired internet access. However, Rockingham County officials estimate that more than 60% of the county's residents don't have access to reliable, high-speed internet that meets the national standard of 25 Mbps to download and three Mbps to upload.

Service Level (calculated field):

- No Internet
- Under 25/3
- Under 25/3 (Fastest)
- Over 25/3
- Other

Figure 4.2: Broadband USA maps show the areas where providers indicate no service.

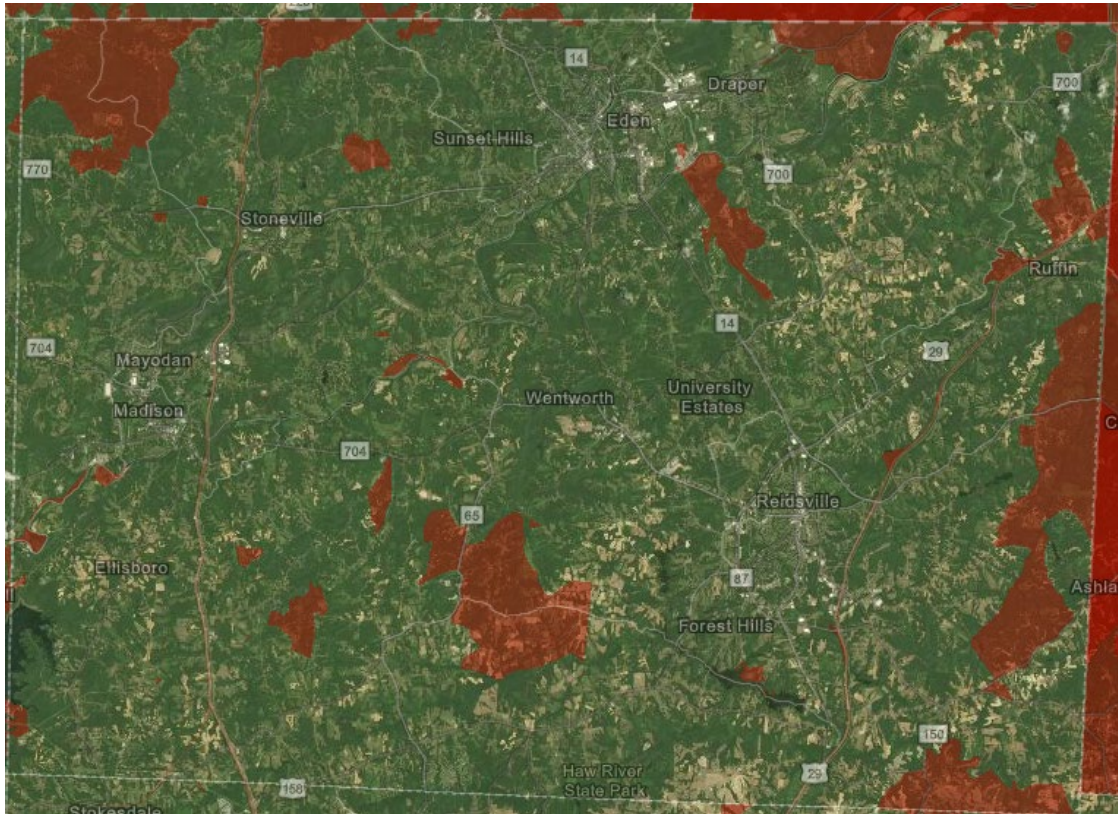
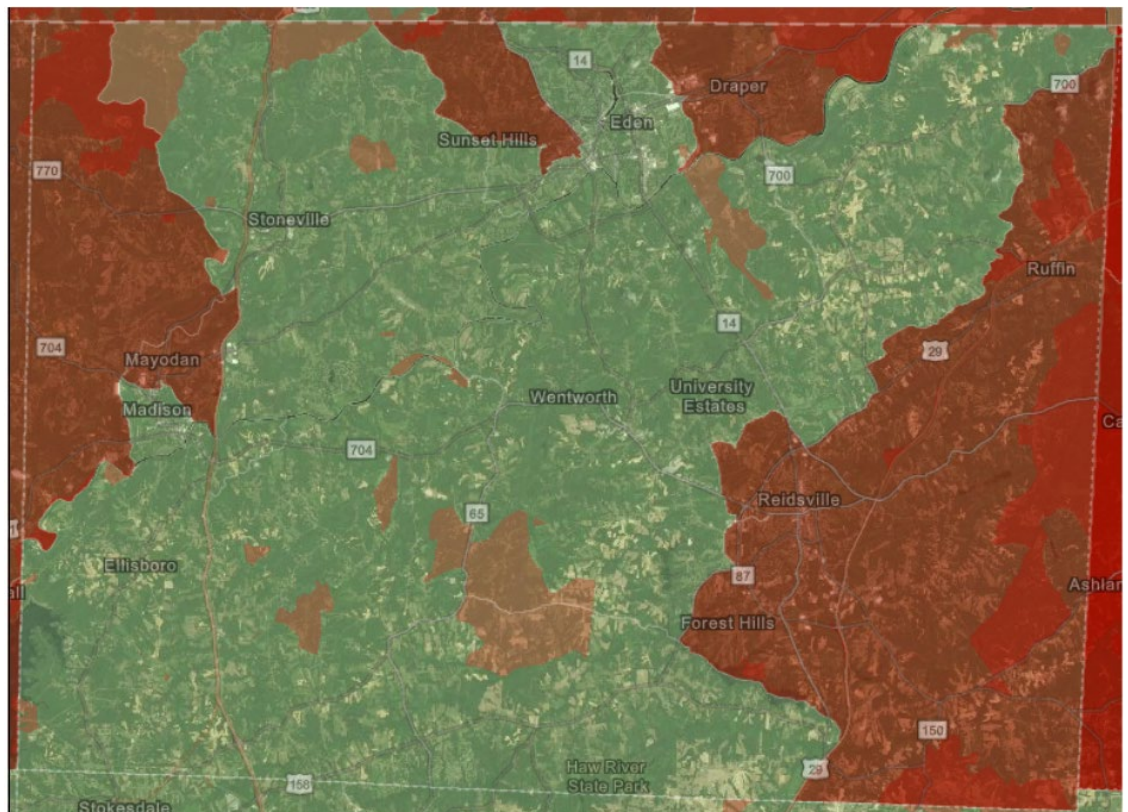


Figure 4.3:
Areas where
households
self-report
no internet
access is
much
greater.



We do not have accurate statistics to reflect whether the self-report data is related to availability, affordability (access) or adoption, or a combination of all three factors.

Figure 4.4: Types of high-speed coverage within Rockingham County: cable service in orange, fiber service in tan, and no high-speed service in pink.

