LENOWISCO Service Area, Virginia

Connectivity Plan

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Date: November, 2024

Acknowledgements

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The following contributors and organizations were critical to the planning process:
VA Department of Housing & Community Development (DHCD)
Virginia Community Action Partnership
Regional Adult and Career Center (RACE1)
Lee County, Virginia
Norton City, Virginia
Scott County, Virginia
Wise County, Virginia

This plan was created as part of the Appalachia Digital Accelerator, a Connect Humanity program funded by the Appalachia Regional Commission with additional support from Truist Foundation, and the Ford Foundation.

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EXECUTIVE SUMMARY

Executive Summary

The Appalachian Community Action and Development Agency (AppCAA) conducted the following Connectivity Plan assessment for the LENOWISCO area (Including Lee, Scott and Wise Counties and Norton City) to gather the information needed to analyze, select, and implement the best solutions to improve broadband connectivity and affordability locally, and prepare the community for the implementation of the Broadband Equity, Access, and Deployment (BEAD) and Digital Equity Act (DEA) federal funding programs.

AppCAA was created as a Community Action Agency in 1964 and serves Lee, Scott and Wise counties and the City of Norton with housing counseling services, financial education, community education, workforce development, home weatherization, and volunteer programs. AppCAA's vision is: *"to eliminate poverty and make our clients more self-sufficient by development of resources and services to low-income individuals and households in our service areas."* Presently, the annual portfolio of AppCAA programs totals nearly $4 million. In an effort to better meet the emerging needs of its service area, AppCAA biannually carries out Community Needs Assessments; the most recent of which showed gaps in high speed internet access and limited use of web-based technologies for educational, healthcare, and employment services. Relevant results from AppCAA's 2024 Community Needs Assessment are presented in this plan to further explain outcomes and objectives from the Connectivity Plan assessment.

Given the current and planned investments in high-speed internet, AppCAA has worked closely with stakeholders to identify the most pressing priorities to bring Southwest Virginia residents' broadband access to parity with others in the Commonwealth. The greatest challenge facing technological inclusion and broadband utilization by the general public is digital equity. Digital Equity refers to the ability of all individuals and communities to access information technology capacity needed for full participation in socio-economic life. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.

To achieve digital equity, AppCAA and LENOWISCO partners have identified key priorities for the service area:

- Establish a digital navigator program in the next 5 years to provide targeted assistance to help community members leverage information and communications technologies and achieve their technology-related goal through AppCAA and other nonprofit and community partners.
- Improve access to low or no-cost devices through AppCAA and other nonprofit and community partners.
- Increase the availability of internet subsidies and offer more long-term/low-cost service options.
- Enhance accessibility via mobile and static access points, particularly for populations residing in remote mountain areas.

SECTION 1

Preliminary research & readiness

1. Preliminary Research and Readiness

A. LENOWISCO Overview

This Connectivity Plan covers the area of Lee, Scott and Wise Counties and the City of Norton (i.e. LENOWISCO). Traditionally a coal mining region, the area experiences higher rates of poverty, lower rates of employment, and worse access to healthcare than other parts of the State, impacting economic and educational achievement and residents' overall wellbeing.

Poverty in the AppCAA service area is 21.6%, compared to the state average of 10.6% and national average of 12.6%[1]. The poverty rate for the counties of Lee, Wise and Scott has remained above the Virginia average for decades and spikes during recessions. Low wages, loss of industry and lack of income-generating opportunities are adversely affecting the population of Southwest Virginia. According to the Bureau of Labor Statistics, in autumn 2023, the average weekly wage for a Southwest Virginia resident was $851, compared to the national average of $1,334.[2]

Poverty particularly affects the elderly and female-headed households in the area. According to the Census Bureau's American Community Survey 2022, 14% of the population over the age of 65 in the LENOWISCO area lives in poverty (compared to 9.3% for Virginia); therefore, there are disproportionately more older people living in poverty in the area than in other parts of the Commonwealth. Per the same source, from those 3,553 families living in poverty in the region 51.3% are female single parents and 9.7% male single parents.

Rising levels of poverty are necessitating that all able-bodied adults work to be able to afford life essentials. As a result, civic participation is waning along with the social services that civil society provides. According to studies Virginia performs, the Southwest Virginia region lagged behind the rest of the state in levels of contributions to charitable causes (1.42%) and has the lowest level of voter turnout for the Commonwealth--a proxy indicator for a population's participation in civil society.

