

November 2022



CONNECTING MCDOWELL COUNTY

McDowell County Digital Inclusion Plan

*Prepared By
Foothills Regional
Commission*

*Adopted By
County Board of
Commissioners
December 5, 2022*

TABLE OF CONTENTS

Introduction	03
Vision, Mission, & Values	06
Definitions	07
About McDowell County	08
Broadband Availability	10
Broadband Adoption	20
Goal 1: Connectivity	24
Access to Devices.....	25
Goal 2: Device Access	27
Digital Literacy & Skills Opportunities.....	28
Goal 3: Digital Literacy	30
Continuing the Work	31



INTRODUCTION

Broadband service represents critical infrastructure necessary for the well-being of residents and businesses alike in the Foothills region. Local businesses –and the jobs they create–depend on high-speed internet access to drive their operations. Residents of all ages need broadband service as they navigate the digital world through activities like telemedicine, distance learning and, in some cases, even work. Just like roads and water, access to broadband has become a necessity of modern life, and should be treated as such moving forward.

Digital inclusion refers to the activities and strategies used to ensure all individuals and communities, including the most marginalized, have access to and use of Information and Communication Technologies.

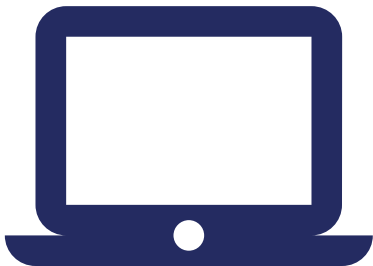
The four key elements of digital inclusion include:



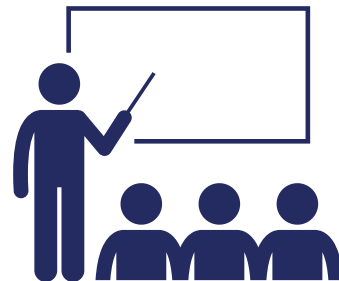
Access to high-speed, reliable
broadband



Affordable internet and user devices



Access to internet-enabled devices
that meet the needs of the user



Access to digital literacy training

Recognizing the importance of broadband in an increasingly “remote economy”, the **Foothills Regional Commission Council of Governments** entered a grant agreement with the **Institute for Emerging Issues at NC State University** to develop digital inclusion plans for McDowell, Rutherford, and Polk Counties. The project, titled “Making Western NC the National Leader in Broadband Access and Adoption,” is funded by **Dogwood Health Trust**. Upon completion of a digital inclusion plan, \$50,000 will be awarded by Dogwood to each of the three counties in 2023. By the end of 2023, an additional award of \$25,000 will be awarded to the three counties.

As a result, Foothills Regional Commission partnered with stakeholders in McDowell County to develop a digital inclusion plan that seeks to collaboratively address the issues of broadband availability, access, and adoption while increasing connectivity throughout the county. Through a series of meetings, a group of diverse community members, business owners, and leaders from McDowell County, including **Connect McDowell**, the leading 501(3)(c) nonprofit broadband coalition in the county, worked to identify technology access issues, broadband adoption and utilization gaps, and actionable steps to close the digital divide. The following statements meld various stakeholders' thoughts, frustrations, and aspirations regarding broadband and provide a roadmap to a more equitable digital future.

**A SPECIAL THANK YOU
TO THOSE WHO
CONTRIBUTED THEIR
TIME AND
KNOWLEDGE TO THIS
PLAN**

FACILITATION & PLANNING

The following individuals served as the primary contact for research, outreach, community engagement, and this plan.

Izzy Norman, Foothills Regional Commission

Katelyn Smith, Foothills Regional Commission

James Ayers, Foothills Regional Commission

Mackenzie Wicker, Foothills Regional Commission

COMMUNITY PARTNERS

The following individuals served as community outreach contacts and provided feedback throughout the planning process.

Connect McDowell Board Members:

Keith Buchanan, APlusnetworking, Co-Founder & President of Connect
McDowell

Madalyn Gaito, Director of Development & McDowell Technical Community
College Board Liaison, Vice-President of Connect McDowell

Kim Effler, Executive Director of McDowell Chamber of Commerce, Connect
McDowell Board of Directors Treasurer

Ashley Boone, McDowell Economic Development Association, Board of
Directors executive committee member at large

Garrett Berryhill, McDowell County Schools

Brenda Vaughn, McDowell County Commissioners

Lavita Logan, Community Forums

Jason Cochran, City of Marion

Kim Humphries, Community member at large

Lisa Ellis, Community member at large

Portia Bollinger, Executive Assistant at McDowell Chamber of Commerce

Carlos Lopez, Youth Coordinator at Centro Unido Latino Americano (CULA)

People Invited:

Susan Elliott, Community member and business owner

Marlan Brinkley, Director of McDowell County Libraries

Katharine Ladnier, Planner Assistant with McDowell County Planning
Department

VISION, MISSION, & VALUES

VISION STATEMENT

A connected McDowell County where broadband is considered an essential utility and all residents are empowered to use technology to enhance their education, health, employment opportunities, and overall standard of living.

MISSION STATEMENT

To improve digital literacy and expand access to reliable, affordable, high-speed broadband in McDowell County through advocacy, collaboration, and education.

VALUES

- **Accessibility:** All McDowell County residents should have access to reliable, high-speed broadband to meet the needs of work, school, and civic involvement, as well as access to the hardware and knowledge needed to successfully engage in the digital world.
- **Equity:** High-speed broadband should be considered an essential utility and available to all regardless of background, geographic location, economic status, or other circumstances.
- **Affordability:** The quality of broadband access for residents should not depend on their level of wealth.

DEFINITIONS

BROADBAND

The Federal Communications Commission (FCC) defines broadband as the transmission of wide bandwidth data over a high-speed internet connection with a minimum of 25 megabits per second (Mbps) download and 3 megabits per second (Mbps) upload speeds.

The following terms are used throughout the plan to explore the concept of digitally inclusive communities.

DIGITAL DIVIDE

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

DIGITAL EQUITY

A condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy.

DIGITAL LITERACY

An individual's ability to use information technology (IT) and digital technology to find, evaluate, create, and communicate information.

DIGITAL NAVIGATOR

A trusted individual who provides one-on-one or small group assistance in internet adoption and the use of computing devices.

ABOUT MCDOWELL COUNTY

GEOGRAPHY

McDowell County is located in Western North Carolina and lies east of Buncombe County. It is situated in between the Appalachian Mountains and the piedmont region. It is a rural community with Marion and Old Fort being the only municipalities.

According to the 2020 census, the population density of McDowell County is 101.3 per square mile. The low population density in the county poses a challenge for residents who want high-speed internet connection in rural areas. Many providers will not offer service in areas with low subscription rates and do not see the value in expanding to these locations. Another barrier facing this community is the mountainous terrain. In order to bring cable internet service to rural areas, providers would need to install the necessary infrastructure in the country. This can be expensive or difficult to accomplish, which leaves rural internet options often unavailable.