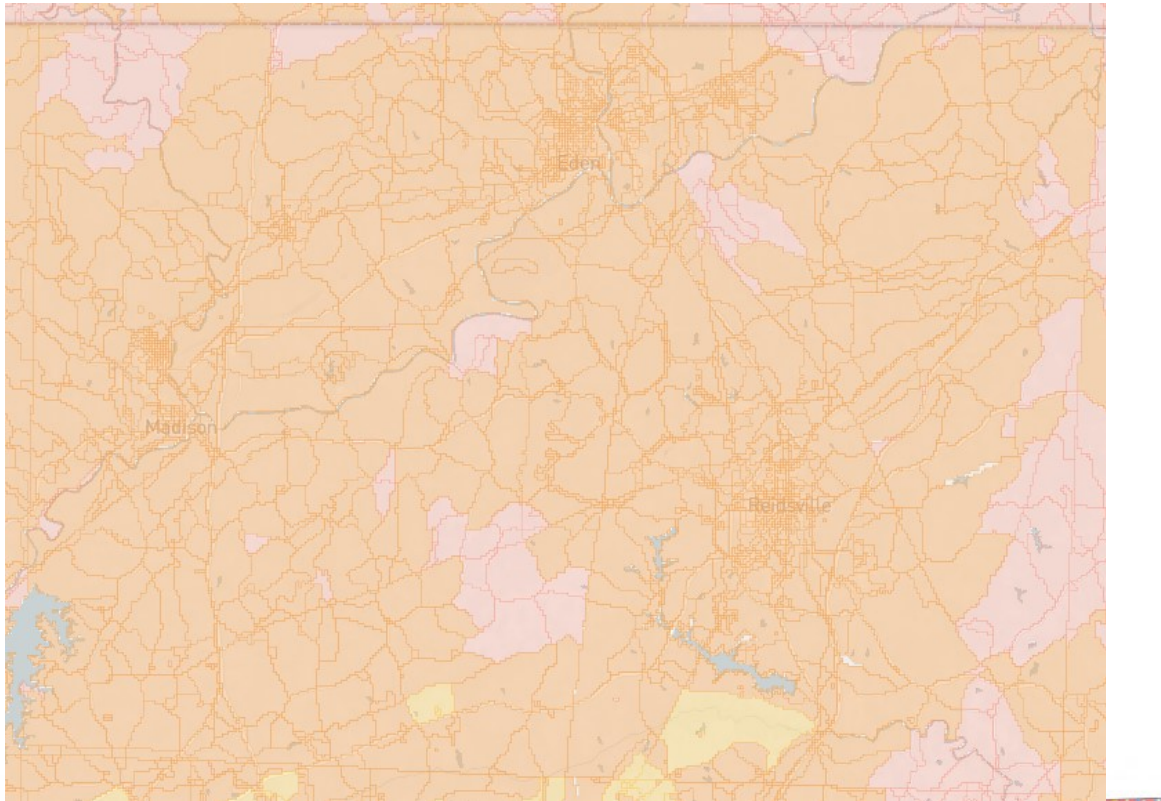
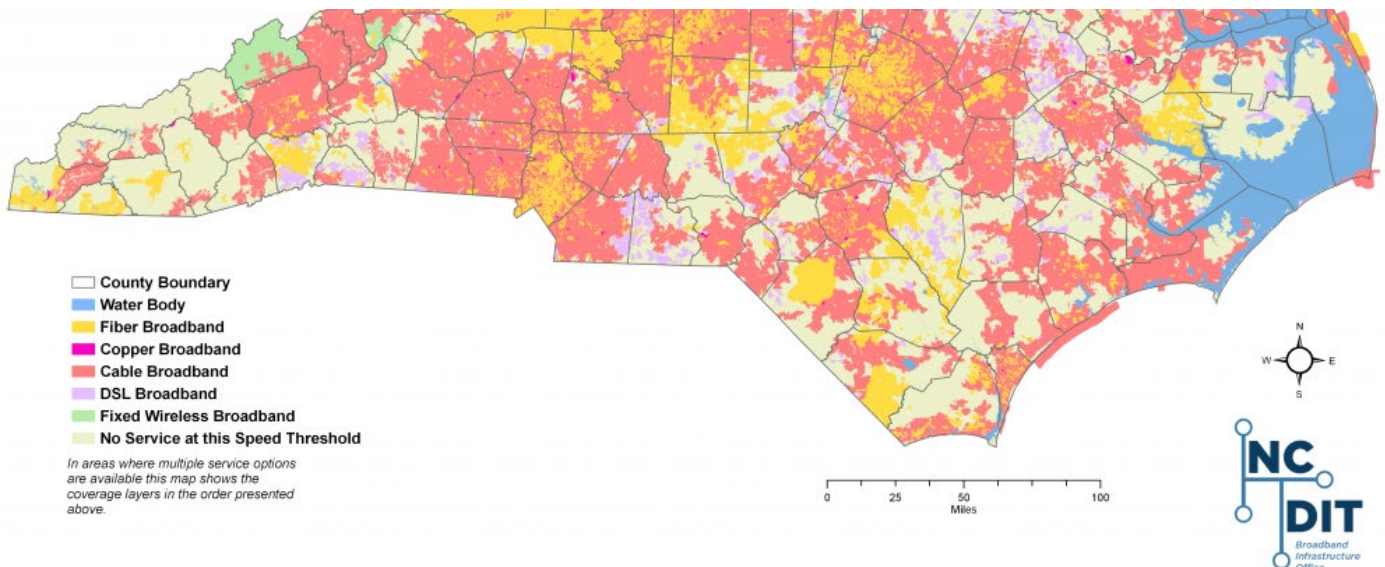


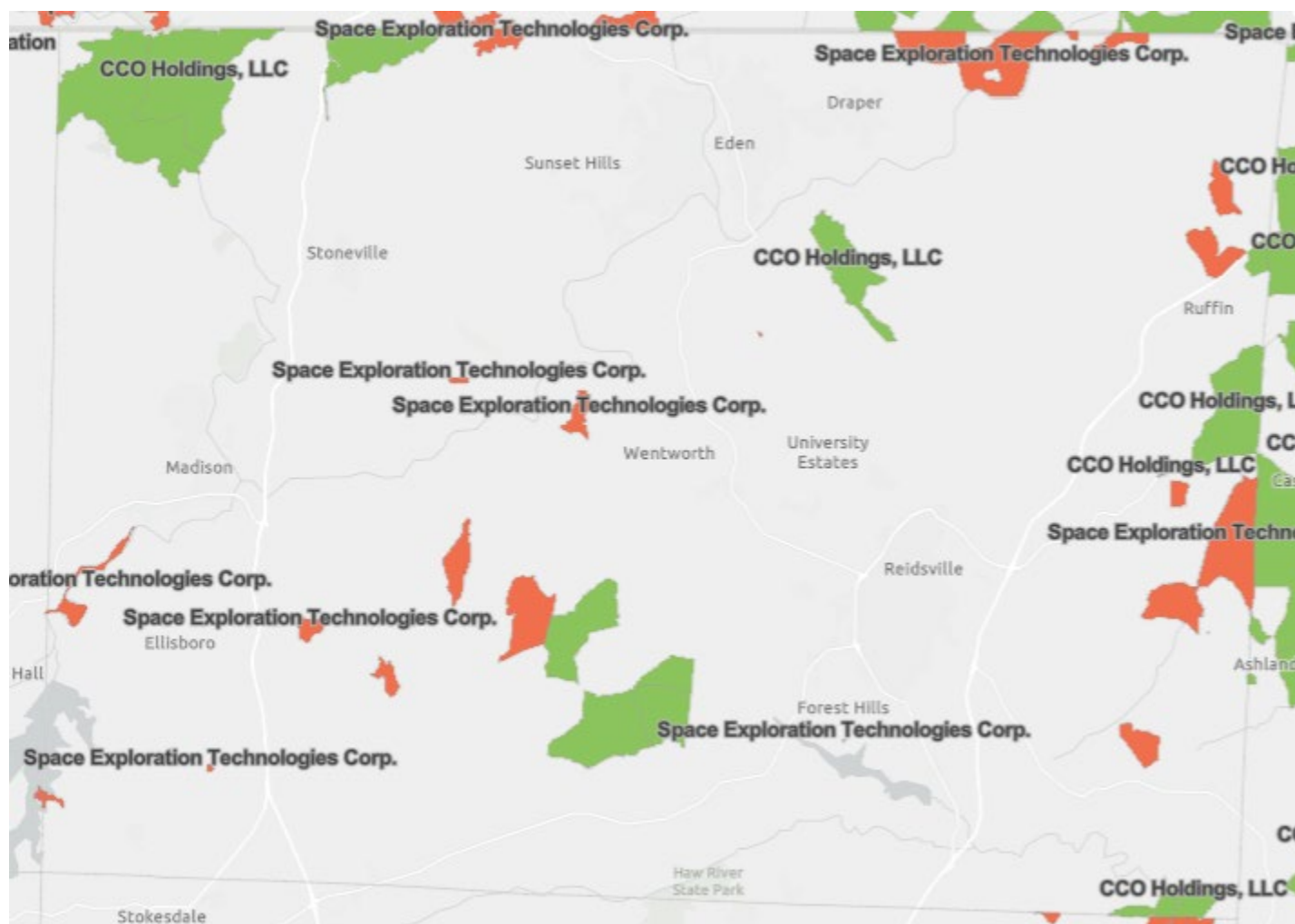
Figure 4.5: Types of high-speed coverage across North Carolina.