Multiplying the problems of lack of economic opportunities and social support are poor health outcomes related to food security and healthcare facility access. The Feeding America 2022 Map the Meal Gap report found that food insecurity exists in all counties where AppCAA operates. The food insecurity rate for children in Southwest Virginia is almost 4% higher than that of adults, with 28% of children in Lee County, 21% in Scott, 24% in Wise and 28% in Norton experiencing food insecurity[3]. Part of the food security problem stems from communities' transition away from subsistence farming to purchasing food. Compounding the negative impact of poor nutrition is the changing healthcare landscape in Southwest Virginia. As rural hospitals are closing and consolidated into quasi-urban areas, many residents (especially the elderly) are becoming less likely to seek out care and treatment due to limited transportation and distrust of

[1] United States Census Bureau. (2022). *Small Area Income and Poverty Estimates.*
[2] United States Bureau of Labor Statistics. (2024). *County Employment and Wages in Virginia — Third Quarter 2023.*
[3] Feeding America. (2022). *Map the Meal Gap. Food insecurity among child populations.*

corporate healthcare systems. Without preventative care, prevalence of health problems that particularly affect the residents of Southwest Virginia (e.g. NCDs) will grow, further taxing an already stretched system.

These socio-economic characteristics of the LENOWISCO area underscore the need for long-term, comprehensive investments to alleviate poverty while improving access to educational and employment opportunities and healthcare services. Broadband expansion and related digital equity activities will provide new avenues for residents to improve their job skills, expand educational opportunities, become more involved in civic life, and take control of the health and wellbeing of themselves and their families.

B. Geographic and Demographic Profile

General Community Demographic Information

AppCAA used demographic data from the US Census Bureau, American Community Survey, and data from AppCAA's Community Needs Assessment 2024 to obtain the following information:

Demographics	Lee Co.	Norton City	Scott Co.	Wise Co.	LENOWISCO Area
Total Population Number	21,982	3,609	21,476	35,421	82,488
Square Miles Covered	435.4	7.5	535.8	405.0	1,383.7
Number of People per Square Mile	51	493	40	103	171.78
Number of Residents Who Identify as White	20,179	3,060	20,804	32,516	76,559
Total Minority[4]	1,890	549	966	2,905	6,310
Number of Residents Who Identify as Black	885	227	215	2,161	3,488
Number of Residents Who Identify as Hispanic or Latino	472	147	365	496	1,480
Number of Residents Who Identify as Indigenous	71	14	64	70	219
Number of Residents Who Identify as Other (i.e. neither white, Black or Indigenous)	39	169	322	673	1203

[4] Totals will not sum correctly as some individuals identify as more than one group.

Household Characteristics

	Lee Co.	Norton City	Scott Co.	Wise Co.	LENOWISCO Area
Total Number of Households	8,244	1,540	8,612	14,025	32,421
Number of Households That Are Owner Occupied	5,779	1,075	6,915	9,929	23,698
Average Household Size	2.55	2.36	2.42	2.40	2.4325
Mean Household Income	$49,746	$54,373	$56,714	$55,076	$53,977
Median Household Income	$37,574	$35,592	$42,561	$44,884	$54,724
Per Capita Income	$19,671	$25,135	$24,214	$22,225	$22,811
Number of People Living Below the Poverty Line	5,480	736	4,209	6,801	17,226
Number of Low (LI) to Moderate Income (MI) Residents	LI=36.2% (2984 persons) MI=11.9% (981 persons)	LI=28.6% (1032 persons) MI=16.3% (588 persons)	LI=23.3% (5004 persons) MI=26.5% (5691 persons)	LI=28.3% (10,024 persons) MI=26% (9,209 persons)	LI=29.1% (19,044 persons) MI=20.2% (16,469 persons)

Observations

The table below outlines social factors that impact the LENOWISCO area and that need to be considered when developing digital equity interventions.

