Transylvania County Broadband Community Profile

June 2019

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LAND OF SKY REGIONAL COUNCIL

Developed by Land of Sky Regional Council for Madison County
June 2019

SUMMARY:

Broadband is a significant innovation in communication technologies with diverse and impactful benefits such as creating jobs and transforming education. To stay competitive in a technologically advancing society, Transylvania County is working to improve its deficient broadband infrastructure. As a small rural county with a low population density and difficult mountain-related environmental challenges it has suffered a lack of widespread connectivity despite multiple carrier offerings. Transylvania County is a desirable place to live with increasing population growth, replete with leadership that moves the county forward without leaving the people of the community behind. However, as education opportunities, occupational development, and public services become increasingly technologically dependent, those on the wrong side of the digital divide will be left further behind.

Broadband internet is no longer a luxury, but an essential component to education and opportunity comparable in effect to a service utility. Homework is delivered online at a rate of 70%, and students with internet access are 6-8% more likely to graduate from high school. A 1% increase in broadband service adoption is associated with a 0.3% increase in employment. Closing this digital divide is a critical component to improving the quality of life for Transylvania County citizens, particularly those transforming their opportunities through education.

The 2013-2017 American Community Survey estimates that 75% of Transylvania County households have an internet subscription. Little information is available to address connectivity concerns at the local level. This study seeks to identify comprehensive information about broadband concerns of the community in order to increase availability, adoption, and inclusivity in an effort to catalyze broadband resources for the community.

ACKNOWLEDGMENTS:

The Transylvania County Broadband Strategy Plan was a cooperative effort in the community. In particular, we acknowledge the efforts of the following people and organizations for their assistance and leadership in making Transylvania County a more digitally equitable place:

TRANSYLVANIA COUNTY BOARD OF COMMISSIONERS

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ART GALLERY

BACKGROUND:

As a state, North Carolina does not allow local governments to treat broadband as a public utility; therefore, local and county governments have historically shied away from inserting themselves in the broadband discussion. Transylvania County recognizes that adequate broadband service is essential to its citizens and the economy; therefore, county officials have taken a more active role in recent years to entice competition and service offerings. Currently, (2019) North Carolina has been working to amend legislation and funding potential for areas to increase broadband resources in the state.

Transylvania County leadership identified specific concerns regarding their broadband issues:

1. Improved Accessibility- Transylvania County has multiple areas that are underserved/unserved that need improved access.
2. Digital Inclusion/Homework Gap- Students being able to complete assignments and use broadband resources to further their education.
3. Public Safety- Communications for Emergency Management teams to take care of the health and well being of the community.
4. Economic Development- Stay competitive in a technology driven economy.
5. Healthcare/Telehealth- Provide excellent healthcare for the county through digital communications.

Transylvania County is comprised of approximately 33,956 residents (87 people per square mile) with a median household income of $44,559. The county's terrain is heavily forested and includes the Pisgah National Forest while traversed by the Blue Ridge Parkway.[1]

The State of North Carolina's Broadband Infrastructure Office performed a state-wide survey as part of a comprehensive study that identified these issues as most important: expanding broadband access, increasing adoption and digital literacy for all citizens and businesses, and developing statewide policies that enhance availability. Further, the State study cites FCC reports that show North Carolina as ranking 9th in the nation in broadband deployment with an estimated 93 percent of NC households having access to broadband. The State report also indicates that 52 of North Carolina's 100 counties have a deployment rate equal to or greater than the US average (90 percent); notably, 89 percent of North Carolina households without access live in sparsely populated areas. More specifically, the State also points out that the FCC's estimate that seven percent of North Carolinians do not have access to adequate bandwidth speeds is likely too low. Transylvania County is shown as having a broadband adoption rate of between 60% and 68% (as per a White House brief).[2] The adoption rate is derived from factors including broadband availability, income, level of education, and whether one is elderly or disabled.

[1] ll demographic data was taken from https://www.census.gov/quickfacts/transylvaniacountynorthcarolina and https://en.wikipedia.org/wiki/Transylvania_County,_North_Carolina

[2] Taken from the North Carolina Broadband Plan https://www.ncbroadband.gov/wp-content/uploads/2017/02/NC-Broadband-Plan_2017_Online_FINAL_PNGs3www.pdf

RESEARCH FINDINGS:

Digital data and insight survey results exist at the state and national level, few represent locally led granular data. As a result Transylvania County decided to pursue participating in the WestNGN Phase II demand aggregation study facilitated by Land of Sky Regional Council in 2018/2019. The survey was broadly marketed and disseminated to the community, specifically targeted to some predicted underserved/unserved areas. The survey addressed questions related to the availability of services customers were able to acquire from local providers and identified common digital activities to which customers are most engaged.

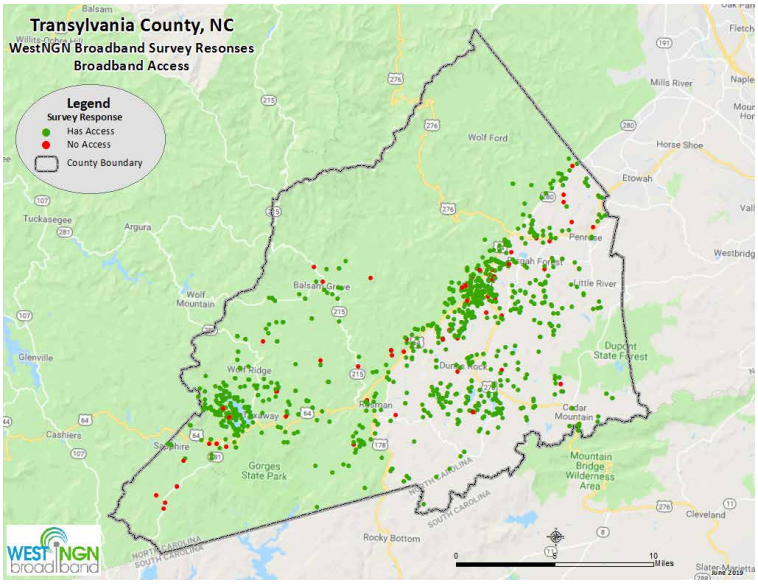
SURVEY DEPLOYMENT:

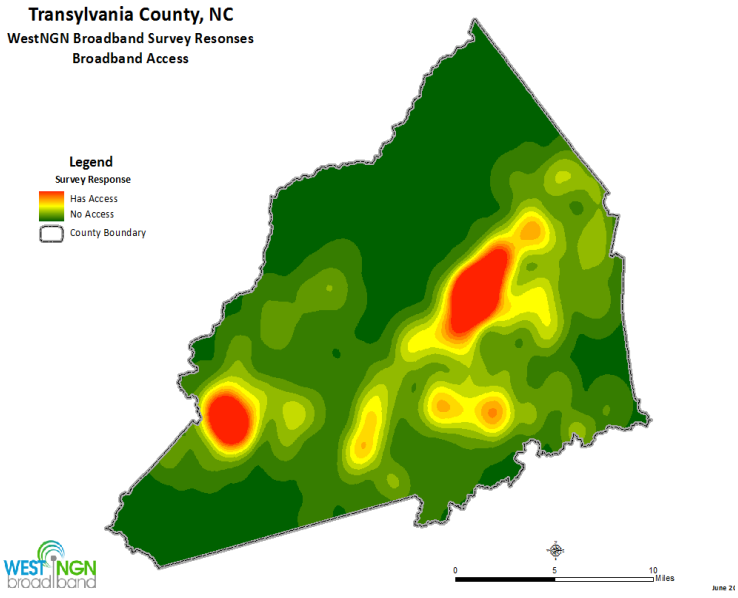
- Paper copies and digital marketing were provided at many public spaces, including libraries
- Paper copies were sent home with every public school student
- Paper copies were provided at activities the “Bookmobile” participated in
- Link to the digital survey was marketed to many non-profits and community partners
- Link to the digital survey was sent to higher education partners
- Link was distributed to industrial and commercial businesses in the county
- An article about the project was in the local newspaper

These efforts resulted in 1,440 participants from the community representing 10.2% of the county’s households. See Appendix A for full Transylvania County survey results.

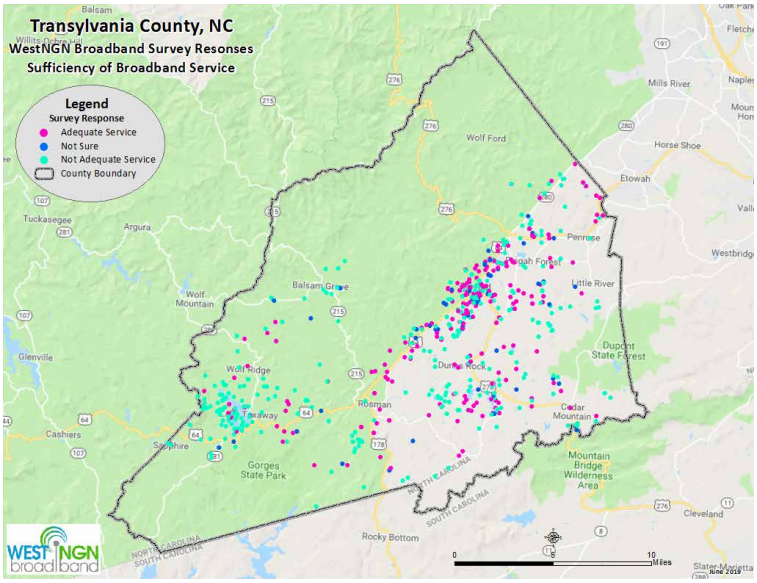
According to the survey 7.3% of the population reports not having internet access. Due to the nature of the content of the survey it is expected that the percentage of unserved populations is over 15%.