ON-GOING EFFORTS TO ADDRESS AVAILABILITY

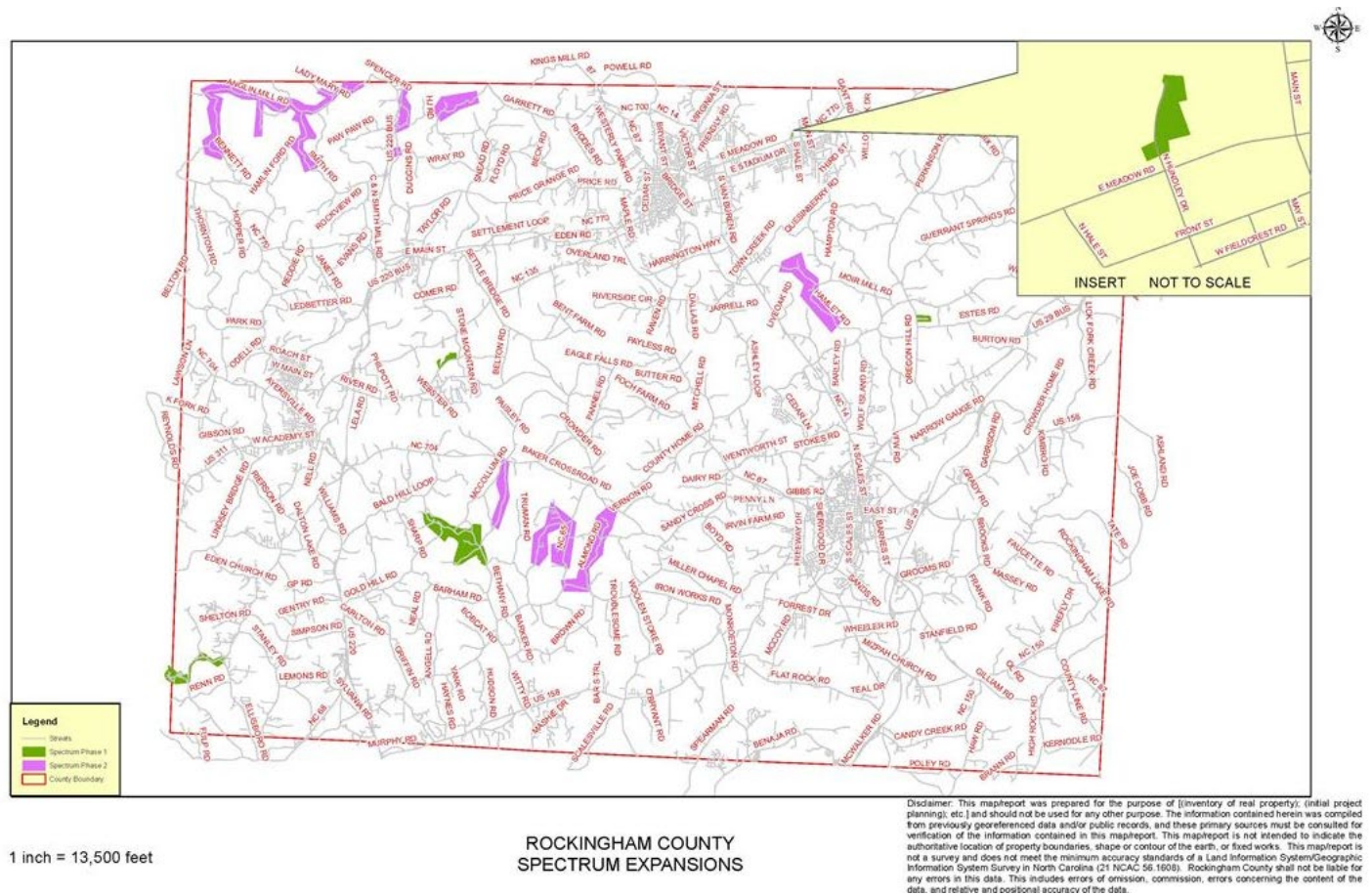
The FCC awarded grants through the Rural Development Opportunity Fund (RDOF) in early 2021. These grants are provided directly to internet service providers to connect census blocks in rural areas that the FCC identified as having no broadband service. In Rockingham County, the awards were given to CCO Holdings, LLC (Charter-Spectrum) and Space Exploration Technologies Corp. (SpaceX). (See Figure 4.6) While these awards indicate future expansion of broadband into the rural areas, awardees have up to 10 years to complete the projects.

Figure 4.6: Rural Development Opportunity Fund Grant Locations



The North Carolina Growing Rural Economies with Access to Technology (GREAT) Grant Program provides additional opportunities for expansion in rural areas. Rockingham County has participated in two rounds of GREAT grants. In August of 2020, The NC Department of Information Technology's Broadband Infrastructure Office announced that Spectrum Southeast, LLC had been awarded \$265,416.92 to deploy broadband services to approximately 222 households, businesses, agricultural operations, and community anchor institutions in Rockingham County. In November, 2020, Spectrum Southeast, LLC was selected to connect an additional 339 potential locations (See Figure 4.7).

Figure 4.7: GREAT Grant Expansion Map



PRIORITY NEEDS

In the area of availability, the overall goal is to expand broadband to every home in the county with sufficient broadband speed to take advantage of current technological needs. As technology needs continue to change, the fastest connections possible should be the target rather than leaning on minimum speeds. Still, the reality is that having some connectivity is better than having no connectivity, which drives these priorities and their associated goals.

1. *Improve Maps*-The first priority should be to improve the maps indicating exactly which homes and business have broadband availability. The lack of clear and accurate availability maps is an impediment to all other digital inclusion and equity efforts.
2. *Increase Connectivity*-The second should be to connect areas where no broadband connection exists. For most rural areas, the cost of installing fiber to individual homes is extremely expensive. Fixed wireless may be the best solution with the County working with providers to develop these connections.
3. *Improve Connectivity*-The third priority should be to provide those homes and businesses with connection speeds of less than 100 Mbps download and 10 Mbps upload to a fiber connection that meets or exceeds bilateral speeds of 100 Mbps.

Addressing Priority of Needs

Goal #1: Improve Maps

Strategy 1.1: Encourage residents and local officials to contact legislative representatives and request changes or additions to the laws that will improve broadband infrastructure mapping.

Objectives

- (A) Create laws to mandate that Internet Service Providers (ISPs) provide the NC Department of Information Technology (NCDIT) with current and planned availability by street and address.
- (B) Dedicate Federal and State funds to broadband projects to collect information from individual households and businesses regarding the availability and speed of internet connections.

Strategy 1.2: Maximize the efforts of Rockingham County Information Technology to create complete maps using new and existing information.

Objectives

- (A) Build upon current relationships with ISPs to expand mapping of current coverage, gaps, and plans for expansion.
- (B) Consolidate existing maps to provide a greater understanding of issues regarding availability versus access deficiencies.
- (C) Dedicate Federal, State, and Local funds to collect information from individual households and businesses regarding the availability and speed of internet connections.

Goal #2: Increase Connectivity

Strategy 2.1: Dedicate State and Federal funds to expand broadband access.

Objectives

- (A) Increase the number of grant applications to connect eligible areas of the County, including cities and towns.
 - o County government should assist in the application for GREAT grants (Round 3).
 - o Cities and towns should capitalize upon recognized downtown designations to seek grants to fund public Wi-Fi networks in those areas.
- (B) Work with County and local governments to develop an RFP to determine the scope of need for future broadband projects.

Strategy 2.2: Advocate for an increase in the number of satellite and fixed wireless options for the most rural areas of the county.