ECONOMY

One of the key components to digital inclusion is affordability. Personal finances can dictate whether individuals have access to internet and devices. According to the U.S. Census Bureau, McDowell County's poverty rate in 2020 was 15.6 percent, which was higher than the state average of 13.4 percent and the national average of 11.4 percent. The City of Marion also had a high poverty rate in 2020 at 25.4 percent. With high poverty rates within McDowell County, we can infer that poverty is a likely barrier to high-speed internet subscriptions in the area.

Along with poverty rates, the median household income in McDowell County represents issues with the affordability of broadband services. In 2020, the median income in McDowell County was \$47,085 which was lower than the state median income of \$61,972. This gap in annual income can result in families operating on tight budgets and prioritizing crucial living expenses over a high-speed internet subscription.

DEMOGRAPHY

McDowell County's demographics should be considered in future digital inclusion efforts. In regard to digital literacy, McDowell County has a higher number of older adults living in the area. In 2020, the population of citizens 65 and over was 20.5 percent, which was higher than the state average of 17 percent. The county also has a smaller portion of citizens 18 and below, only representing 20 percent of the population, compared to the state average of 21.8 percent. Older adults tend to possess lower levels of digital and internet-related skills due to barriers around access, installation, knowledge, and trust. As the internet becomes more integrated into everyday life, they are at a higher risk of becoming disadvantaged and thus require additional assistance in digital inclusion efforts.

McDowell County also has residents that are different races and ethnicities. In 2020, 2,947 individuals identified as Hispanic, 388 identified as Asian, and 216 identified as American Indian. These cultural groups suggest that there may be residents who speak various languages other than English in the county. In fact, in 2020, 7.1 percent of people in McDowell County spoke a language other than English at home and 0.85 percent of the population had limited English. With this in mind, digital inclusion resources will need to be provided in other languages to ensure equitable access to services.

BROADBAND AVAILABILITY

BROADBAND PROVIDERS

Within McDowell County, there are 9 fixed internet service providers (ISPs); three providers offer residential fiber, two extend fiber to businesses and institutions, two offer cable, three offer satellite, one provides fixed wireless, and one provides DSL.

Provider	Technology Type	Maximum Advertised Speeds
Skyrunner	Wireless Internet Service Provider	25 Mbps download / 5 Mbps upload
Frontier	DSL & Fiber	25 Mbps & Up to 100 Gigs
Optimum	Cable & Fiber	940 Mbps & 5 Gig
Spectrum	Cable & Fiber	1 Gig & Up to 100 Gigs (business service that some residents opt for)
Conterra	Fiber	Up to 100 Gigs (serves government agencies, schools, businesses)
ERC	Fiber	Up to 100 Gigs (serves government agencies, schools, public safety networks)
HughesNet	Satellite	25 Mbps download / 3 Mbps upload
Viasat	Satellite	30 Mbps download / 3 Mbps upload
Starlink	Satellite	50 to 200 Mbps download

Despite 7 of the 9 ISPs extending their services to residents in McDowell, 23.6 percent of households in the county do not have internet access, according to the American Community Survey 2013–2017 5-year estimates. On top of a large unserved population, many McDowell residents report being underserved by their ISPs. It is important to note that the maximum advertised speeds are not available to all subscribers and actual speeds tend to be much slower. Within the county, the most widely available technologies remain cable and DSL. Fiber optic cable has risen in popularity with its promise of consistent high-speed internet, but less than a quarter of the county has access to it through Optimum or Frontier. The following section explores some of the reported downfalls of local broadband provision.

Skyscraper is a fixed wireless internet provider, or WISP, in Western NC that transmits the internet to users via radio waves instead of cables. This type of service involves beaming an internet signal from a land-based tower to an antenna attached to a residential or office unit. This form of internet is less expensive to install in rural areas because it does not require building out cable or DSL infrastructure from scratch. However, this service costs more than DSL; the minimum price for non-broadband with data caps is \$45 a month or \$95 a month with no data caps. This coverage does not support fast download/upload speeds and low latency, often leaving users underserved and dissatisfied. Additionally, this service requires a clear line of sight from the tower to the antenna, which is difficult to achieve in mountainous areas with dense foliage, such as McDowell County.

Viasat and HughesNet are two local providers that deliver satellite internet to rural locations in North Carolina so long as there is a clear view of the sky. These services offer various monthly plans with download speeds ranging from 12 to 30 Mbps and unlimited standard data with varying high-speed data limits. When data limits are exceeded, HughesNet reduces download speeds to 1 to 3 Mbps. Compared to HughesNet, Viasat offers a more extensive range of speeds, high-speed data, and price options.

Satellite is often the only internet option in low density areas where other modes have not been built out, yet it has limited functionality and tends to be exceptionally expensive, has high latency, and has stringent data restrictions.

Starlink is a new satellite service that provides faster internet speeds through its network of low earth orbit (LEO) satellites. Unlike other ISPs, Starlink satellite dishes are under 20 inches in diameter and have a built-in snow and ice melting function, resulting in less interruptions during bad weather. The company advertises download speeds averaging around 100 Mbps, with latency as low as 50 milliseconds. As of now, Starlink is sporadically available throughout McDowell County, but they plan on expanding consistent coverage to the Southeast by 2023. Another obstacle to this service is cost, for there is a one-time hardware fee of \$599 in addition to a monthly fee of \$110.

Another source of internet in McDowell County is offered through cellular providers. In addition to providing cell service for cell phones, these providers are now able to deliver wireless broadband services to individual residences by

52%

**OF MCDOWELL
RESIDENTS ARE
EITHER SOMEWHAT
OR EXTREMELY
DISSATISFIED WITH
THEIR INTERNET
SERVICE**

(NC BROADBAND SURVEY, NOV.,
2022)

connecting existing cell towers with a wireless router. The main cellular providers in McDowell are **Verizon, T-Mobile, AT&T, and US Cellular**. Each of these companies offer a form of wireless internet that their customers can add to their new or existing plans. The main issue with this source of internet capacity is the lack of 5G coverage throughout the county. 4G coverage implies significantly less data capacity than 5G coverage. This results in unreliable speeds that vary depending on area and coverage.

BROADBAND SERVICE IN MCDOWELL

The NC Department of Information Technology (NCDIT) developed Figure 1 using data collected through the FCC's Form 477, which requires internet service providers to report service information at the census block level. The FCC interprets data regarding internet availability such that if at least one location in a census block has high-speed internet access, then the whole census tract is served. Therefore, the FCC's estimate of broadband availability is considerably overstated. The green tracts in Figure 1 are areas where internet service providers reportedly provide broadband speeds of at least 25 Mbps download and 3 Mbps upload in McDowell County.