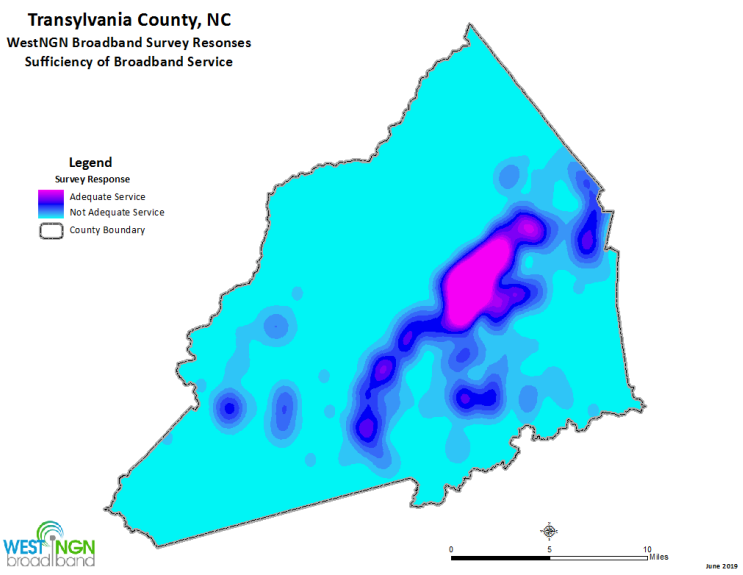
Figures 1 and 2: Transylvania County survey results for accessibility show that more population dense areas of the county are currently served by some kind of internet source. Specific locations reporting no access cluster around the Pisgah Forest land corridor and southwest corner of the county.





Figures 3 and 4: Over half of Transylvania County residents who have service believe their service is insufficient. Responses for "insufficient service" came in countywide, but significant clusters around more remote sections of the county.





The more populated areas of Transylvania County are where K-12 schools, libraries, public safety, and other community organizations generally have access to higher broadband speeds. Businesses and residents located outside of the town limits in the more rural sections report having unreliable service, service unavailable or too expensive, or no choice other than satellite.

Historically, Transylvania County has had one commercial entity driving both telecommunication and cable services, respectively: the Citizens Telephone Company and Sylvan Valley CATV Company. In 2008, Comporium purchased both of these companies. The county has experienced gains with Comporium as the single wireline provider through its investments in infrastructure, but there remains an opportunity to expand broadband access in rural parts of the county. However, the result is that there is little competition for broadband services throughout the county. A collaborative approach towards deployment of various technologies and companies will help Transylvania County meet the needs of its citizens.

TABLE 1: Primary service providers for Transylvania County

PROVIDER	SERVICE	BROADBAND SPEEDS (up to)
Comporium	Fiber optic cable cable modem DSL	1 Gbps (1000 Mbps) 400 Mbps 11 Mbps
Skyrunner	fixed wireless	10 Mbps (“Metro” service) - 6 Mbps (“Enhanced service”)
HughesNet	Satellite	25 Mbps
ViaSat	Satellite	30 Mbps

(Notes: 1. The information in the above chart was taken from https://broadbandnow.com/North-Carolina/Brevard, 2. the Federal Communications Commission defines ‘broadband’ as 25 Mbps download and 3 Mbps upload), 3. the above table only captures organizations that have infrastructure in the County, and 4. the above named providers may not be able to serve all areas of the County.

As seen in the above chart, gigabit service is available, but predominantly only in Brevard. Moreover, there is only limited fixed wireless service available in the County.

NOTE: Within the framework of this document, cellular service is not being considered a satisfactory means of providing Internet service because it is most prevalent along the highway corridors of US64, US276, and NC280.

Providing access to devices and broadband resources to the community helps give those who struggle with connectivity a space.

RECOMMENDATIONS:

Transylvania County should consider short-term and long-term options for the expansion of coverage to the greater community that results in improved access for all residents.

In the short-term, Transylvania County should work with providers to extend fixed wireless connectivity into unserved areas. In the long-term, Transylvania County would benefit by having a competitive wireline provider network. Internet heavy industries prefer redundancy in broadband services for their business. Due to the varying nature of costs associated with different technologies it is not feasible to predict costs of deployment.

Additional information for strategies and recommendations of the next steps for broadband implementation can be found below:

ACCESSIBILITY:

Options for local governments to consider that may accelerate broadband deployment include:

A. Host a provider meeting with the NC Broadband Infrastructure Office to present results, community assets, and vertical assets from the survey to both incumbent and potential new providers. Identify areas of the county that may have service sufficiency problems and opportunities for providers.

B. There are many groups in Transylvania interested in improving the broadband issue. Forming a Transylvania County broadband committee involving various stakeholders from the community to facilitate conversations regarding broadband issues. It is suggested that this team work to identify progress and deficiencies associated with broadband access for the county. This approach will ensure that county wide efforts are being addressed on a recognized platform with public input and visibility. It will also encourage less redundancy of programming, improve viability for future funding prospects, and improve the ability to leverage additional funding.

C. Adopting public policies that will lessen the cost of entry for new service providers, and, by offering county resources to said providers (for example, a “Dig Once” or “Build Once” policy or simplifying the permitting process - note that the State of North Carolina is considering implementing its own “Dig Once” policy - for more information please see section 8 of North Carolina Governor Roy Cooper’s Executive Order Number 91, dated March 14, 2019 - https://governor.nc.gov/documents/executive-order-no-91-establishing-task-force-connecting-north-carolina-promoting.).

Figure 5: Vertical Assets in Transylvania County.

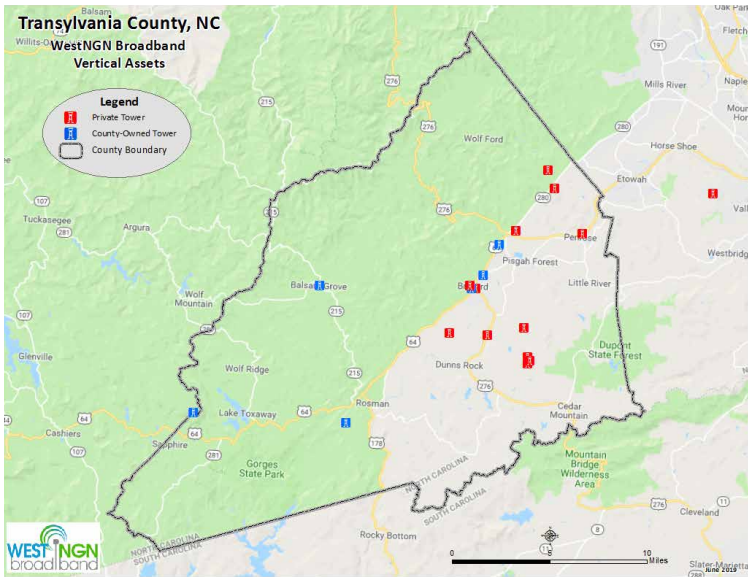
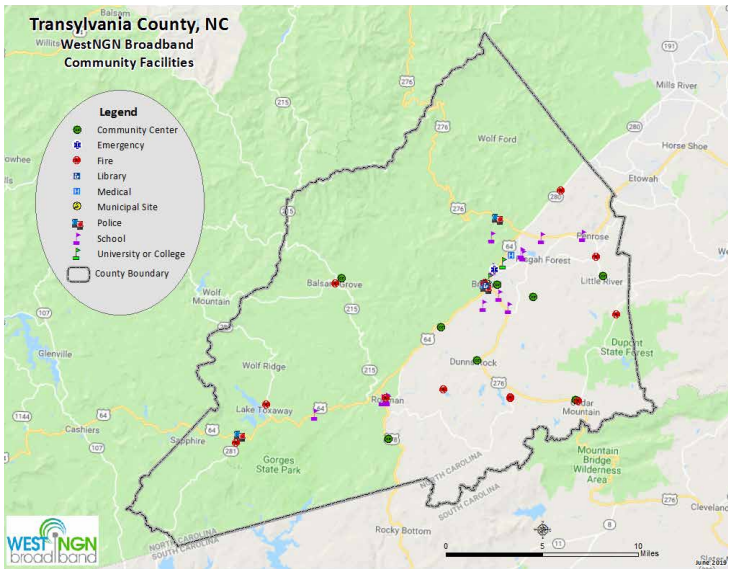


Figure 6: Community Asset Map



Current placement of Transylvania towers are confined to areas with higher population density. This dedensityreducin.

Pursuant to North Carolina Governor Roy Cooper’s Executive Order Number 91, dated March 14, 2019 - https://governor.nc.gov/documents/executive-order-no-91-establishing-task-force-connecting-north-carolina-promoting - section 5.d. speaks directly to creating recommendations to “..leverage state property and reduce barriers to the deployment of broadband infrastructure .. in partnership with ISPs.” And, in section 5.e., the order goes further to “..facilitate the use of state property and rights-of-way for broadband deployment.” This would include gaining access to State-owned vertical assets.

D. Installation of strategically placed towers and connections at all anchor institutions could be beneficial to help deploy additional fixed wireless assets to the community as well as increase public safety. By creating an RFP to access these resources, new providers and incumbents can increase broadband offerings to the community. See a map on page 22 for larger map Transylvania County vertical assets. See Fig. 5 and 6 for Vertical and Community Assets in Transylvania County.

E. A portion of Transylvania County is currently served by Haywood Electric Membership Cooperative. Working with and educating legislators about the need to change existing North Carolina laws to support rural broadband expansion. If successful, this will lower barriers to entry as well as increase infrastructure deployment. For example, the present House Bill 387 (Senate Bill 310) would allow Electric Membership Corporations ("EMC" or "EMCs") to provide telecommunications and broadband services or contract with third parties to provide over EMC facilities. See https://www.ncleg.gov/Sessions/2019/Bills/House/PDF/H387v0.pdf for more information.

F. Create public/private partnerships with private and/or nonprofit providers to extend services and increase adoption.

G. Continue to deploy and expand a County network for governmental use (including, for example, connecting government facilities via fiber optic cable and/or developing a public safety network) and allowing service providers to lease excess strands (lessening their investment) or by performing "joint builds" to lower deployment costs for everyone.

H. Work with providers to encourage extension of existing infrastructure, including new wireline providers, to capture more customers and/or improve existing services such as fiber to the home. In locations where some communities may have financial resources they may be able to individually incentivize a company to improve services in their area.