Objectives

- (A) Seek to replicate the partnership that NCDIT created with SpaceX in Swain, Hyde, and Warren Counties. ("New Satellite Internet Pilot Program to Connect Students in Two N.C. Counties," "Another North Carolina County Joins Satellite Internet Pilot Program to Connect Students.")
- (B) Capitalize on existing funding available to expand public safety connectivity through the NC Voice Interoperability Plan for Emergency Responders (VIPER) network by building extra capacity for fixed wireless transmission.

Goal #3: Improve Connectivity

Strategy 3.1: Encourage residents and local officials to contact legislative representatives and request changes or additions to the laws that hinder fiber-based broadband expansion.

Objectives

- (A) Create or change laws to allow use of existing dark fiber and government fiber infrastructure construction to expand in areas where internet service providers will not invest in improvements.
- (B) Create or change laws to provide for more competition in the broadband market among ISPs.

Strategy 3.2: Regionalize the effort to increase availability to leverage more funds to create incentives for internet service providers to expand fiber infrastructure.

Objectives

- (A) PTRC should capitalize on its relationships with municipal officials to coordinate region-wide efforts at broadband expansion.

5. ACCESS

PRIORITY AREAS

- 1. Expand Wi-Fi Access
- 4. Increase Service Access
- 5. Increase Device Access

The Access Workgroup considered issues revolving around where internet connectivity may be available, but barriers exist to people that keep them from accessing it.

Group members serve the community in diverse capacities, offering a unique lens on how digital access impacts the function of education, recreation, government, and

community based organizations. Committee members gathered statistics and narratives from the community members served through their organizations. These narratives can be found in Section 9, Community Voice (page 32).

Everyone is affected by the digital divide, especially school-age children, work from home employees, health care patients, and county residents. **To achieve digital equity means that every North Carolinian would have the technologies, tools and skills needed to access affordable high-speed internet anywhere, anytime.**

According to data from the NC Broadband Index, developed by the NC Broadband Infrastructure Office, 55% of households have a broadband subscription. More than 25% of households do not have access to internet (subscription, cellular, or Wi-Fi access) and more than 20% report having no computer or internet enabled devices within the home. **More than 35% of participants accessing the Cone Health Care Connect Mobile food market reported no access to home internet services.**

In school year 2020-2021, over 1,800 households with students enrolled in Rockingham County Schools were issued a hotspot due to lack of connectivity. Chromebooks were issued to any student needing a device at home. **The school system serves as a community hub for Wi-Fi connectivity.** During the third week of September, 22,190 unique devices connected to the Rockingham County Schools network: 10.6K were computers, 8,478 were

1.1 million

North Carolina households lack access to high-speed internet, cannot afford it, or do not have the skills needed to take advantage of the digital economy.

handhelds (phones, tablets), 544 were wearable devices, and 41 were multimedia/other. Note: this number does not include student and teacher Chrombooks, as those devices are allocated to a separate, private network.

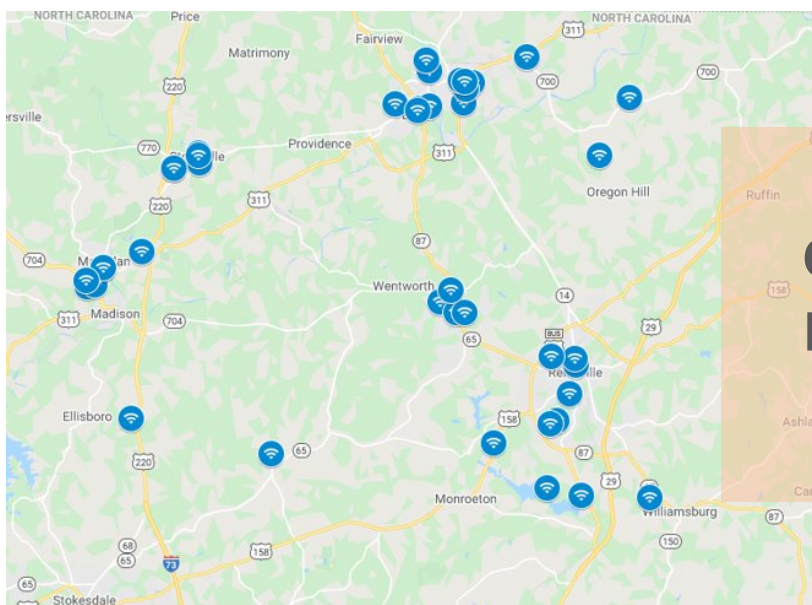
PRIORITY NEEDS

The group identified three leading barriers and challenges to digital access:

1. Insufficient public and private free Wi-Fi locations AND incomplete community knowledge of free access sites;
2. Affordable, sustainable, and robust broadband internet service;
3. Affordable, internet-enabled devices (tablets, computers, etc.);

Early in the pandemic, businesses and organizations opened their doors and parking lots to community members to help combat the digital divide. Rockingham County Public Libraries serve as a hub location for free internet access and utilize the mobile internet van to reach underserved and rural communities. Rockingham County Government compiled a database and map of 43 public internet access points including government buildings, libraries, schools, etc.). **Rockingham Community College equipped 9 areas across the county with Wi-Fi access** - Draper Recreation, Madison Mayodan Parks and Recreation Commission, Stoneville Memorial Park, Mill Avenue Recreation Center, Bridge Street Recreation Center, Elm Grove Baptist Church, Happy Home, Jerusalem United Church, and the Rockingham Community College parking lot. The map below highlights these locations.

Figure 5.1: County Wi-Fi Access Points



**Rockingham
County has 43
Public Access
Wi-Fi points.**

Goal #4: Expand wireless access

Strategy 4.1: Complete a community scan of private businesses, churches, and community-based organizations that provide free Wi-Fi network access. Use GIS mapping to overlay public and private access maps (output).

Objectives

- (A) Collect internet access data from private businesses and community-based organizations and submit to Rockingham County's Broadband Initiatives Team for mapping (ongoing).
- (B) Make maps easily accessible to the community through county, municipal and Digital Inclusion Coalition member websites.

Strategy 4.2: Within five years, increase the areas that have no-cost Wi-Fi network availability, with the aim of no-cost free public or private access points within no more than 10 miles of each Rockingham County residence.

Objectives

- (A) Enable Wi-Fi access in all government buildings.
- (B) Enable Wi-Fi access in all community and neighborhood parks by installing weather protected routers at park facilities that would expand access to parking lots and picnic areas. Suggested Neighborhood parks are listed below:
 - **Eden** – Dehart, Draper, Freedom, Grogan, and Peter Hill Parks
 - **Reidsville** - Barnes Street, Cambridge, Courtland, Glenndale, H.K. Grigg, Jaycee, Oaks and Woodland Parks
 - **Madison** – Idol and Natt Wall Parks and Carlyle Lewis Tennis Courts, John Collins Basketball Court
 - **Mayodan** - Elliott Duncan, Farris, Jake Atkinsons, Mayo River, Veterans' Memorial Parks
 - **Stoneville** – Memorial Park (Wi-Fi equipped)
- (C) Enable Wi-Fi access development in churches, income-based housing, and community-based organization buildings. Funding will be necessary to support the initial engineering, equipment, and ongoing service costs required to establish services in public/private use areas.
 - A pilot project has been launched in the Reidsville community by NC 100 in partnership with Reid's Computer Sales & Service and St. Paul Church. The plan is to include a project model based on the Federal HUD's Connect Home USA and Neighborhood Networks programs. The project will ping internet service from

St. Paul Church or a municipal-owned space to several access points within Marcellus Place, creating no-cost internet access for residents. This project should provide guidance and recommendations for replication across communities.

(D) Equip public and medical transportation options with Wi-Fi access (school busses, RCATS, Pelham Transportation). *Note: RCAT buses are equipped, but vans are not.*

(E) Fund infrastructure needs like sidewalks, bicycle lanes, and public transportation to decrease barriers to free Wi-Fi opportunities.

Strategy 4.3: Establish a countywide Broadband Resource Education Center.