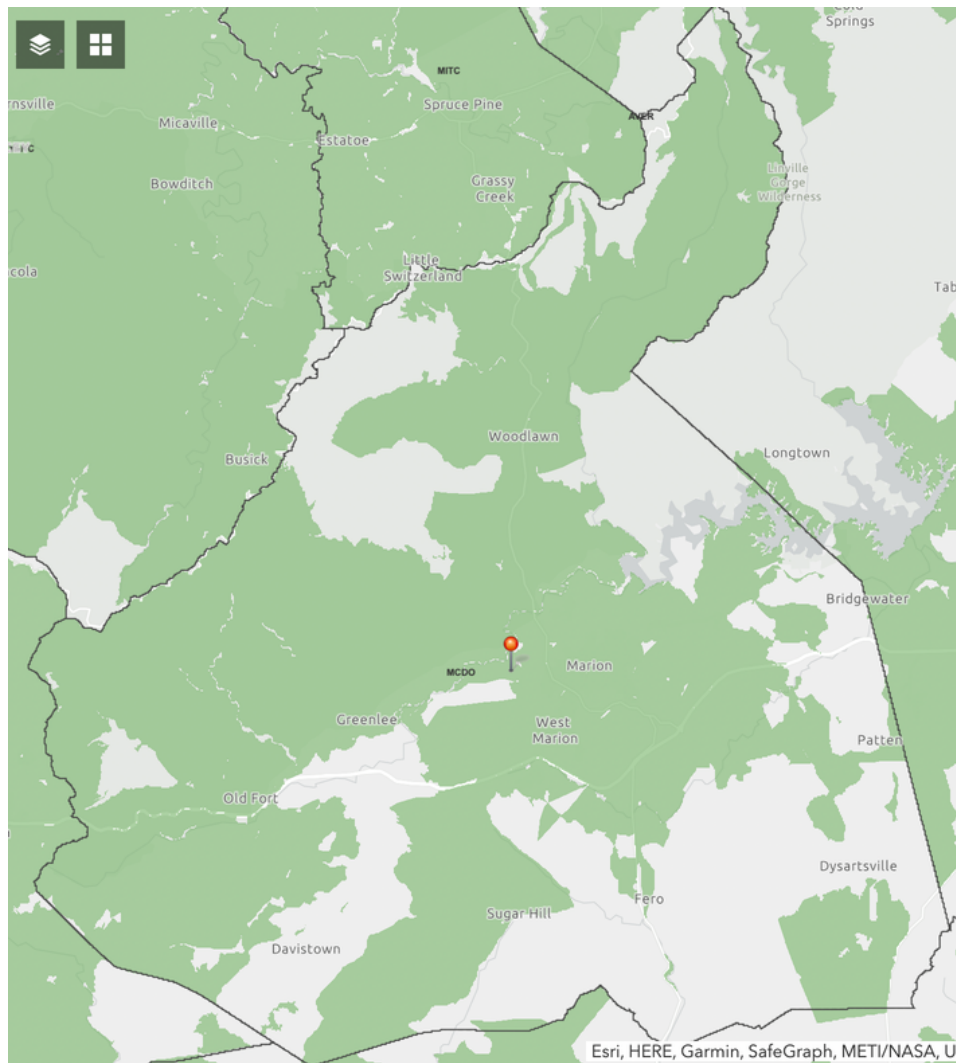


Figure 1. FCC Map of Broadband in McDowell County

NCDIT created the NC Broadband Availability and Quality Index using 8 broadband-related metrics to paint a more accurate picture of internet availability in every census tract within North Carolina. The following variables were assigned different weights to reflect internal priorities.

Contributing Variables:

1. Percent population with access to 25/3 broadband
2. Percent population with access to 100/20 broadband
3. Percent population with access to fiber
4. Ration of upload to download median advertised speeds
5. Households per square mile
6. Percentage of housing units built in 2010 or later

Undermining Variables:

1. Percent population with access to no providers
2. Percent population with access to DSL only

Using these factors, in 2019, McDowell County received a 60.4 on the Broadband Availability and Quality Index scale out of 100; a higher score denotes better broadband availability and quality. The map in Figure 2 indicates that areas around the City of Marion have increased access to quality broadband services. The areas shaded in light red indicate a lack of access to consistent, reliable, high-speed internet. Most notably, the dark red southeast portion of the county has the worst access to broadband, for only 49.42 percent of the population has access to 25/3 broadband speeds.

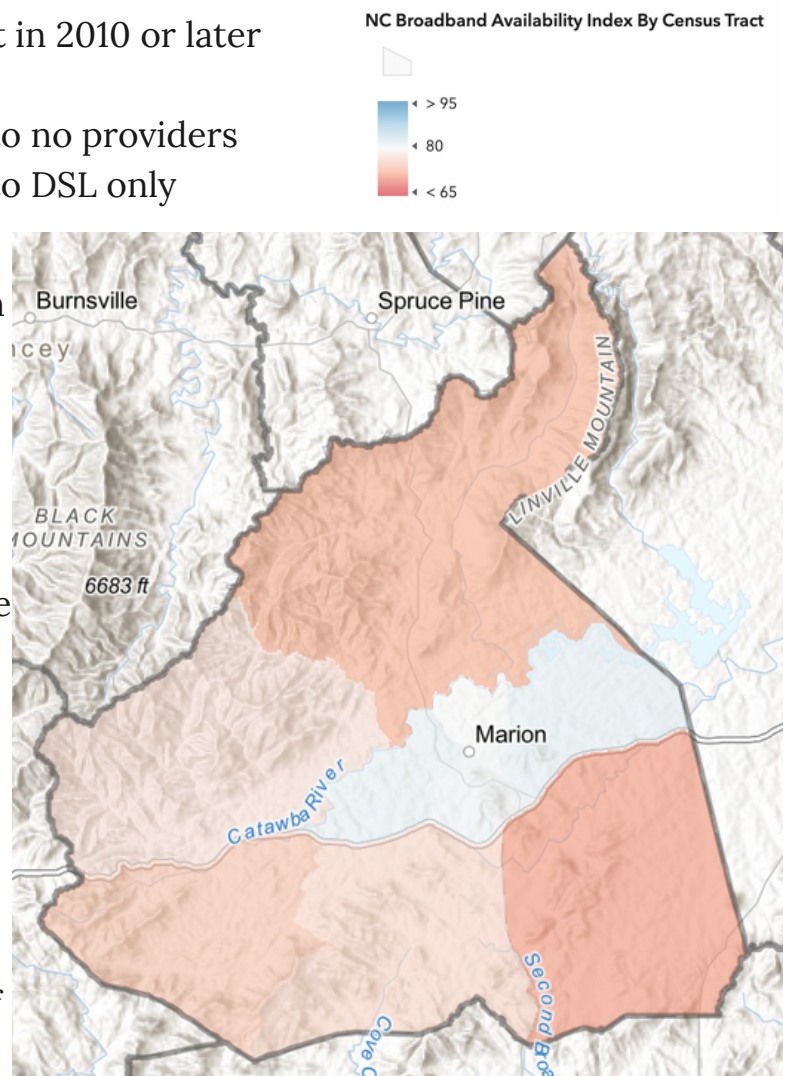


Figure 2. Broadband Availability and Quality Index Map of McDowell County

On a regional scale, Figure 3 highlights how McDowell compares to its neighboring counties in broadband availability. Compared to the more populated counties of Buncombe and Henderson, McDowell has inadequate access to high-speed broadband.