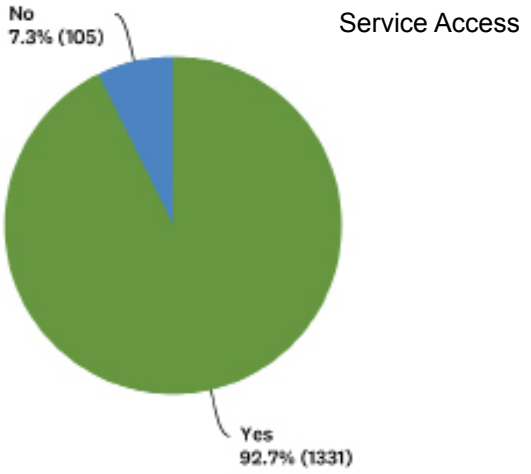
I. Utilize varying technologies such as fixed wireless and wireline to fill in the gaps of service to underserved sections of Transylvania County. As a long-term solution the County could put out a Request for Proposal (RFP) to a point-to-point or (multi-point) wireless provider to create a blanket wireless solution for the entire County.

DIGITAL INCLUSION:

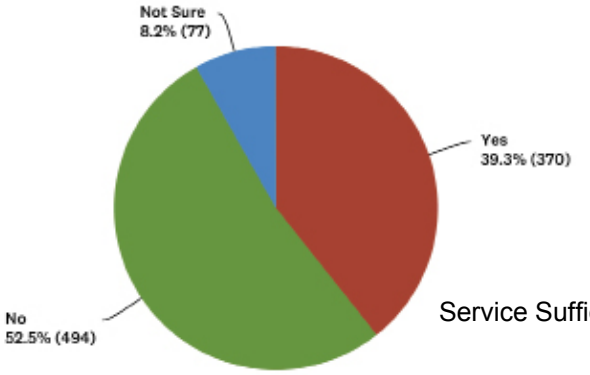
Ideally every citizen who desires internet access would be able to receive it, but unfortunately there are gaps in coverage for various reasons.

Nearly 53% of survey respondents said their service did not meet their sufficiency needs and 7.3% of survey respondents don't have access at all. Transylvania County may want to consider some digital inclusion activities to help meet the needs of the community. Of the survey responses indicating "no Internet access", cost of service ranks as the top barrier to internet adoption (63.6%).

Figures 7 and 8: 7.3% of Transylvania County survey responses respond by having no service and nearly 53% of responses say service does not meet their sufficiency needs.



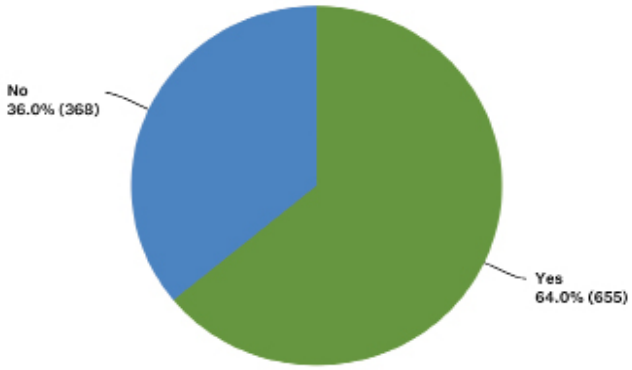
Service Access



Service Sufficiency

Transylvania County is cognizant and progressive at addressing concerns related to Homework Gap. Transylvania County Schools already offer a 1:1 program for their students to have device at home. These devices will be better utilized with increased adoption rates and other digital inclusion activities for the community. 64% of the population reported someone in their household requiring school work or training tasks online.

Figures 9: 64% of survey responses claim someone in their household is required to perform educational tasks online.



To help alleviate cost burdens to communities the county may consider implementing additional low cost mobile service solutions and public access locations.

1. HotSpot-To-Go Programming- HotSpot lending programs assist with providing individuals access who can't afford regular service or do not possess consistent broadband needs. These programs are often administered by libraries, schools, non-profits, or faith-based institutions and are available for determined periods of time for free, or at a low cost.
2. Implement low/cost mobile service solutions- School district, public agencies, and private facilities can create additional community wifi spots to provide better coverage for unserved/underserved communities. Examples of locations include: school buses,public transportation, community centers, parks, schools, libraries, churches, downtown districts, and businesses. Transylvania County Library system owns and operates a traveling bookmobile that can serve as a roaming hotspot. Using this type of resource as a model could leverage better community connectivity.
3. In areas where broadband competition is viable, encouraging competition in the market will help reduce cost barriers.
4. Help encourage companies to offer low cost plans to qualified customers.

Additionally- the county may consider organizing and branding this initiative locally by creating a map of these public and private locations. Locations participating in the program can get a sticker for their window/front desk that indicates participation in helping the community make sure it has broadband resources. As high quality broadband is created and marketed to these locations residents will become more familiar with the services broadband offers. This may lead to an increased demand for service as the value placed on adequate broadband rises.

EMERGENCY MANAGEMENT:

It is important for Emergency Management Teams to have the ability to communicate well in order to help manage calls in remote areas. Broadband plays a critical role in improving emergency communication systems. Upgrading broadband resources can aid in the prevention of emergencies and decrease response time in their event. Improvement will also make available a spectrum of new technologies to be utilized as avenues of communication when these situations transpire.

The creation of additional towers in the county could help improve access to both the resident and emergency responders, especially in rural areas where fewer towers exist. And, pursuant to North Carolina Governor Roy Cooper's Executive Order Number 91, dated March 14, 2019 - https://governor.nc.gov/documents/executive-order-no-91-establishing-task-force-connecting-north-carolina-promoting - government agencies across the State will also be the beneficiaries of additional broadband infrastructure. Emergency management systems would be a beneficiary.

In more urban areas of the county there may be opportunities to look at SMART city technology to improve emergency response efforts.

Transylvania County Bookmobile provides a portable library accessible to any library card holder.

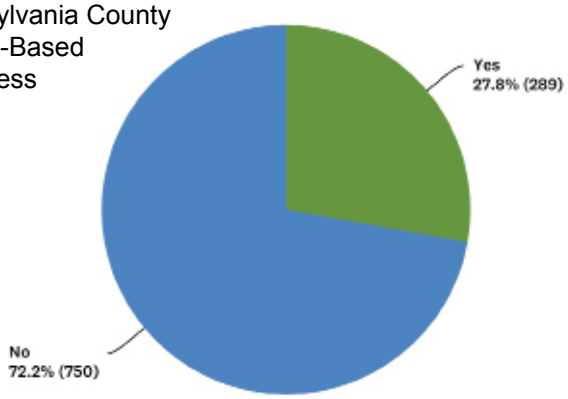
ECONOMIC DEVELOPMENT:

The availability of secure, reliable, competitive, and sustainable broadband infrastructure is essential to meet citizens' needs and is a powerful catalyst for job creation that drives economic modernization. Additionally, small and medium sized businesses grow faster with greater high-speed internet use. Any business or industry, small to large, rural to urban, could benefit from access to broadband. Broadband access is increasingly crucial to small, rural, and home based businesses as it provides access to a global marketplace from their location.

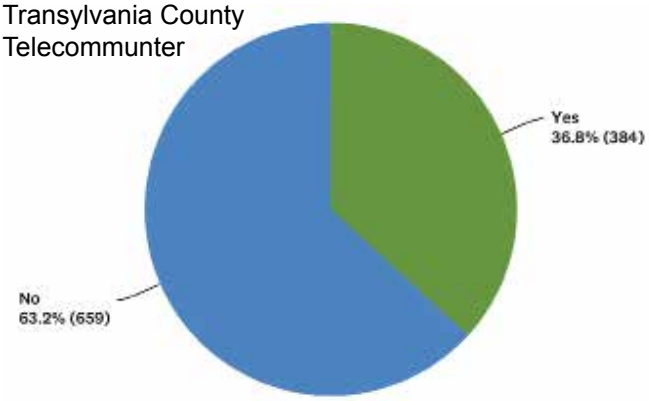
According to survey data nearly 28% of the population operates a home based business and nearly 37% of the population telecommutes. These businesses will be better supported with improved connectivity.

Figures 10 and 11: Business needs and potential for economic growth would be strengthened by improved broadband resources in Transylvania County. Figure 10 shows that over 27% of responses operate a home based business and over 36% say they currently telecommute to work.

Transylvania County
Home-Based
Business



Transylvania County
Telecommunter



Transylvania County has been successful at implementing several projects through grant funding and private investment that has made it possible for Economic Development sites and projects to be well covered. Funding opportunities for projects associated with Economic Development and business services are available (see page 13 for funding opportunities).

Further deployment of broadband resources, redundancy, and multiple carrier options in Transylvania County will increase its ability to develop more Economic Development sites and recruit more projects to the community. Improving and expanding fiber assets into unserved areas of the county will increase areas with the potential for commercial viability.

HEALTHCARE:

Increasingly, healthcare options are accessible at one's home and satellite sites. In order to support access to said services, a vibrant broadband connection is required. For example, the North Carolina Telehealth Network ("NCTN", http://nctn.web.unc.edu/) supports eligible healthcare providers' access to broadband services across the State through a Federal Communications Commission ("FCC") program (the Healthcare Connect Fund). See https://www.fcc.gov/document/healthcare-connect-fund-fact-sheet for more information.

Quality broadband is a requirement for viability of telehealth opportunities in rural areas. According to the FCC, in order to support high definition video teleconferencing the required minimum broadband speed is 6 Mbps. Transylvania County has a hospital and urgent care facilities, but bringing specialized care to the community via telehealth will increase overall health services.

1. Bring together healthcare stakeholders to discuss how broadband speeds can work to improve the health of the community.
2. Identification of strategic sites(such as community centers, business districts, etc) that co locate with other needed service offerings could help customer participation in a variety of resources.
3. Working with healthcare providers to create a pilot program to deploy telehealth service offerings.