Objectives

(A) Identify and equip a facility in an accessible location that can serve as an advocacy/implementation hub for home and public broadband access, affordable personal devices and services, and local technology training and support programs (i.e., digital navigators).

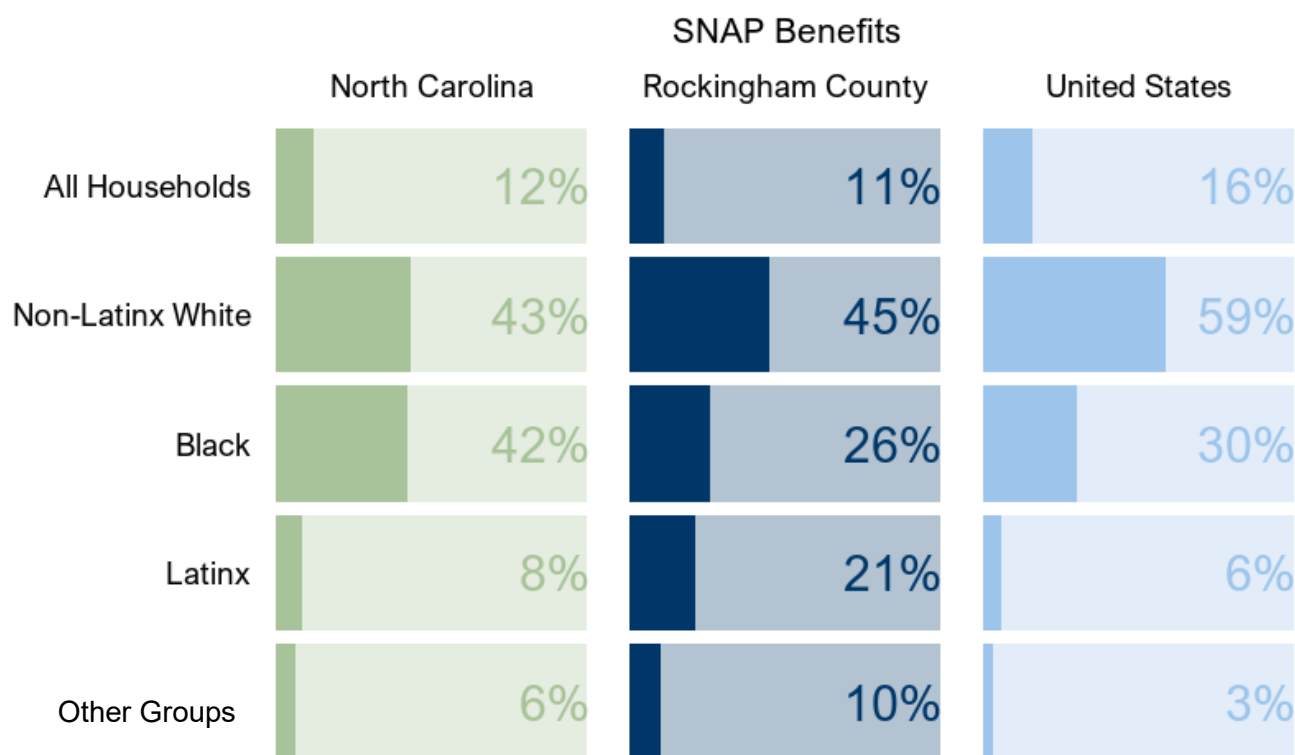
Goal #5: Increase access to low cost or no-cost broadband through stipend or subsidy programs and services.

The Federal Communications Commission issued the Emergency Broadband Benefit (EBB) program to provide a monthly discount on internet bills for qualifying households. The EBB Program will provide a discount of up to \$50 per month for broadband services for eligible consumers. That rises to \$75 a month for broadband service on tribal lands. Additionally, the program provides a one-time device discount of up to \$100 for a laptop, desktop computer, or tablet purchased through a participating provider. The one-time discount requires a consumer co-payment of more than \$10 and less than \$50. The Emergency Broadband Benefit is temporary. It will expire when funds are exhausted or six months after the Department of Health and Human Services (HHS) declares the end of the COVID-19 health emergency. For more information, visit <https://www.fcc.gov/broadbandbenefit>.

Additional Information on Low-Cost Internet Programs can be found on the following sites:

- <https://www.digitalinclusion.org/free-low-cost-internet-plans/>
- Spectrum Internet Assist - <https://www.spectrum.com/internet/spectrum-internet-assist>
- ATT Access - <https://www.att.com/internet/access/>
- T-Mobile - 10 Million Project - <https://www.t-mobile.com/brand/project-10-million>
- Verizon Lifeline discount - Fios - <https://www.verizon.com/info/low-income-internet>

Most households receiving public assistance qualify for EBB.



Other Groups consist of American Indian, Alaska Native, Hawaiian, Pacific Islander, and any other groups not specified.

Rockingham County Schools secured funding through T-Mobile's *Project 10 Million* for free internet connectivity through 1805 mobile hotspots. Students are identified through school-based personnel, focusing on free and reduced lunch eligible students and underserved communities. There are no limits on bandwidth within the first year, funded through the Elementary and Secondary School Emergency Relief Fund (ESSER Fund). The district is able to request additional devices if necessary. Students are eligible to keep the device for up to five years (length of the grant) or upon graduation from high school. Funding sustainability will need to be explored for school years beginning 2022-2023, beyond the life of ESSER Funds.

Strategy 5.1: Address gaps in unlimited bandwidth hotspot funding as well as connectivity for students residing in areas where hotspots are ineffective.

Objectives

- (A) Explore funding options to sustain unlimited bandwidth hotspots for all school students in need of the service beyond the current school year.
- (B) Reduce connectivity barriers for e-learning or students in quarantine in areas unable to connect through hotspots. *Note: Ongoing exploration of best practices is needed.*

Strategy 5.2: Increase enrollment in established programs (i.e., Emergency Broadband Benefit Program, provider plans) that give broadband stipends, scholarships or subsidies.

Objectives

- (A) Explore opportunities to implement assistance programs (similar to utility assistance programs) through Department of Social Services or community-based organizations serving Rockingham County.
- (B) Utilize local networks, marketing departments within participating organizations to increase community awareness of no-cost or reduced cost internet service.

Goal #6: Increase the number of people who have a device that allows them to participate fully online (Device Affordability and Cost Reduction programs)

Rockingham County Schools' early adoption of 21st Century Classroom Technology allows for a one-to-one model for students grades 6-12, eliminating the device barrier for many students. ECF and ESSER Funding (current year) were used to purchase 1,988 new devices with an additional 1,000 were purchased to replace end of life models. Elementary students have the ability to check out devices as needed.

Numerous education and community based organizations, including Rockingham Community College and Rockingham County Partnership for Children, provide devices for program participants.

Strategy 6.1 (Kindergarten - Community College): Utilize current programs to increase device distribution.

Objectives

- (A) Eliminate or minimize Chromebook insurance costs for students enrolled in Rockingham County Schools (average cost = \$30.00 per device).
- (B) Increase the number of devices available to enrolled students through Rockingham Community College's device loaner program.
- (C) Establish a device/equipment lending program through the county library system.
- (D) Secure funding to reopen the financial assistance application process for students at RCC needing scholarships to purchase internet service plans (including installation costs).

Strategy 6.2 (Community): Expand device ownership within the community.

Objectives

- (A) In partnership with businesses and education systems, develop and sustain a refurbishing program (with an identified lead organization who has the capacity to refurbish and distribute devices locally). Kramden Institute (Durham) has been identified as a potential partner.

- (B) Explore a Device Refurbishment curriculum within Rockingham Community College and RCS Career and Technical Education programs (funding would be needed until an ADM funding stream is established).
- (C) Provide funding for programs that provide computer devices to community members.
Example: Beginning September, 2021, NC 100 will begin a digital navigation pilot program, distributing low cost devices to participants.