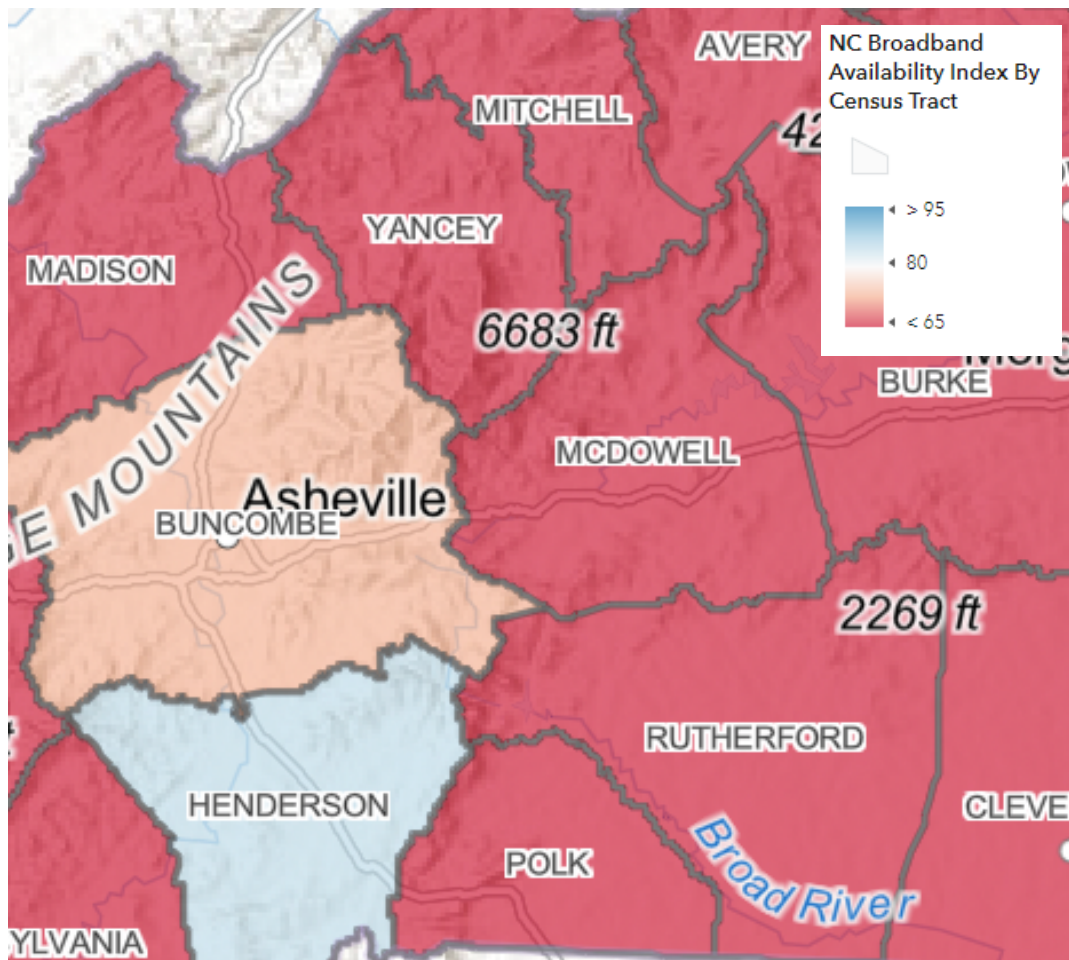


Figure 3. Broadband Availability and Quality Index
Map of Surrounding Counties

According to the 2017 FCC report, 83.09 percent of the population in McDowell County has access to 25/3 broadband service. Drawn from the same report, 20.05 percent of the population has access to fiber technology, 0.4 percent has access to DSL only, and 0.23 percent does not have access to any providers.

The North Carolina Broadband Survey, designed by the **NCDIT Broadband Infrastructure Office** and the **Friday Institute for Education Innovation at N.C. State University**, has been gathering information on locations throughout the state without adequate internet access and speeds since 2020. The survey is still in circulation and the results are frequently updated on the NC OneMap dashboard. Compared to the FCC report, the following survey results paint a more accurate picture of the level of service in McDowell County.

As of October 26th, 2022, 1,493 individuals from McDowell County responded to the NC Broadband Survey. According to these results, only 1 percent of McDowell respondents have fiber optic, while 27 percent have DSL. The aforementioned FCC data, which is self-reported by ISPs, overestimates the amount of fiber optic within the county while understating the number of residents still reliant on DSL.

Additionally, the survey results indicate that 19 percent of the population utilizes satellite, 20 percent rely on cable, and 5 percent have a fixed wireless provider. Out of the approximate 1,500 survey respondents in McDowell, 720 respondents, or 48 percent, reported having no wireline internet; 118 respondents of the 1,500 had no cellular service at their home location.

The survey also asks individuals to complete a speed test at their location using LibreSpeed. Out of 921 respondents that completed the speed test, only 28 percent of the population had download/upload speeds of 25 Mbps/3 Mbps or greater, the minimum requirement for broadband. Over half of the respondents, 55 percent to be exact, registered speeds less than 10 Mbps download/1 Mbps upload, which fails to meet the broadband threshold.

Figure 4 is a map generated from the survey with location-based results for McDowell County. This data suggests that there is a substantial portion of unserved or underserved respondents with less than 25/3 speeds outside of the unserved census tracts identified by the FCC in Figure 1. This data points to unreliable and weak broadband service throughout the county.