FUNDING OPPORTUNITIES:

To support any recommendation, the County will need access to capital. The following groups may have grants available in support of broadband infrastructure deployment (note this list is not complete). Each respective group must be contacted to determine project eligibility:

1. USDA – please refer to footnote 2, There are community connect and reconnect grants available to eligible applicants. www.rd.usda.gov/programs-services/community-connect-grants
2. Connect America Funds (CAF) – CAF funds are available to designated areas of the region. Currently there are no sites in Transylvania County, but often very unserved areas of the country are part of this program. See https://www.fcc.gov/consumers/guides/connect-america-fund-phase-ii-faqs for more information.
3. Appalachian Regional Commission (ARC) – The ARC has made funds available for rural broadband access projects. Transylvania County has participated in ARC funding for broadband. Currently, ARC projects need to be tied to Economic Development projects. www.arc.gov/program_areas/index.asp?PROGRAM_AREA_ID=18
4. The GoldenLEAF Foundation –GoldenLEAF has made funds available for economic development programs that include broadband telecommunications. www.goldenleaf.org
5. State of North Carolina – the Broadband Infrastructure Office, as authorized under S.L. 2018-5, is providing grants to private providers of broadband services to facilitate the deployment of broadband service to underserved areas of the State. The Growing Rural Economies with Access to Technology (GREAT) Grant program funds eligible projects only in Tier One counties. These funds are not presently available to Transylvania County due to its status as a Tier Two county. Transylvania County officials may consider making their legislators and other state officials aware of this barrier for Tier Two counties and work to remove elements of the program that make it inaccessible to counties similar to Transylvania.
6. Implementation of leasing vertical and community assets to private companies could leverage supplemental funds to deploy additional broadband related resources to the community.
7. Building a philanthropic model of corporate and public funding to address the highest needs among different barriers of adoption will increase deployment and reduce digital inclusivity concerns for the county.

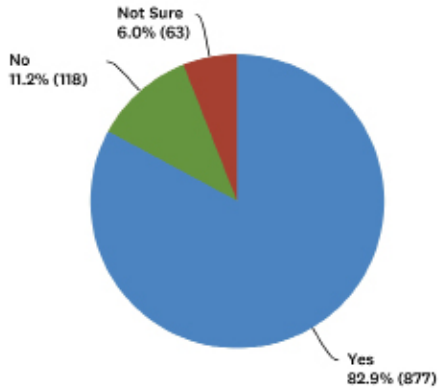
CONCLUSION:

Nearly 83% of survey responses from Transylvania County indicate that they consider internet access to be as essential as other basic services such as water, sewer, and electricity. In another question regarding a scale of importance, respondents registered importance of internet access at 88 out of 100. The value of these resources from the community are very high.

Due to the high cost of implementation of fiber resources there is no fast track to closing the digital divide for Transylvania County, the method of assistance to improve connectivity access will require a collaborative approach among the community's partners. An improved and coordinated effort across the public, private, and non-profit sectors could significantly close the gap. Identification of highest priorities for the county could help play a role in leveraging funding from various resources to facilitate project implementation. This will likely require a comprehensive look at fiber, fixed wireless, and wifi/mifi improvements to close the digital divide countywide.

Telecommunication patterns follow a supply and demand model. Ensuring providers in the region receive positional awareness of the opportunities and issues is critical to improving connectivity. Through this project, Transylvania County, the North Carolina Broadband Infrastructure Office, and Land of Sky Regional Council now have the data to leverage private support to improve broadband resources.

Figure 12: (To the right) 83% of Transylvania County survey respones say that they consider internet access to be an essential peice of infrastructure.

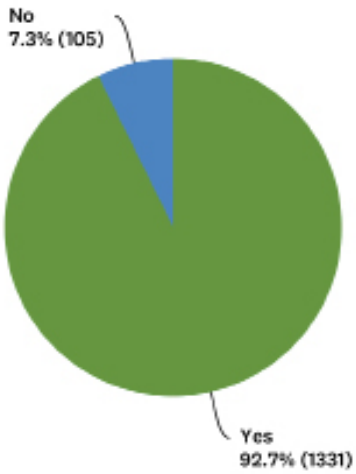


2 - The United State Department of Agriculture's (USDA) Rural Utility Service (RUS) will direct this program and rules for participation have not been released. Competition for these funds will be considerable and interested groups should start preparing now with business/technical assessments, cost analyses, engineering plans, and financial viability studies. In sum, these capital projects should be "shovel ready". https://www.federalregister.gov/documents/2018/07/27/2018-16014/broadband-e-connectivity-pilot-program

ATTACHMENT A:
BROADBAND SURVEY RESPONSES

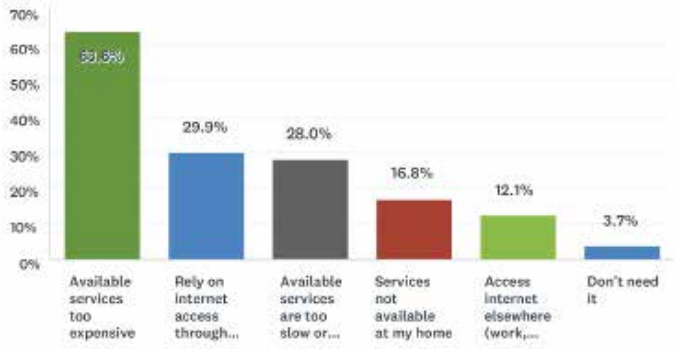
Does your household currently have Internet access?

7.3% of Transylvania County residents claim they do not have access to Internet.



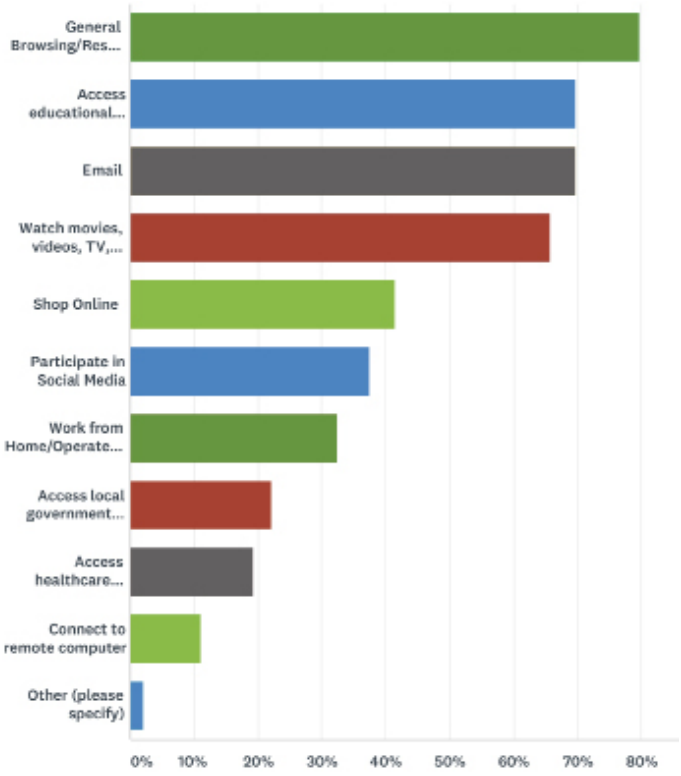
Why doesn't your household subscribe to Internet services? (For those who do not have Internet access)

63.6% of Transylvania County residents claim cost as the most significant barrier to internet adoption. 16.8% of the survey responses claim that services are unavailable at their home.



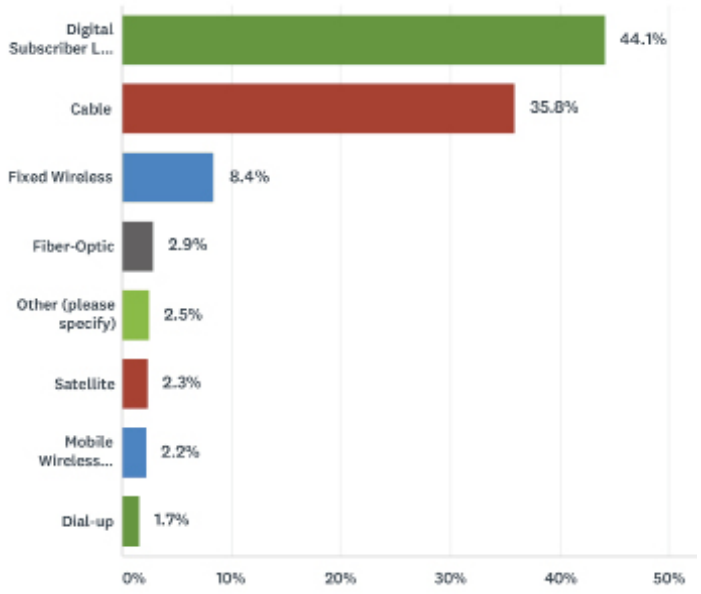
If you could access Internet service in your home what activities would be most important to you? Select all that apply

Transylvania County residents claim General Browsing/ Research, Access to Educational Materials, and Email as their top desired activities if they had access to the Internet.



What is the primary source of Internet service that you have at your house? (for those who do claim to have Internet access)

44.1% of survey responses claim to have DSL as their primary source of Internet. 35.8% of the responses claim cable as their primary Internet source. Few responses came in as other sources such as satellite, fixed wireless, and fiber. Many people may not understand how their Internet service is delivered.

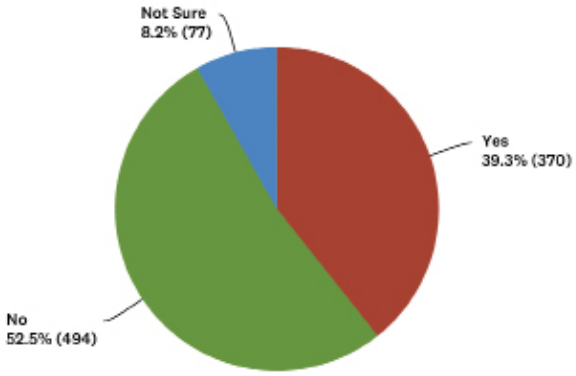


How much does your household pay each month for Internet service, including taxes and fees? If part of a bundle or package deal, please consider only the Internet portion of your monthly bill.