6. ADOPTION

PRIORITY AREAS

1. Create Resources
2. Increase Assistance
3. Align Community

The Adoption Workgroup focused on digital literacy, awareness of access options, engaging community leaders to share resources locally.

The lack of technical skills and knowledge needed to navigate use of computers and the Internet is a prime obstacle to many individuals being interested in, or being able to take advantage of, online services and resources. Success on the scale of a

county-wide effort to decrease the number of non-adopters requires a portfolio approach that offers instruction at various levels and scales, digital literacy, awareness of access options, takes into consideration the current access and availability of internet access in Rockingham County municipalities, townships, and incorporated areas, and the consistent engagement of community leaders to share resources.

Primary assets for digital literacy assistance in Rockingham County include the following:

Rockingham Community College offers computer skills classes at various levels through its Business Technologies Division and as part of the curriculum for various degree and continuing education programs. These classes meet many needs, but there is evidence that alternatives are needed that target specific populations that are most in need of assistance getting online. There is interest and need for digital literacy training at different levels and scales—a portfolio of offerings. There is also a need for digital literacy training at no or little costs to the public.

NC Works (via Triad Goodwill) provides basic computer literacy assistance to clients to assist their job searches and provides a limited number of computers for use by clients and visitors.

The Parks and Recreation Departments in Reidsville, Eden, and Madison. Each department has dedicated staff and computers used for digital literacy training.

The Rockingham Partnership for Children (including Parents as Teachers program) supplies Smart Start services to qualifying families. COVID-19 amplified the need for virtual monitoring and for parents to engage with their children's teachers remotely. Both

THE INTERNET REPRESENTS A
FUNDAMENTAL SHIFT IN HOW
AMERICANS CONNECT WITH ONE
ANOTHER, GATHER
INFORMATION, AND CONDUCT
THEIR DAILY LIVES.

need computers and digital literacy training for parents, many of whom speak English as a second language.

Rockingham County Library system supplies one-on-one training and assistance to patrons on an as-requested basis at all branches of the library.

Rockingham County Primary Care Initiative. Members of this project include healthcare providers Cone Health, UNC Rockingham, and Compassion HC that provide assistance and support to clients via telehealth options. Made possible from an \$800,000 grant from Blue Cross and Blue Shield of North Carolina (Blue Cross NC) and supported by the University of North Carolina at Chapel Hill to address a need for better access to health care in Rockingham County by increasing patient-centered primary care.

NC 100, a Rockingham County based non-profit NC 100, in partnership with the Reidsville Area Foundation and other resources, expanded their Digital Navigator program to supply individualized or small group aid to community members who need affordable home internet service, affordable internet-capable devices, and/or coaching in introductory digital skills to become effective home internet users.

The group identified three leading barriers and challenges to digital adoption:

1. Volume and capacity of organizations offering Digital Literacy Education, Computer Skills Training.
2. Lack of computer labs for classroom instruction and the dependence of volunteers to deliver the instruction.
3. Lack of “technical navigators.” These are individuals who provide a bridge to the information, skills and resources needed to bring non-adopters along the digital inclusion path. In addition to digital literacy training, new adopters often require assistance in setting up and using their devices. This sort of assistance is not readily available in Rockingham County at this time.

PRIORITY NEEDS

1. Create and communicate resources for outreach about current internet access areas.
2. Fill the gaps of who else is supplying information technology assistance and education and address gaps uncovered by outreach in the community.
3. Build consensus on navigation/inclusion definitions between the community and resource providers.

Strategy 6.1: Connecting digital literacy training with relevant content and services.

Inclusion plans in North Carolina have developed innovative digital-literacy training strategies to aid those who do not feel the Internet is relevant to them as well as those who already understand the importance of the Internet to their everyday lives. There is a need to conduct

direct outreach where people are meeting already, as well as create space for focus groups and listening sessions.

Strategy 6.2: Making low-cost computers available.

Low-cost or free computers are often just as important as having access to low-cost or free Internet options, particularly for people in low-income communities. Many communities have embraced this reality by refurbishing older computers and making them available to low-income people for free or at a reduced cost.

Strategy 6.3: Running more public access computing centers across Rockingham County.

These spaces also complement the digital literacy classes that are often offered in the same location. Low-income individuals and families value public access computing centers because they are often in convenient locations and have helpful staff that provide them with one-on-one support with computers and broadband Internet access.

Strategy 6.4: Exploration of secondary and post-secondary curriculum and certifications in Digital Literacy and Navigation.

Potential programs to explore involve the exploration of a Rockingham Community College led Digital Navigator support network within Rockingham County that would help to develop relationships with members of the community, as well as the exploration of a Rockingham County Government sponsored staff position to expand support and ability for digital literacy training and promotion to align resources.

Strategy 6.5: Leverage local non-profits, grassroots organizations, and faith-based organizations within Rockingham County to support county efforts.

These organizations and groups can be leveraged to gain access to under connected, underserved, and low-income residents for distributions of services and training....

Strategy 6.6: Work with retail and corporate entities inside of Rockingham County.

Funding

- Hardware/Software
- Reduced/Low cost or Free services
- EBB
- Public/Private partnerships

7. IDENTIFIED STRATEGIES (COMPILED)

	GOAL	STRATEGY AND OBJECTIVES
Availability	Improve Maps	Encourage advocacy with legislative representatives for laws that will improve broadband infrastructure mapping.
		Maximize the efforts of RC Information Technology to create complete maps using new and existing information.
	Increase Connectivity	Dedicate Local, State and federal funds to expand broadband access.
		Advocate for an increase in satellite and fixed wireless options for the most rural areas of the county.
	Improve Connectivity	Encourage advocacy with legislative representatives for changes to laws that hinder fiber-based broadband expansion.
		Regionalize efforts (to leverage more funds) to create incentives for service providers to expand fiber infrastructure.
Access	Expand Wireless Access	Complete a community scan of private businesses, churches, and community based organizations that provide free, reliable Wi-Fi network access. Use GIS mapping to overlay public and private access maps.
		Increase reliable Wi-Fi network availability, with the aim of access points within 10 miles of each residence.
		Establish a countywide Broadband Resource Education Center (long-term goal).
	Increase Access to Low-Cost Broadband	Address gaps in hotspot funding as well as connectivity for students residing where hotspots are ineffective.
		Increase enrollment in established programs (i.e., Emergency Broadband Benefit Program, provider plans) that give broadband stipends, scholarships or subsidies.
	Increase Access to Devices	Utilize current programs to increase device distribution to students K-12 (RCC, RCS, RCPC).
		Expand device ownership within the community through refurbishing and digital navigation programs.
Adoption	Create and Communicate Resources	Connecting digital literacy training with relevant content and services.
		Exploration of secondary and post-secondary curriculum and certifications in Digital Literacy and Navigation.
	Address and Fill gaps in information technology assistance	Running more public access computing centers across Rockingham County.
		Work with retail and corporate entities inside of Rockingham County.
		Leverage local non-profits, grassroots organizations, and faith-based organizations to support county efforts.

9. COMMUNITY VOICE

Healthcare

We certainly have challenges communicating to many of our patients via the web. It is a multifactorial issue which including literacy challenges, lack of patient device access and very spotty internet coverage. From a little different angle, I am a physician who lives about 3 1/2 miles from the hospital on a major artery (highway 158 West) on the city/county line. We have slow DSL in my neighborhood. This has impacted my ability to sign on to the hospital computer system when on call to address patient issues. It can be very frustrating when a review of the electronic medical record is needed outside the office. At times, the internet is very SLOW and may simply stop working when making a patient inquiry. This continues to be a major problem on a recurring basis which impacts both patients and physicians alike who live in this rural area.

- Dr. R. Michael Rourk, Rockingham Gastroenterology Associates

Without divulging too much information, I had a special-needs patient who was cared for by her elderly mother and they clearly had little access to technology/Internet. I actually ended up driving out to patient's house (definitely rural!) on my lunch break because the pt was totally unable to get out of bed and clearly needed to be evaluated. Luckily, I have wonderful colleagues at WRFM and 2 of them accompanied me to get this patient care. Her mother was so moved. She still talks about that to this day and now I see the whole family. Patient avoided and unnecessary EMS ride and got the care she needed. Unfortunately, we aren't able to do this for every patient but GOOD or even decent internet access would have been very helpful in at least assessing the patient visually.