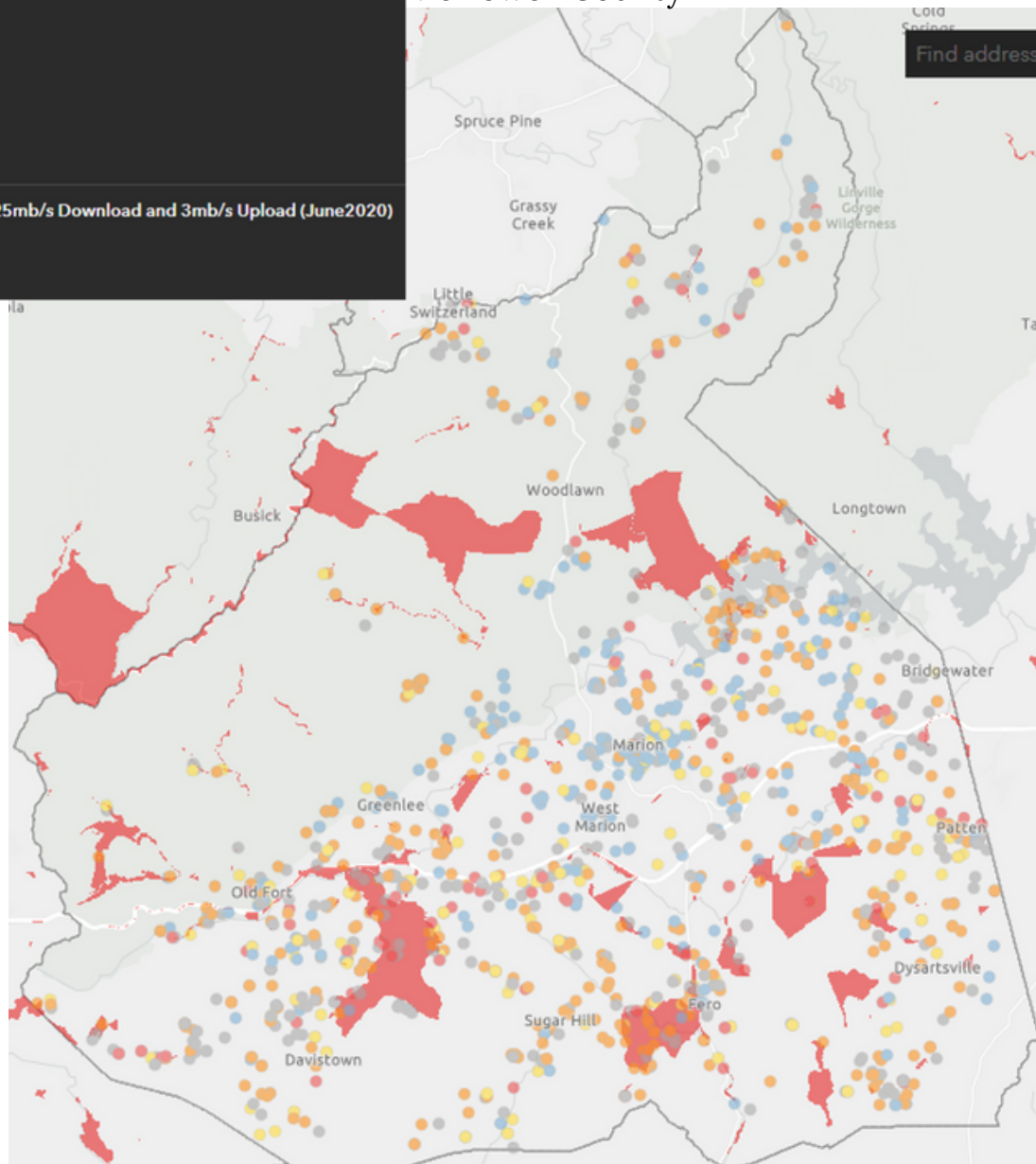
NC Broadband Survey Points (General, Phone, & Farm)

Service Level (calculated field):

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

FCC Blocks Less Than 25mb/s Download and 3mb/s Upload (June2020)

Figure 4. Map of Broadband Speeds in McDowell County



PUBLIC WI-FI

For McDowell County residents without sufficient home broadband, certain locations in the area have wireless hotspots that provide internet to the public at no cost. Most of these devices can be connected to from the parking lot of the facility.

Early on in the pandemic, **McDowell County Schools** partnered with local organizations to provide Wi-Fi hotspots to the public. They also expanded the range of school Wi-Fi to be accessed outdoors.

Figure 5 is a flyer highlighting some of the public Wi-Fi access points in the county.



The flyer is titled "McDowell County Schools WiFi HotSpots" and features the McDowell County Schools logo. It provides information on MCS WiFi and MCS Community WiFi, including the password success828. It lists MCS Sites with Outdoor WiFi, such as Nebo Elementary and McDowell Early College. It also lists Partnering Sites with WiFi, including Victory Temple Church and Addie's Chapel United Methodist Church.

McDowell County Schools WiFi HotSpots

MCS WiFi and MCS Community WiFi

Password: success828

MCS Sites with Outdoor WiFi

- Nebo Elementary
- Glenwood Elementary
- Pleasant Gardens Elementary
- North Cove Elementary
- Marion Elementary
- West Marion Elementary
- Eastfield Global Magnet School
- McDowell Early College (at MTCC)
- McDowell High School
- West McDowell Middle
- East McDowell Middle
- Central Office
- Sugar Hill Head Start
- Guard Office below West Middle

Partnering Sites with WiFi

- *NEW* Victory Temple Church
- *NEW* Hankins Baptist Church
- East Marion Baptist
- New Horizon Baptist Church
- Rocky Pass FWB Church
- Nebo Crossing Church
- Addie's Chapel United Methodist
- Grace Community Church
- McDowell Chamber of Commerce
- Montford Cove Baptist Church
- Concord United Methodist Church
- McDowell Tech Community College (MTCCNETWORK)
- Crooked Creek Fire Department (Please use lower parking lot)
- Old Fort Elementary Pickup Area (Skyrunner OFE Hotspot)

MCS TECHNOLOGY

For Help Please Contact
techhelp@mcdowell.k12.nc.us

mcdowell.k12.nc.us

[/mcdowell590](https://twitter.com/mcdowell590)

[/mcdowell590](https://facebook.com/mcdowell590)

Figure 5. Public Wi-Fi Points in McDowell

In addition, the following sites (not exhaustive) have been identified as providing public Wi-Fi: McDowell County Sheriff's Office, McDowell County Health Department, Sugar Hill Health Center, and Mission Hospital McDowell.

For individuals seeking to use Wi-Fi on a more consistent basis, the **McDowell County Public Library** offers a mobile hotspot lending program. Through a 2021 grant from the Emergency Connectivity Fund, a federal program funded by the American Rescue Plan Act, the county library now allows McDowell County residents and library members of at least 18 years of age the opportunity to check out hotspot devices and computers.

Between the **Marion Library** and **Old Fort Library**, there are 10 MiFi hotspots, 10 Chromebooks with built-in hotspots, and 10 regular Dell laptops available for checkout. Devices can be checked out for three weeks at a time and will automatically renew four times (for a total of nine more weeks) if there are no pending holds.



BROADBAND ADOPTION

Access to broadband is only one piece of the digital inclusion puzzle. Another key facet is ensuring individuals have the financial means to subscribe to available services. To evaluate the adoption potential of technology at county and census-tract levels, NCDIT created a Broadband Adoption Index using 11 variables shown to influence an individual's likelihood of subscribing to high-speed internet. Similar to the Broadband Availability and Quality Index, these variables were weighted according to research.