Over half of survey respondents spend an average of $50-74.99 each month on their Internet service. Over 18% claim to to pay $30-$49.99 and nearly 14% pay $75-$99.99.

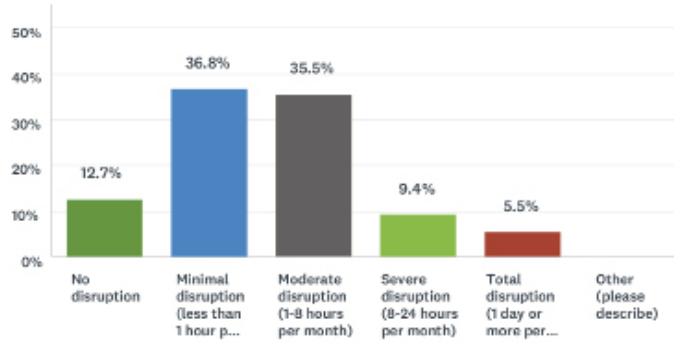
Do you think your Internet service provider sufficiently meets the needs of your household?

Over half of the survey responses from those who have Internet service claim the service does not meet their needs and over 8% aren't sure.



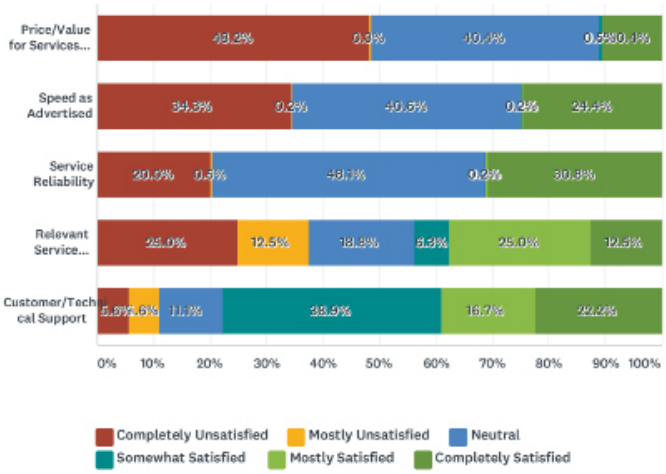
Do you have any problems with the quality of your home Internet connection? Consider issues like service reliability, unacceptable speeds, service outages, etc. that occur during a typical month.

Over 70% Transylvania County survey responses claim that service disruptions are less than 8 hours per month and 12% claim there are no disruptions.



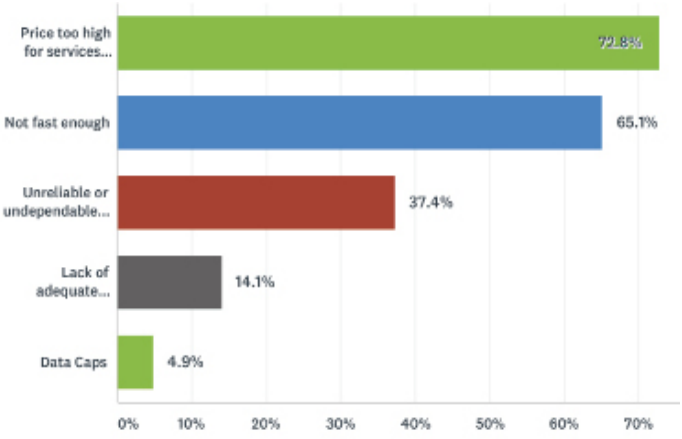
Please rate your level of satisfaction with your home service:

Over all Transylvania County is most unsatisfied with Price/Value for services and Speed as Advertised. They are most satisfied with Customer Service and Tech Support.



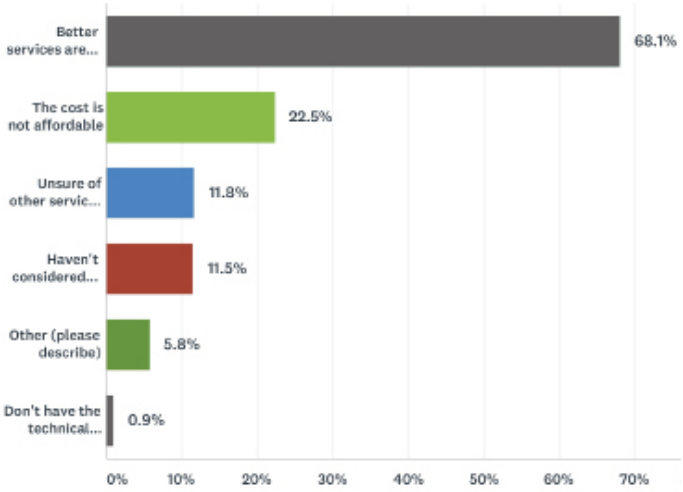
What would you like to improve about your Internet Service?

Consistent with the previous question nearly 73% of survey responses claim they would like for prices for the service provided to decrease, additionally customers expressed concerns about their speed and reliability.



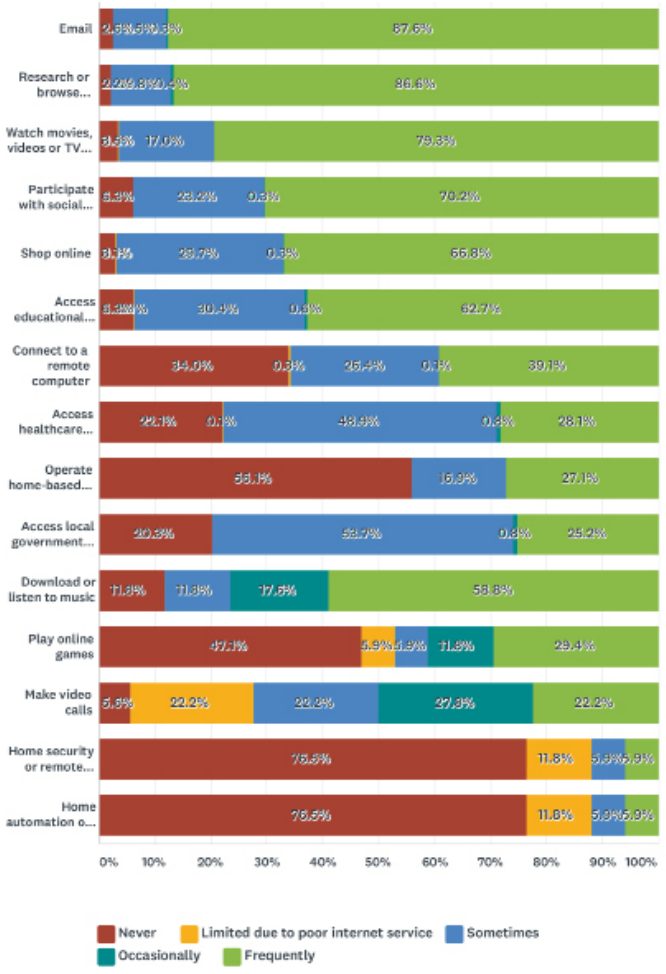
Why haven't you upgraded your residential service?

Over 68% of the survey responses claim that they have not upgraded their service due to a lack of better options.



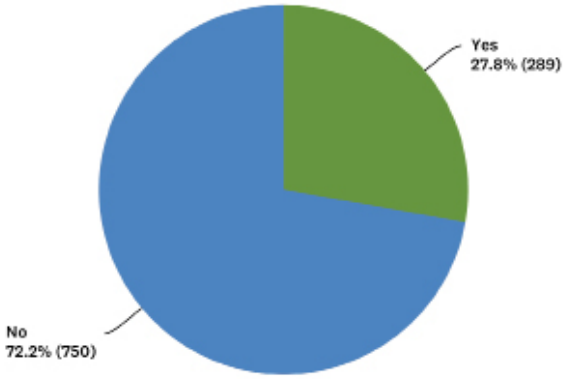
What activities do you do through your home Internet service?

Transylvania County residents use the Internet for diverse reasons, basic activities such as email, research, entertainment, and social rank among the most popular.



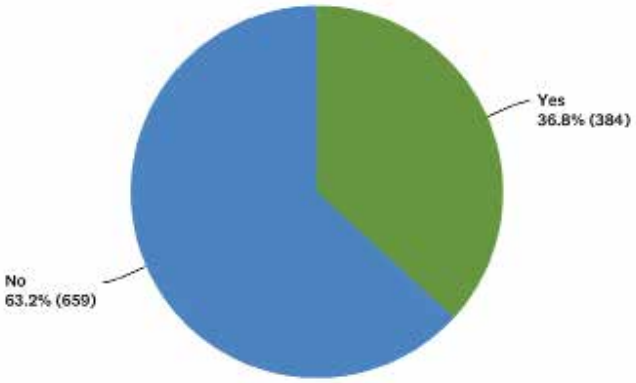
Does anyone in your household operate a home-based business?

27.8% of survey responses claim to operate a home-based business.



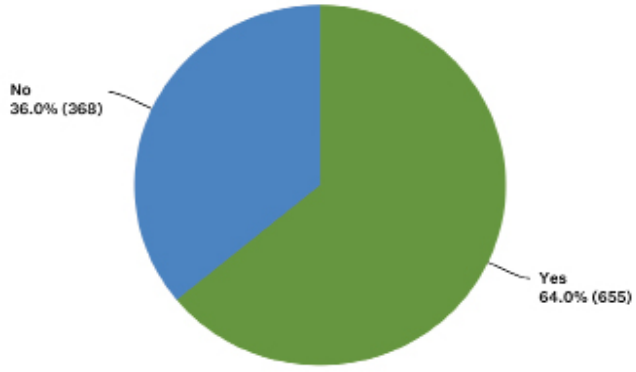
Does any member of your household telecommute or occasionally work from home from an outside employer?

36.8% of survey responses claim to telecommute to their jobs. Based on several open ended questions at the end of the survey, the option to work from home came up as something Transylvania County residents would like to participate in.