- Ashly Gottschalk, DO Family Medicine Western Rockingham Family Medicine

I do not have a specific story, but I contact those who want telehealth by regular telephone. Most of the patients are elderly, have transportation problems and have land lines not cell phones. I have considered this as one of the few pluses of COVID, as it has allowed me to have telephone visits with these type of patients. They have chronic orthopedic issues that often can be handled on the telephone. They are not receiving narcotics, they do not have a wound or lesion I need to see. We have a nice conversation on the phone at their convenience. For these elderly patients I often mix regular office visits where they need x-rays done and follow-up visits as to their range of motion and pain level and activity level which I can get over the telephone. I do know that many patients in the Western part of the county have very limited internet, at least which is what they tell me. I often give reference material and give them web sites to review and study about their condition. Younger people love to do this. I hear over and over that they cannot access the web from their home very well or none

at all. I often pull up the site in the office for the patient, have them review it and print out information they want to have to review later.

- Dr. Wayne Keeling, OrthoCare Reidsville

We have had to convert video visits to telephone because lack of internet. I have had patient say they are so thankful for the video visits, and they love to see our faces. Face-to-face video calls provide connection for many patients who have been isolated, especially in our older adult community. I have had several older adults lament on how much they miss their family and grandkids due to COVID-19. They will take a little extra time to talk, almost like you are right there in the room with them. A phone visit doesn't provide that human connection. In a time where so many are struggling, internet access brings hope to many who feel alone.

-Anna W. Boone, PhD, ANP-BC, Rockingham Gastroenterology

With the intermittent flares of COVID-19, while we try to see as many patient's as possible in the office, we have had to see more and more telemedicine patients. Insurers often require video capability for these visits, which requires stronger internet. Out of 10 video telemedicine visits I perform, 8 have connections issues resulting in poor video/visibility, spotty voice/communication, and frequently needing to reconnect the visit. Unfortunately, sometimes appointments need to be rescheduled because the attempts are taking 30+ minutes and we run out of time. An even worse situation is for patients who do not even have internet connection at all, which can limit their ability to receive healthcare in the current environment. My colleagues in some of the larger cities with access to faster broadband internet do experience similar issues, but at a far lower rate. COVID-19 has changed our world; Telemedicine has allowed us to adapt to an environment in constant flux, and will likely benefit patients in previously unthought-of ways. However, reliable internet connections are imperative for this to be possible.

-Eric Gill, DNP, AGNP-C, Rockingham Gastroenterology Associates

My family and I moved to Reidsville in 2015 after my husband fell in love with this area and the people after working in Annie Penn hospital as a hospitalist. The colleagues whom my husband worked with at that time have morphed into family from acquaintances.

As we were having a home built in this area, we initially lived in a "tobacco cabin "with a beautiful pond and dairy cows to keep us company. My first introduction to lack of Internet in this area was when we lived in that tobacco cabin. As I'm a Pediatrician and my husband an Internist, we of course would be on call for our patients. There was only one spot where we could make calls from, a large oak tree, outside the cabin. As long as I stood underneath that tree, reception was good-not very comforting in the middle of the night, for a woman from the "city "with howling coyotes outside! This of course was very frustrating for us as it limited our capacity to not only communicate, but also take care of our patients.

In our home now, we still do not have any Internet. We use a "hot spot "from Verizon or our phones to "hook" our computers up to in order for us to do our work from home. To be able to use this way of communication with our patients is definitely out of the question as our work mandates that we use a secure Internet site for not only HIPAA confidentiality, but also for protection against cyber-attacks. Therefore, we are unable to use our personal phones to make any phone calls to our patients directly or conduct video chat with them. This in itself limits the care to our patients that we feel that they deserve and expect.

When we moved to our new home, lack of Internet continued to be an issue. My son, who was in 7th grade at that time and a new student at Rockingham middle school, called Time Warner to ask what we needed to do to have access to Internet. He was told to get names and numbers of all neighbors on our street who are willing to be customers for Time Warner. My son and my husband walked up and down Baynes Rd for these signature. My son quickly uploaded the information and called Time Warner one week later to confirm the receipt of this list. Unfortunately, Time Warner was bought out by Spectrum, who proceeded to tell him they could not honor the request. Then, my husband asked Spectrum what was required to have Internet access as our neighbors half a mile down from us had Spectrum as their carrier. He was told that we would have to pay \$40,000 in order for those cables to be laid to our home for the privilege of Internet usage.

Seven years later, we still do not have any Internet access and we continue to use our Verizon hotspot or our phones in order to perform our work. In this COVID environment, I have also seen my children as well as other children in our environment suffer due to lack of Internet. Majority of the children are given Chromebooks from their schools; however, lack of Internet does not allow them to use those books effectively. Our daughter, who is a student at Rockingham middle school, had to be at her father's office, in the back, in order for her to access Internet from his office to do her work. Our son, who was a first year student at UNC Chapel Hill, and who was sent home due to COVID 19 pandemic, also suffered in his academics due to lack of this Internet. He would either be in my husband's office to try to get some work done or at Panera's in Greensboro to do additional work. It is hard enough for these children to perform virtual academics, but lack of unreliable Internet makes it even more challenging.

In the office, my husband and I often come across families who do not have adequate Internet access for us to Tele health with them via video chats. Being able to "see" our patients while discussing their medical condition is very important. For us to be able to see our patients across the computer screen helps us to determine how they not only physically look, but also assess for any respiratory distress, color, toxicity etc.

For myself, as a Pediatrician, I enjoy the rare moments when I can see "my kids "on the Tele health as it gives both myself and the family a non-threatening and less anxiety provoking means to offer care. My younger patients actually get excited with this new way of care as they are already a technology generation. I will actually have young children who will actively give me their medical history when compared to face to face visits in the office, which to me is quite exciting.

My husband finds it frustrating to care for his patients virtually because many of the elderly patients are not only technologically challenged but also have poor access to the internet.

In this new 'norm' of the COVID-19 pandemic, we physicians are overwhelmed by the number of sick patients that do need medical care. Tele health allows us to take care of as many families as we possibly are able to without causing added suffering that coronavirus has already contributed to our environment. In order to make this possible, reliable Internet access is necessary.

-Dr. Shilpa Gosrani, Reidsville Pediatrics

-Dr. Nimish Gosrani, Gosrani Optimal Health

Business & Industry

Quality Wi-Fi is so essential when operating a child care center and when the pandemic happened it proved to be very vital. One of the biggest changes when the pandemic happened was that we would be serving school-age children full-time and they would need access to the internet for their class zooms. Also, the NC Pre-K teachers were offering zoom sessions from their classrooms to the children at home. Some of the children and their families may not have access to the internet at home so the child care centers may be the only place they can do their work. With so many individuals using the Wi-Fi, we had really slow service and had to seek alternative solutions to provide internet services. I feel that if we had quality Wi-Fi during this time, we would've been able to accommodate everyone in the building a lot better.

-Donna White, Director of Carols' Care (Childcare Center)

Reid's Computer Sales and Service is a Spectrum partner, meaning we can sell commercial spectrum services, but not residential services. I was working on a security camera project at McCollum Commercial Warehouse, but the speed of the internet was not strong enough to stream the video feed. The management team asked if there was something I could do, so I put an order in for spectrum services. The location came back red, which meant it was not in a serviceable zone. This building is on the fringe of the city limits near other businesses that do have Spectrum, so I reached out to Scott Cooper, the commercial spectrum representative. Scott researched and discovered the site could be serviced but would incur additional costs for the installation build up. Through conversation, we discovered that multiple tenants needed service, and because of this cooperation, the cost for installation was decreased, and now the whole location is "hot" for spectrum services. Navigating this sector is difficult, but strategic partnerships can make a huge difference.