Increase Variables:

1. Percent households with a DSL, cable, or fiber-optic subscription
2. Percent population ages 18 to 34
3. Percent population age 25 or more with bachelor's or more
4. Percent households with children
5. Percent workers age 16 and over working from home

Decrease Variables:

1. Percent populations ages 65 or over
2. Percent households with no internet access
3. Percent households with no computing devices
4. Percent population in poverty
5. Percent non-institutionalized population with a disability
6. Percent households with limited English

McDowell County scored a 36.6 out of 100 on the Broadband Adoption Index in 2019; a higher score implies a higher rate of broadband adoption. For some perspective, McDowell's score is in line with the other counties in the Foothills region (the highest score in the state is 70.3). One of the main factor's influencing McDowell's score is that nearly a quarter of households in the county do not have internet access, as determined by the American Community Survey's 5-year estimates for 2013-2017. This lack of infrastructure compounded with a poverty rate of 16.7 percent culminates in low subscription rates across the county.

Figure 6 highlights areas in dark red that scored lower on the adoption index. This primarily consists of the northern and southeastern portions of the county. The northern tract received an adoption score of 28.3, likely due in part to the fact that roughly 3 percent of this population has limited English and nearly a third of households reported not having internet access. The southeast portion of the county received an adoption index score of 29.82, potentially due to the following variables: a third of households do not have internet access, over a quarter of the population reported a disability of some type, and a little less than one-fifth of the population is in poverty. These figures suggest that in addition to a lack of widely available broadband, specific demographic characteristics may impact one's likelihood of subscribing to broadband.

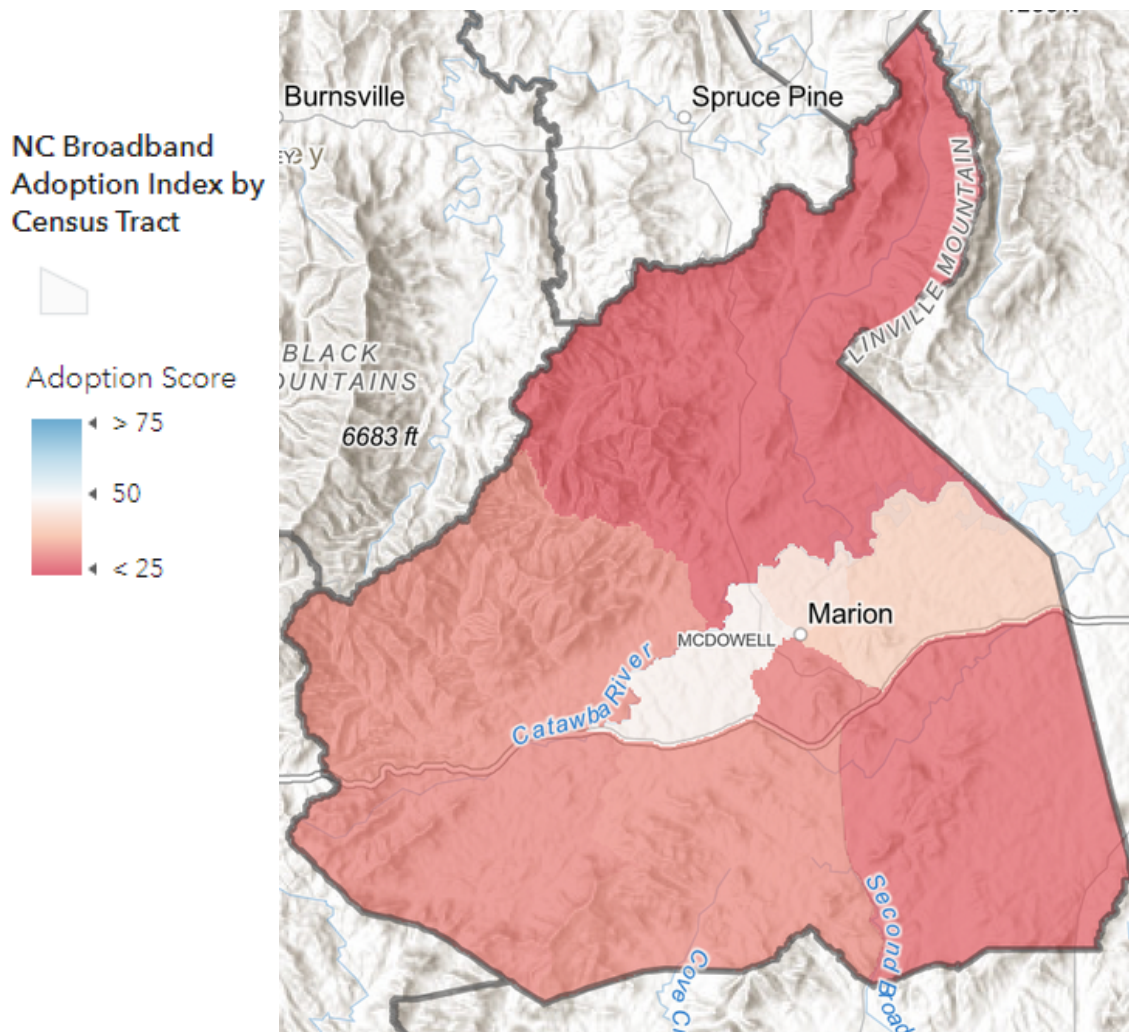


Figure 6. Broadband Adoption Index Map of McDowell County

According to the Broadband Adoption Index, 51 percent of McDowell residents subscribed to an internet service, yet 83.09 (FCC 2017) percent of the population reportedly has access to broadband. The NC Broadband Survey depicts that 720 of 1,500 respondents do not have internet, which aligns with the 51 percent subscription rate. However, it is important to note that out of the pool of individuals without internet, 74.9 percent said that their lack of internet was a result of broadband not being available, and 6.9 percent responded by saying it was too expensive.

Decent internet plans with quality download/upload speeds and data limits can range in price, yet the largest portion of McDowell survey respondents, nearly 20 percent, pay over \$125 for internet monthly. Figure 7 captures the range of internet costs for McDowell residents. The high cost of internet, in tandem with a lack of access, likely contributes to a low broadband adoption rate for the county. Moving forward, it is important to expand the range of internet pricing options without sacrificing the quality and speed of service.