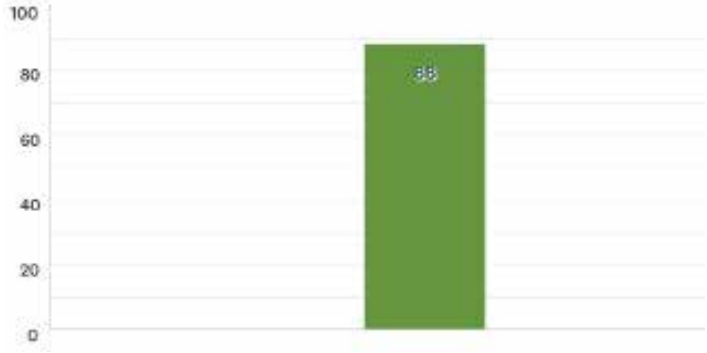
Are any members of your household required to perform schoolwork or training tasks via the Internet?

64% of survey responses claim that someone in their household is required to perform schoolwork or training tasks.



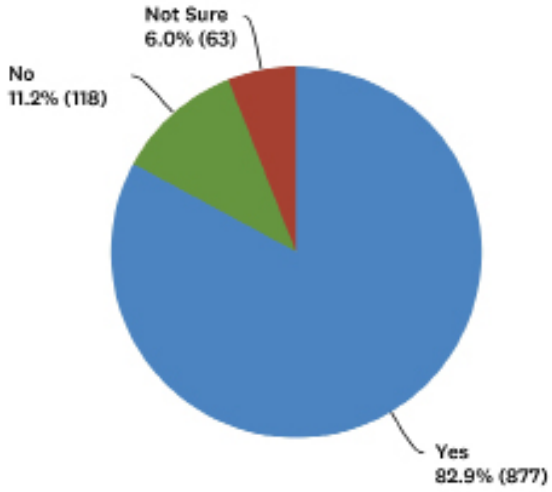
How important is the Internet to your household?

On a scale from 1-100 Transylvania County ranks the importance of Internet access as an 88.

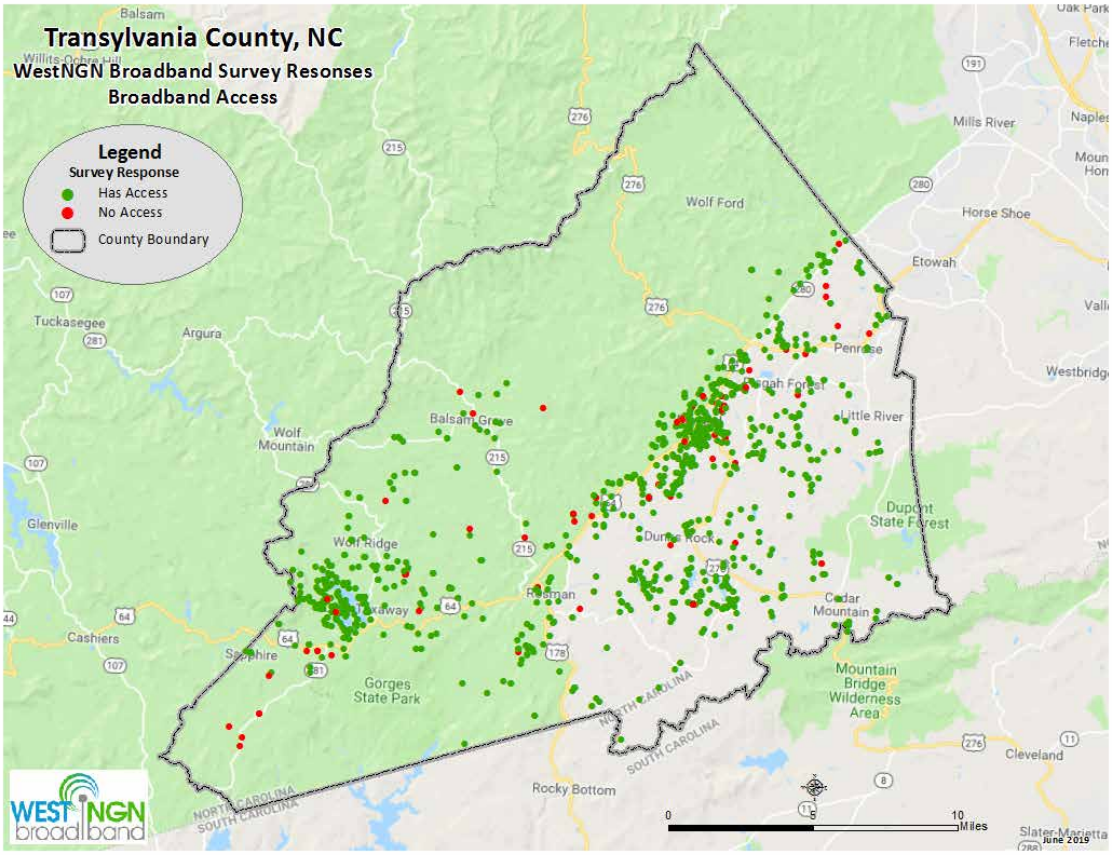


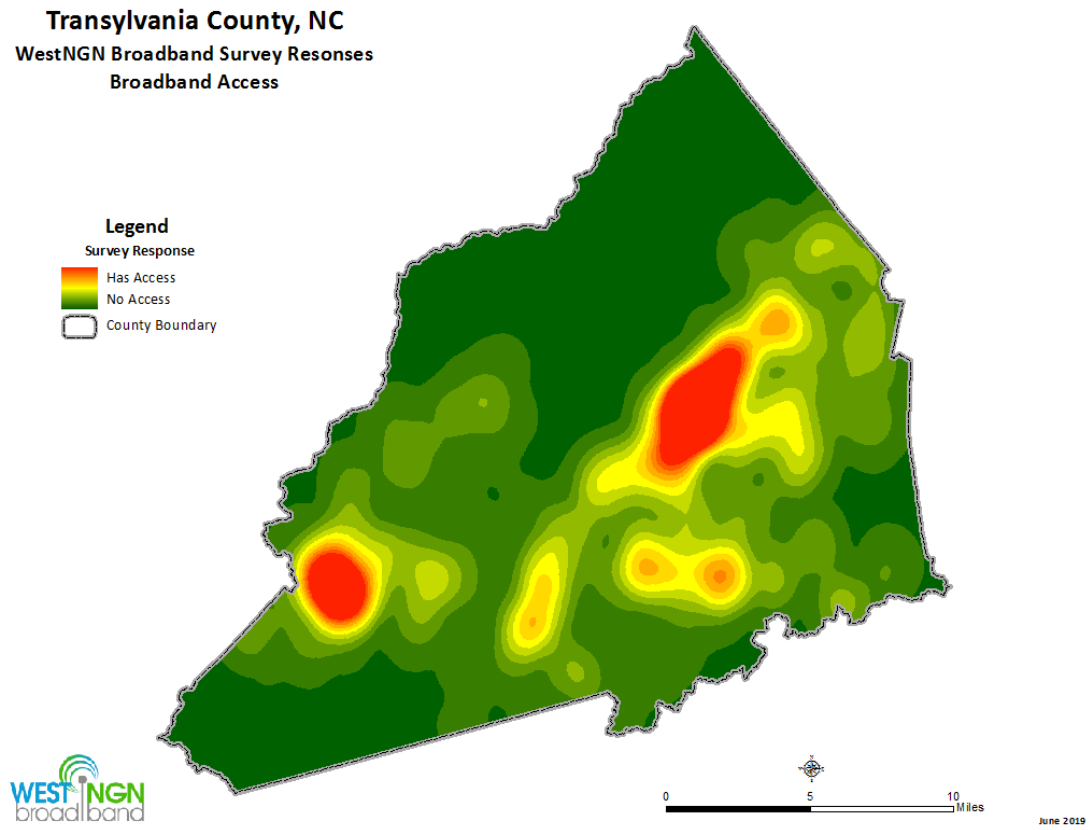
Do you consider Internet access to be an essential service; much like water, electricity, and other utilities?

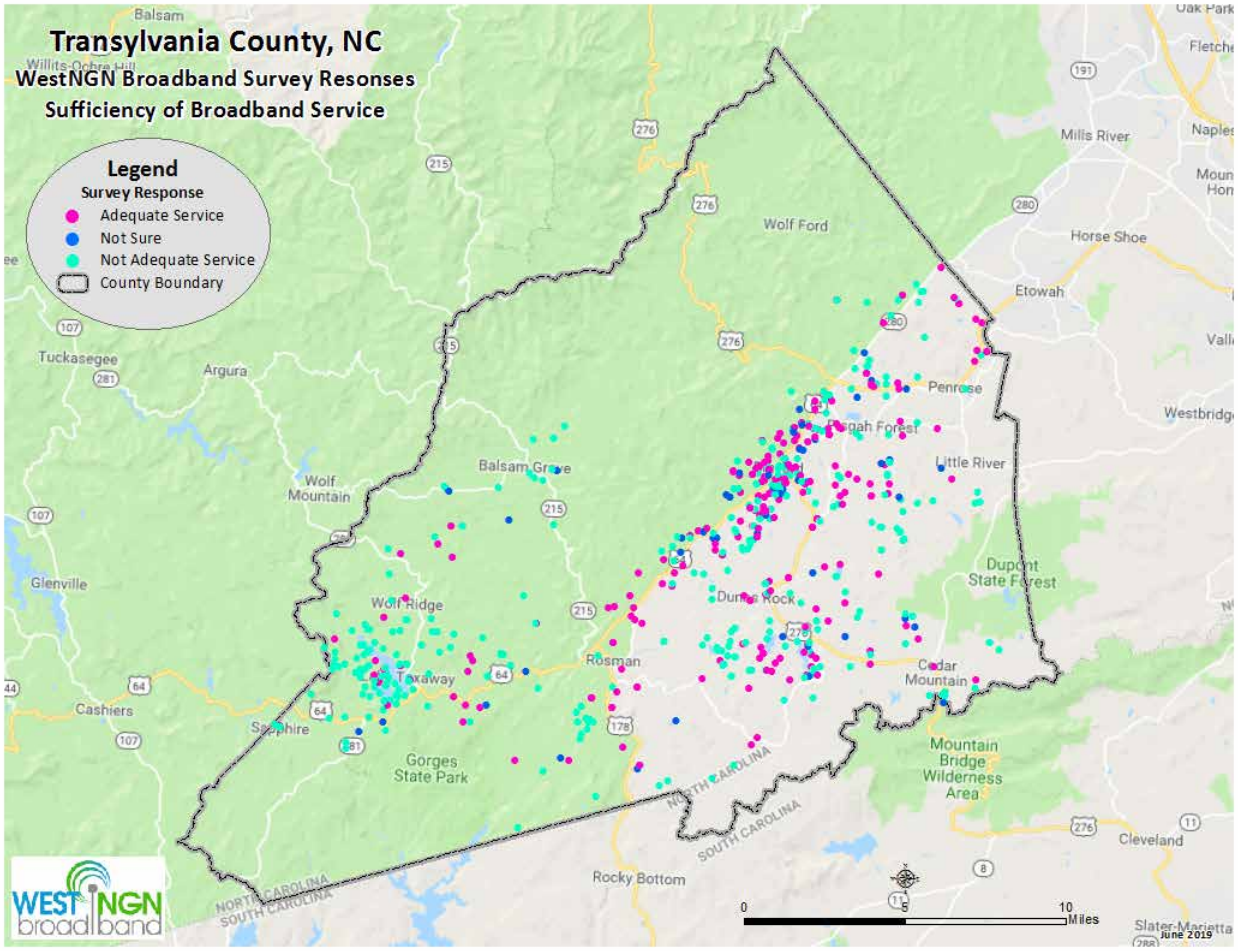
Transylvania County feels very strongly (82.9%) that Internet access has become a basic utility.