-Chris Reid, Owner of Reid's Computer Sales and Service.

The COVID-19 epidemic has detrimentally impacted The Barry Joyce Cancer Resource Center's annual fundraising season, which creates a strain on the organization to provide essential client services during this difficult time. As cancer patients, the BJC clients are already fighting through physical, emotional, and financial challenges that have now been worsened by the threat of the coronavirus and the life uncertainties it presents. BJC is hoping to continue to provide nutritional and emotional support for this vulnerable population whose daily lives are made better by knowing this organization understands their plight and cares enough to help shoulder their burdens.

Many of the individuals we serve do not have Internet or a way to communicate visually with the outside world. Our solution for our friends to get the emotional support they were getting at The Barry Joyce Cancer Resource Center was to establish a "video reality" program. Device costs prohibit us from offering it to all 112 of our clients, but we know it would be life-changing to help them deal with the additional health crisis that has been thrown at them.

-Jennifer Joyce, Director of Barry Joyce Cancer Fund

Families & Education

I have a little sister and when we moved to Reidsville, school went virtual and she had to do work on a laptop. At that point, she had to borrow a laptop from the schools. If she had to do online work now, she couldn't because she doesn't have a device now. Also, we do have Wi-Fi, but when my sister used the laptop she just couldn't stay connected. Our Wi-Fi is not strong and reliable.

-Desire Martin, Nurse Family Partnership (RCPC) Participant

When Rockingham Community College offered hot spots when the pandemic started, students completed applications for assistance. Here are a few stories shared by students to explain why access was needed.

- *Getting Internet access would be such a relief for me. Right now I have to go to friends and relatives' houses, or to coffee shops, or restaurants. In many ways Internet access would take a huge burden off of me and my friends/family.*
- *It's difficult to do online classes without a reliable internet connection and I can't afford paying for internet on my own. I often have to drive to my friend's house to do my schoolwork. I am able to use their internet, but all the driving adds up also.*
- *This would enable me to be able to continue to take online classes at home while having a full-time time job, 3 kids and working split shifts with my husband. I am working towards an associate in Office Admin. We live in an area where there is no provider for Internet so unless we get satellite internet which we cannot afford. Our children use*

tablets to read and work on math but their apps cannot be used now since we are not connected to Wi-Fi or any type of internet.

- *I would love to have internet so I wouldn't have to go somewhere with Wi-Fi every time I want to work on anything! I have 2 kids and I have to take advantage of every opportunity I get to work on schoolwork, nap time etc. That would help me be able to really focus on my work and not rush!*
-

Last year, when the pandemic started, my kids, my husband, and I were all sent home to virtual school and work from home situations. At the time, the only internet we had was DSL and it has never been particularly great. It gave us just enough bandwidth to check emails and use Google drive on one computer at a time. If we were patient enough to deal with constant buffering, maybe watch a low quality video but - not a whole lot else. The speed is typically less than 1 mbps download or upload with DSL at our house. In looking for solutions, I tried calling conventional internet service providers only to be tossed around and finally told that none of them could or even would help us. I looked into satellite service, but discovered that, not only are they expensive, but they are also unreliable. If you get a cloud in the wrong place, your signal drops. And if you're having a rainy day, you might as well hang it up for the day.

I did a lot of digging and discovered another option that is advertised as rural and mobile internet connection through cellular service with cellular modems. The service I found required that I buy my own device and SIM card. We paid \$340 for the MoFi and because we still didn't have a strong signal we paid an additional \$170 for a Wilson's amplifier antenna, SIM card, and all the parts we needed to connect and mount it. We were then charged a \$30 "membership" fee and \$100/mo for 500GB.

My husband, my kids, and I started using the service for school and work as soon as we got everything in place. It was a little better than DSL, but we noticed that when all of us were on at one time we all wound up buffering and dropping a lot. We hadn't cancelled our DSL yet, so we opted to put one of us on DSL to help with the load on the MoFi. It helped, but we were still having a hard time with connection, so my husband decided that he would go setup his work from home space at his mom's. She lives in Greensboro and has AT&T U-verse. We didn't join him at her house because there is not enough space for all of us and we were in the middle of a pandemic, so having us all there would have been considered unsafe.

Well, even with this new plan, it didn't take long for us to hit the data cap. Keep in mind, 8 hours a day, 3 people, Zoom conferences, video streaming needed for school assignments, my work applications, which are pretty bandwidth intensive. 500GB went by within about two

and a half to three weeks. The only way to quickly get us back up so that we didn't lose school and work time, was to buy another SIM card and another data plan. We had to pay another membership fee and we paid another \$100 for 500GB, thinking that maybe it was a fluke and that we wouldn't use as much again. We also adjusted all of our settings so that our data usage would be as efficient as possible.

We still wound up hitting the cap. We had to pay another \$30 membership fee, then upgrade to an 800 GB plan for \$130/mo, but we had to wait for the provider to send us a SIM card. So, we missed three days of school and work waiting for the new SIM card. We tried to sit in the car at a McDonalds so the kids could go to school, but that didn't work out too well, either. Apparently there were a lot of other kids doing the same thing and the wireless service at the restaurant just wasn't able to keep up.

The SIM card for the 800 GB plan showed up and it worked great! Until it didn't. I found out something very interesting about these cellular internet companies. They aren't always stable. Our provider's supplier "surprised" them and shut all of their Blue plan customers off because they didn't want to offer the 800 GB plans anymore. The Blue plan is basically AT&T. This is important to my story, because the only cell signal we can get here is AT&T. So, we're kinda stuck with that as our only option. The new Blue plans that are offered only work with modems that the provider sells and the price has increased. This time, though - they did, at least, offer an unlimited plan for \$160/mo. So - not having a lot of other options, we had to buy this new modem (luckily the provider gave us \$100 off of the price so we got it for \$110) and start with the \$160/mo plan. Even with this new, supposedly unlimited, supposedly super stout plan and modem, we still have connection speed issues and we still have to rely on supplementing it with the old DSL line. Though the cellular signal is usually faster than the DSL line, it is not consistent and it is not always reliable. If the towers are having high traffic days, our speeds can slow down to a crawl. If something happens to the tower we are pointed at, we are out of luck until it is fixed. We are also at the mercy of these rural cellular providers.

We are really trying to make all of this work. When I've told people this, many have said "well, when the pandemic is over, you'll go back to the way that it was before and you'll be able to do without again..." except that's not what's going to happen. The kids' schools have already said that now that (mostly) everyone has access to the internet, to expect more internet-heavy assignments and that there will be no more snow days, but that they will have virtual learning days instead. Also? My husband's and my jobs aren't going back on site. Our jobs have realized a great advantage to having a lot of their workforce at home and are negotiating sending us to work from home permanently. So it feels like my struggle to keep internet in this home is only just beginning. I am VERY lucky that I've been capable of piecemeal-ing a solution together, though it has cost us a lot and has been very difficult to maintain.

Broadband internet should be considered a basic utility. It is increasingly becoming a necessity for school, work, bill paying, information, and even healthcare.

Please let me know if I can give you any more information or if I can help you help me to solve this problem. There are many families with school aged children in my area. There are also many elderly here that are likely going to need more and more telehealth options. This is literally becoming a life and death situation when you consider that education, means of making a living, and health care are tied to whether or not we have reliable, consistent, and robust internet connection.

-Sara Cavanaugh, Williamsburg Community resident

9. CONTINUING THE WORK

CONTINUING THE WORK

Although the Rockingham County Digital Inclusion Coalition was created to develop a digital inclusion plan, the group has developed the capacity to continue its efforts at achieving digital inclusion goals. The group members elected to stay intact as a resource for Rockingham County residents. The group will compile and maintain a comprehensive list of resources for its residents and area organizations that will serve to improve broadband access. It will continue to provide input on behalf of residents to government officials regarding the needs of the community in matters of digital equity and inclusion.