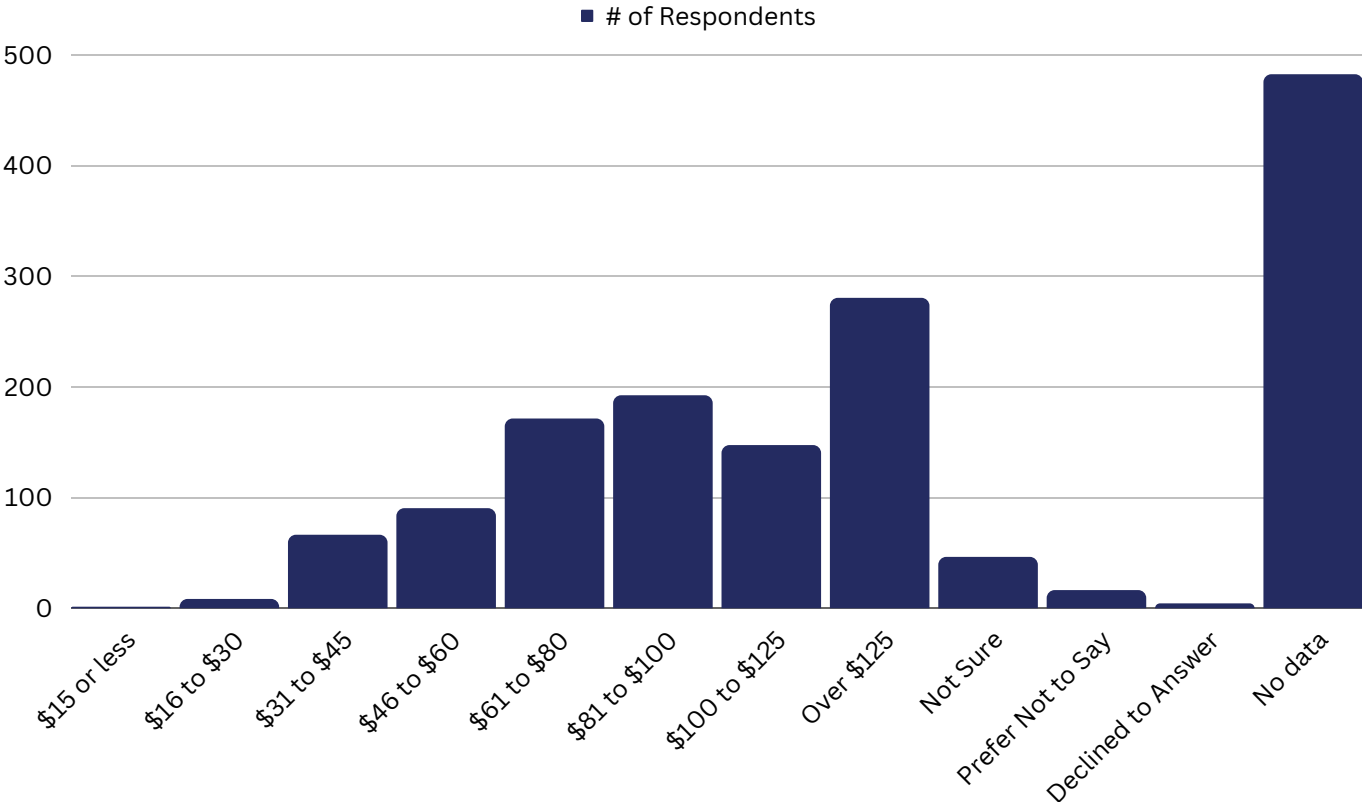


Figure 7. Total Cost of Internet per Month for McDowell Residents

As for existing low-cost or discount Wi-Fi options in the area, most providers participate in the federal FCC Affordable Connectivity Program (ACP). The ACP offers eligible households a discount of up to \$30 per month towards internet service and up to \$75 a month for eligible households on tribal lands. Applicants may also be eligible for a one-time discount of up to \$100 to purchase a user-friendly device. As of August 2022, McDowell County had 2,655 households subscribing to the ACP, approximately 14.5% of all households in the county.

Additionally, through the Spectrum Internet Assist program low-income households can access low-cost, high-speed internet for \$17.99 a month. To qualify for the program, a member of the household must be a recipient of the National School Lunch Program, the Community Eligibility Provision, or Supplemental Security Income (age 65 and over only). With Spectrum Internet Assist, users can receive a free internet modem with no data caps and no contract.



GOAL 1: CONNECTIVITY

DEPLOY / UPGRADE BROADBAND INFRASTRUCTURE TO IMPROVE ACCESS FOR ALL RESIDENTS AND GUESTS OF MCDOWELL COUNTY.

With the goal of increasing availability in mind, it is paramount that reliable, high-speed broadband is expanded to every citizen, guest, and business in McDowell County. Currently, some areas of the county have access to the internet but at non-broadband speeds, making it impossible to deliver education, telehealth, and public safety services online. These underserved areas are unable to access federal and state broadband grants as a result of the inaccuracy of the FCC maps; therefore, it is essential to gather complete and accurate information on the actual level of service. Other areas of McDowell are wholly unserved by ISPs and cellular providers, in part due to the county's low household density. Moving forward, it is important to increase the public's ability to access the internet in both private and public settings.

OBJECTIVES

01

Encourage government entities and private sector firms to improve and expand broadband service in McDowell County.

02

Gather data on the actual level of service to assist with policy decisions and investments.

03

Increase the number of public Wi-Fi zones and public access centers with Wi-Fi, with the potential for a public Wi-Fi wayfinding program.

ACCESS TO DEVICES

A core tenant of digital inclusion includes having access to a device that meets all of your online needs, typically a computer or tablet. While cellular devices have become ubiquitous in daily life, they are limited in their functionality and impractical for intensive tasks like remote work and online learning. For McDowell residents that do not have the financial means to afford a suitable device, the following entities, including but not limited to, offer public access to computers or tablets: McDowell Chamber of Commerce, Senior Center, McDowell Technical Community College (MTCC) Library, NCWorks, and the Marion and Old Fort branches of the McDowell County Public Library.

The **McDowell Chamber of Commerce** recently acquired a tablet that they plan on allowing their guests to utilize.

The **McDowell County Senior Center** located in Marion provides patrons access to 6 computers connected to the internet.

Within MTCC's library is the **Academic Resource Center** (ARC). The ARC has 18 computers with internet access that can be used by all students free of charge. There is also a printer that is connected to all the computers.

In September 2022, **McDowell Technical Community College** was awarded the Bright Ideas Grant from the State Library of North Carolina to increase digital literacy and expand equitable access to underserved communities throughout the county. For a total of \$14,008, the college purchased 16 Acer laptop computers, computer bags, and a computer storage cart for the library. The laptops are equipped with Microsoft Office software, as well as Adobe Acrobat Reader. Students enrolled at the college can check out computers for an entire semester. If they return the devices on time, they are eligible to extend the loan for the following semester. The technology staff and Director of Technology at the college provide technology support to the library for the computers.

The **Marion Library** offers adult patrons access to 13 computers with internet services and access to a printer and copying machine. Children have access to 6 computers with kid-friendly programs, 2 of these devices have internet access. In addition, the library received a \$100,000 Library Services and Technology Act Grant in 2019 that allowed them to purchase a Bookmobile. The Bookmobile is a mobile service that meets the public where they are. The vehicle has 4 laptops as well as a printer and copier on board. The traveling service is also equipped with a wireless hotspot.