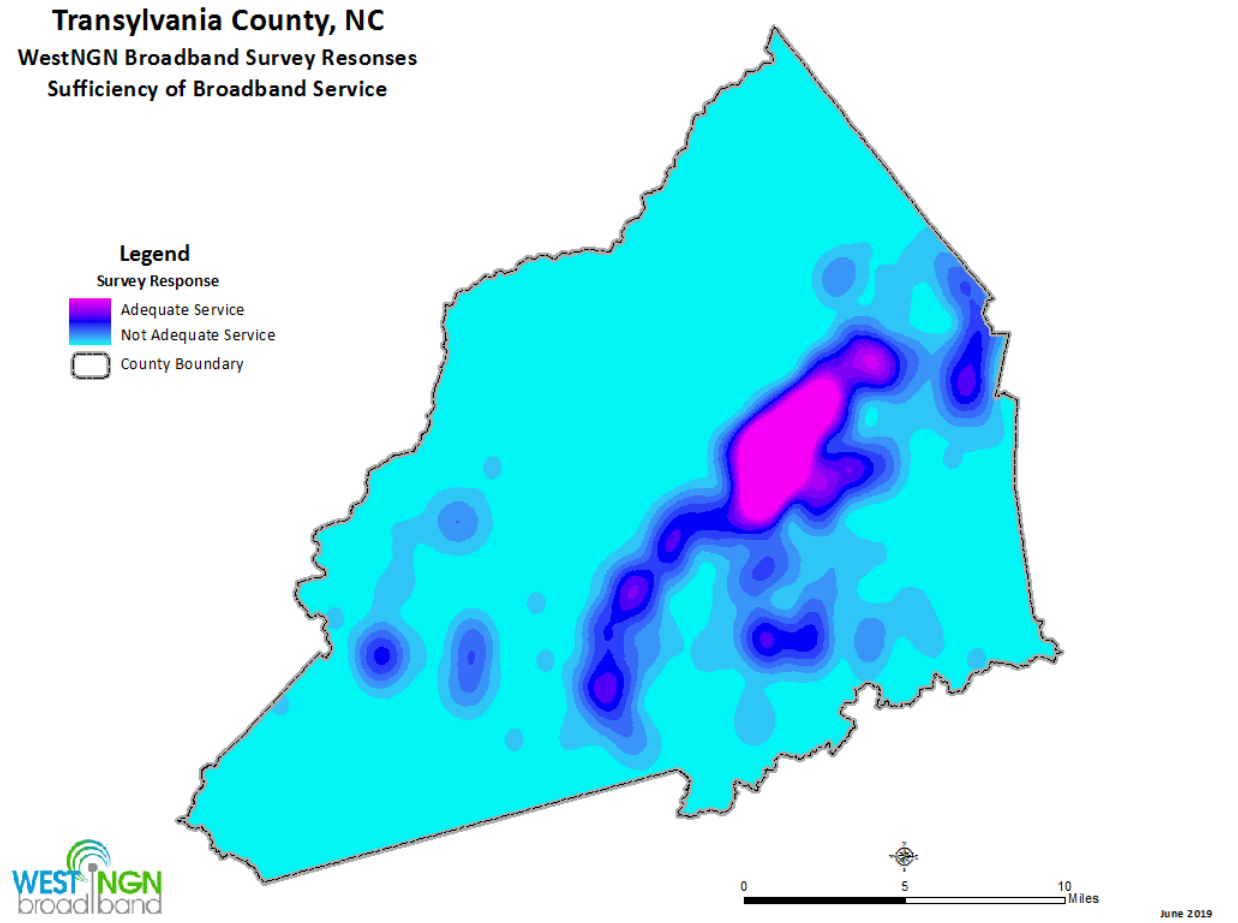


ATTACHMENT B:
MAPS






Transylvania County, NC
WestNGN Broadband Survey Resonses
Sufficiency of Broadband Service
Legend
Survey Response
Adequate Service
Not Sure
Not Adequate Service
County Boundary
Balsam
Willits Ochre Hill
Tuckasegee
Argura
Wolf Ford
Mills River
Horse Shoe
Etowah
Penrose
Pisgah Forest
Little River
Balsam Grove
Wolf Mountain
Glenville
Wolf Ridge
Dupont State Forest
Dunn Rock
Rosman
Toxaway
Cedar Mountain
Cashiers
Sapphire
Gorges State Park
Mountain Bridge Wilderness Area
Cleveland
Rocky Bottom
NORTH CAROLINA
SOUTH CAROLINA
0
5
10
Miles
June 2019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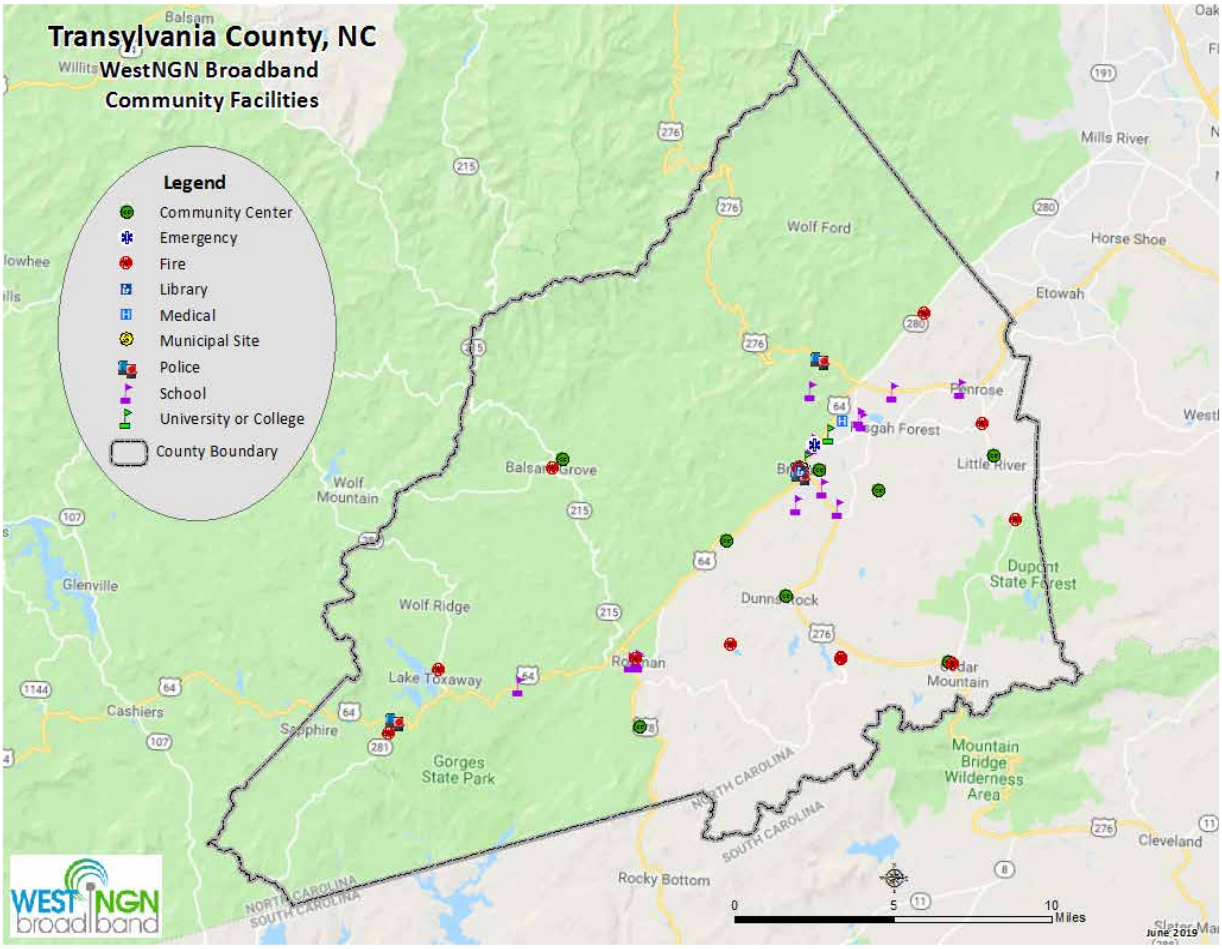


Community Center

Balsam Grove Community Center
Catheys Creek Community Center
Cedar Mountain Community Center
Dunns Rock Community Center
Estatoe Community Center
French Broad Community Center
Little River Community Center
Williamson Creek Community Center

Emergency

Transylvania County EMS
Transylvania County Rescue Squad

Fire

Balsam Grove Volunteer Fire Department
Brevard Fire Department
Cedar Mountain Volunteer Fire Rescue Incorporated
Connestee Fire Rescue Incorporated - Upper Building
Connestee Fire Rescue Incorporated - Station 1
Connestee Fire Rescue Incorporated - Station 92
Lake Toxaway Fire Rescue Incorporated - Station 1
Lake Toxaway Fire Rescue Incorporated - Station 2
Little River Volunteer Fire Department
North Carolina Division of Forest Resources District 9 - Dupont State Forest
North Transylvania Volunteer Fire Department
Rosman Fire Rescue
LUNTEER FIRE DEPARTMENT
ROSMAN FIRE RESCUE

Library

Transylvania County Library

Medical

Transylvania County Health Department
Transylvania Regional Hospital

Municipal Site

Brevard City Hall
Transylvania County Court House

Police

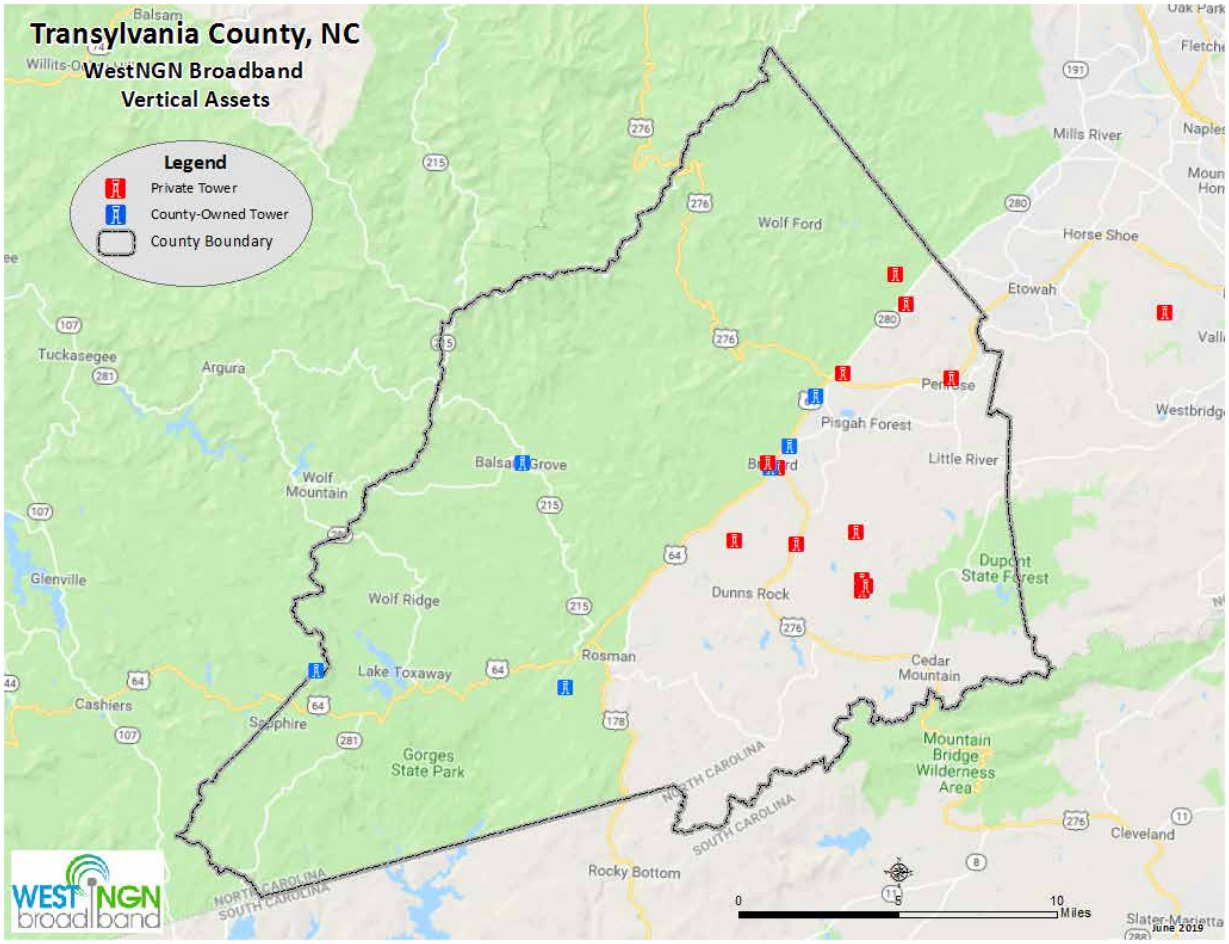
City of Brevard Police Department
North Carolina Division of Parks - Gorges State Park
Transylvania County Sheriffs Department
United States Forest Service - Pisgah National Forest Pisgah Ranger District

School

Anchor Baptist Academy
Bethany Christian School
Brevard Academy
Brevard Elementary
Brevard High
Brevard Middle
Davidson River School
Mountain Sun Community Sch
Pisgah Forest Elementary
Rosman Elementary
Rosman High
Rosman Middle
T C Henderson
Wellspring Acad. of the Carolinas

University or College

Blue Ridge Community College - Brevard
Brevard College


Transylvania County, NC
WestNGN Broadband
Vertical Assets
Legend
Private Tower
County-Owned Tower
County Boundary
Wolf Ford
Horse Shoe
Etowah
Mills River
Tuckasegee
Argura
Pisgah Forest
Little River
Wolf Mountain
Balsam Grove
Glenville
Wolf Ridge
Dunns Rock
Dupont State Forest
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Rosman
Cedar Mountain
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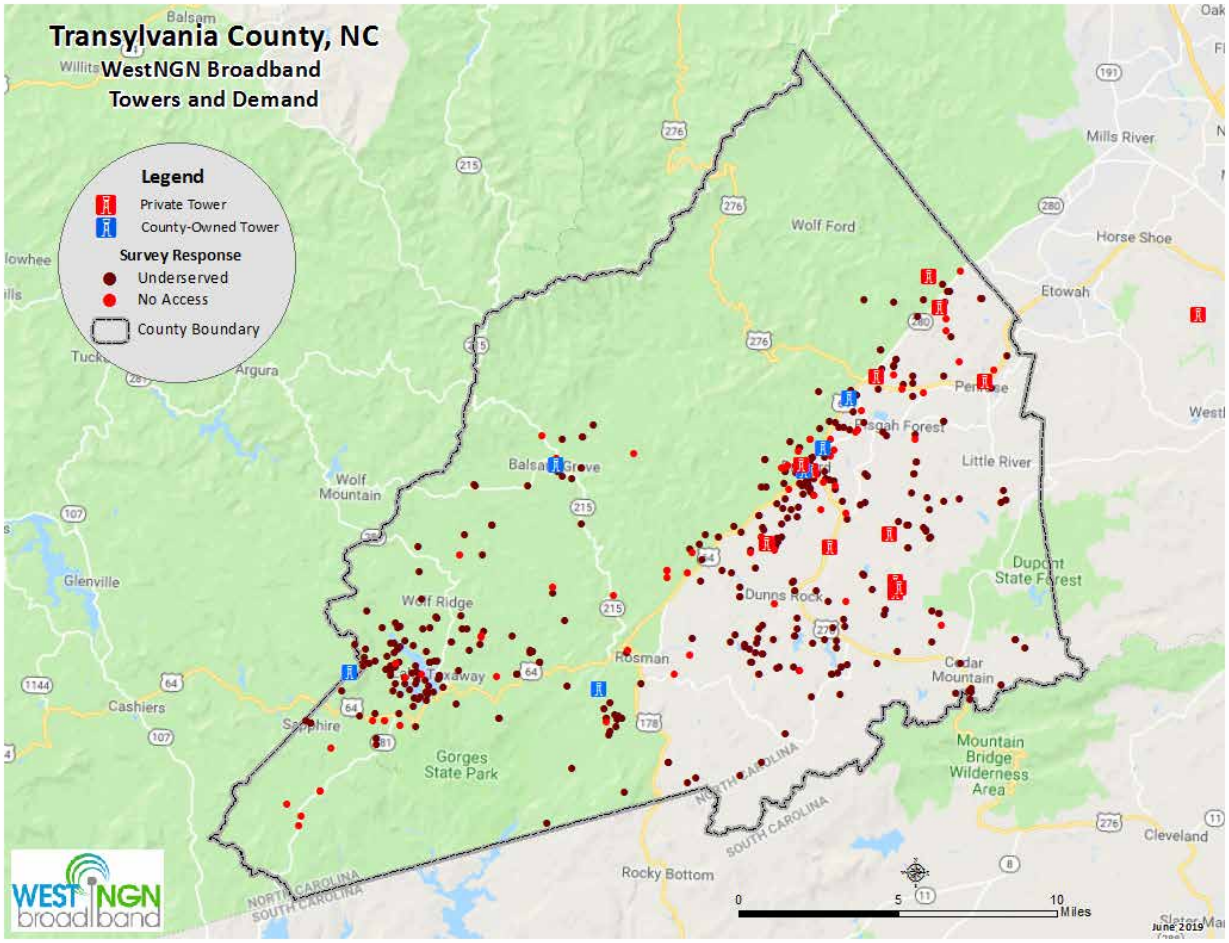
Transylvania County, NC
WestNGN Broadband
Towers and Demand
Legend
Private Tower
County-Owned Tower
Survey Response
Underserved
No Access
County Boundary
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Horse Shoe
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Mills River
Argura
Pisgah Forest
Little River
Wolf Mountain
Balsam Grove
Glenville
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Dupont State Forest
Rosman
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Sapphire
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Mountain Bridge Wilderness Area
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NORTH CAROLINA
SOUTH CAROLINA
0
5
10
Miles
June 2019

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Brevard, NC 28712
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www.transylvaniacounty.org