The **Old Fort Library** offers patrons access to 6 computers equipped with internet services and Microsoft Word and Excel. The devices are also connected to a printer and a scanning machine. Additionally, the library allows for 2 laptops, 1 Chromebook, and 1 hotspot to be checked out by patrons.

The **McDowell County School System** has a one-to-one computer program for all students. Students in grades 6-12 are provided a district-owned Chromebook that is allowed to be taken home. Students in grades K-5 use a mixture of PC's, iPads, and Chromebooks. Students also have access to Google Workspace that allows for communication and collaboration. The school system employs 21 full-time staff to oversee technical issues and instructional technology.

In order to tap into the possibilities of the digital world, access to a device is critical. The 2013- 2017 American Community Survey data reported that 15.9 percent of households in McDowell County do not have a computer device, furthering the need for more publicly accessible devices and low-cost options within the county.



GOAL 2: DEVICE ACCESS

ENSURE THAT ALL RESIDENTS OF MCDOWELL COUNTY HAVE ACCESS TO AN AFFORDABLE DEVICE THAT MEETS THE NEEDS OF THE USER.

The COVID-19 pandemic served as an impetus for day-to-day activities to transition online, many of which have yet to fully return in person. From remote learning to doctor's visits to online banking, technology permeates everyday life. Without a functioning computer or tablet, an individual's personal, political, and economic capabilities are hindered. A major impediment to digital inclusion is the cost of computers and tablets. The need for an increased supply of low-cost, refurbished devices is demonstrated by the rate of households without computer devices and the impromptu lending model (discussed in the next section) that formed between MTCC and Centro Unido Latino-Americano. Increasing public access to devices, either through extended hours or locations, and private access to devices, through subsidy programs, is essential for bridging the digital divide.

OBJECTIVES

01

Support where available a device refurbishment program and/or device subsidy program that provides low or no-cost devices to people who need them.

02

Facilitate lending programs with partner organizations who serve communities needing devices.

03

Increase the number of locations offering public access to usable devices and services.

04

Work with, including but not limited to, educational institutions and community program providers to gain access to devices.

DIGITAL LITERACY & SKILLS OPPORTUNITIES

The following assets provide digital literacy training in some shape or form to McDowell County residents.

McDowell Technical Community College offers a variety of courses teaching basic computer skills, including but not limited to: BSP4010 - Transitional Digital Skills, an introductory course on computer literacy; and BSP4011 - Transitional Digital Skills Application, a more advanced course building upon computer literacy. MTCC utilizes the NorthStar Online Learning service for digital literacy curriculum.

MTCC also offers a **Human Resources Development (HRD)** program to educate and train individuals for success in the workplace. HRD courses provide skills training and assistance for adults who are trying to find employment or get back into the workforce. All classes in the HRD program are offered at no cost to unemployed and underemployed individuals seeking employment. The HRD program hosts classes at the **NCWorks Career Center / Ford Miller Employment and Training Center**. Together, MTCC and NCWorks provide an array of services that aim to make the transition for job seekers into the workforce easier by increasing their familiarity with technology and improving their digital skillset. Specifically, the HRD program offers a Basic Technology Literacy Course that teaches individuals basic computer skills which can be used to compile job opportunities, research careers, build resumes, and engage in online networking. NCWorks is also preparing to offer more interactive computer classes in the future.

In 2021, **Connect McDowell** was awarded a grant from BAND-NC to implement Project BRIDGE, a digital literacy program for students and their guardians. Connect McDowell identified the East Marion community as an area in need of support when it came to student distance learning. It was reported that 69 percent of student households in this community lacked a reliable internet connection, making it one of the most vulnerable and disconnected pockets in McDowell. Project BRIDGE developed a seven-session course curriculum in partnership with McDowell County Schools to teach parents and guardians the skills they needed to communicate with educators and assist their children with online assignments. The classes were taught in English and Spanish by dual language teachers at Eastfield Global Magnet School over the course of two months. The course was widely successful, for 22 people enrolled and ten people completed the course; the majority of participants were Latino-Hispanic.

Since the success of Project BRIDGE, additional community organizations have adapted this curriculum and engaged with partners to improve digital literacy. In 2022, McDowell Technology Community College provided 20 used laptops to **Centro Unido Latino-Americano (CULA)** to use in a United for Technology course. CULA is a non-profit organization focused on meeting the needs of the Latinx community in McDowell County and surrounding areas. This course, taught in Spanish, is a joint project between CULA and the **McDowell County Public Library** that seeks to teach members of the community basic computer literacy. As of now, the McDowell County Public Library does not employ a dedicated digital navigator, but they do provide one-on-one support when available.

GOAL 3: DIGITAL LITERACY

DEVELOP TECHNOLOGY SUPPORT AND EDUCATIONAL PROGRAMMING THAT EMPOWERS ALL COMMUNITY MEMBERS TO GAIN THE NECESSARY SKILLS TO PARTICIPATE IN THE DIGITAL WORLD.

Digital inclusion doesn't stop with access to devices or high-speed internet, it goes beyond this to ensure that users can meaningfully engage with the technology available and participate in essential online services. Closing the digital gap involves providing access to relevant educational experiences and learning opportunities. Digital literacy trainings can be catered to meet the needs and interests of various target populations. This can take on various formats, including but not limited to: workforce development trainings that focus on employment searches and resume development; supporting parents and guardians navigating virtual learning environments; trainings for senior citizens on accessing telehealth services; and trainings taught in various languages to reach those with limited English.

OBJECTIVES

01

Support the expansion of organizations that offer digital literacy and skills training.

02

Support programs that serve marginalized communities and others who are unserved/underserved to expand their ability to thrive in a virtual world.

03

Support where available a digital navigator position or program.

CONTINUING THE WORK

Preparing a digital inclusion plan that evaluates the existing assets and needs of McDowell County is a necessary step to raising awareness around digital inclusion and will open the door to various funding opportunities. This plan serves to provide government officials and involved stakeholders with guidance regarding the needs of the community in matters of digital inclusion and equity.

As the premier broadband organization in McDowell, Connect McDowell will continue to address issues regarding broadband connectivity in the area. To achieve the initiatives laid out in this plan, it is necessary to involve stakeholders from the public, private, and nonprofit sectors. Individuals from across these realms have a vested interest in solving digital inequities that prohibit the county from achieving broadly-shared growth and prosperity.

The following entities have been identified as partners essential to advancing the established goals. This is not an exhaustive list of partners, but an initial cohort of key players.

- West Marion Community Forum, Marion East Community Forum, Old Fort Community Forum; Town of Old Fort; Community Engagement Project; Rotary Club of Marion; Corpening Memorial YMCA; Optimum Internet
- Connect McDowell represented by McDowell County Schools, McDowell Technical Community College, City of Marion, McDowell County government, McDowell Chamber of Commerce, Community Forums, Centro Unido Latino-Americano, McDowell Economic Development Association, Community Member(s) at large