Social Determinant	Description
Economic Factors	
Income Inequality and Low Wages	Wage and industry trends continue to follow a trajectory moving away from industry and toward service sectors. Healthcare remains a major employer in the area along with retail trade. The loss of coal jobs continues to affect the region as the transition to newer technologies and their associated careers have been slow to

	develop. Despite this, the Virginia Initiative for Growth and Opportunity ("Virginia GO") found that from 2022-2024, wages for District One (which includes LENOWISCO) have increased by 33%, higher than the state average[5]. Broadband access will add to this momentum and accelerate progress on poverty alleviation.
Unemployment Rate	Scott County is faring the best in overall employment (with unemployment in 2023 at 2.8%), with Lee at 3.2% and Wise at 3.6%. In Norton, roughly 4% of residents are unemployed (compared to roughly 4% statewide). Individuals leaving the workforce due to disability, family responsibilities, or lack of transportation may also contribute to the downward trend in employment.
Poverty Levels	Nearly 22% of the Southwest Virginia population are living in poverty with 28% of this population under 18 years old. Poverty in the area is generational and particularly impacts women-headed households and children.
Education	
Access to Educational Resources	Students in Southwest Virginia can benefit from additional digital educational resources (including hardware) to supplement traditional, classroom-based learning in addition to web-based mentoring and other digital educational aids.
Healthcare	
Healthcare Access	Healthcare availability and quality are poor and are getting worse. Healthcare facilities are usually remote and cost is prohibitive while service availability is declining for rural areas. Residents continue to report a high amount of medical debt; the national percentage of medical debt in collections is 5%; in Scott County 6% are in collections; in Lee and Wise Counties, 9% of the population has medical debt in collections[6]. Persons of color disproportionately have higher rates of medical debt in collection in the service area.
Health Disparities	The service area experiences higher rates of non-communicable diseases (NCDs) including those affected by the economic determinants of health. For example, retrospectively, diabetes-related mortality is stable in Scott County, but rising in Lee

[5]https://cardinalnews.org/2024/05/29/wages-in-southwest-virginia-still-lag-behind-but-are-growing-faster-than-both-state-and-national-averages/

[6] The Urban Institute. (2023.) Debt in America: An Interactive Map.

	and Wise Counties.[7]
Food Deserts	Southwest Virginia is remote and sufficient food is not always accessible. Feeding America's annual survey of hunger found that food insecurity has risen in LENOWISCO since COVID, while food banks have been closing and fewer options for nutritional support are available.
Housing	
Affordable Housing	The 2022 American Community Survey 5-year estimates found average rents for Scott County was $621; Lee County $651; Wise County $750; and Norton $613. With the average household income in the LENOWISCO area of $53,977[8] (or roughly $4498 monthly gross income) rent comprises 17% of costs for the average household, meaning rental housing is still "affordable" in the service area.
Homeownership	Across AppCAA's service area, roughly a quarter of residents are renting (Scott: 21.5%; Lee 27.8%; Wise 29.7%; and Norton 47%). Although there is a high rate of home ownership, housing stock is on average more than 40 years old and residents struggle to afford home maintenance and heating/cooling costs.
Infrastructure and Environment	
Transportation Access	Southwest Virginia's topography and remote nature of its communities make comprehensive transportation solutions expensive and unsustainable. Presently, Mountain Empire Older Citizens (MEOC, a Community Agency on Aging) MET-go for Norton and Wise provides low-cost or no-cost rides on demand between the town of Wise and the City of Norton using an app. These services have been expanded from Big Stone to Appalachia through Department of Transportation funds. This expansion filled a great demand; however, service gaps remain with many passengers relying on the service for medical appointments and shopping.
Social Support	
Resources for Elderly Persons	AppCAA's 2024 Community Needs Assessment found that as an individual grows older in AppCAA's service area, they are more likely to fall into poverty. Higher prescription drug costs, greater tax

[7] National Institutes of Health. (2023.) **Diabetes Mellitus Death Rates Table for Virginia by County** All Races (includes Hispanic/Latino), Both Sexes, All Ages, 2018-2022.

[8] **The Census Bureau. (2021.) American Community Survey *Five Year Estimates.***

	burdens, growing utility costs, and overall inflation put financial pressures on seniors living on limited incomes. Southwest Virginia is experiencing fewer multi-generational homes and lessening filial supports, resulting in older individuals needing outside assistance for activities of daily living. Activities should be planned to decrease isolation and improve individual connections to the community.
Limited Childcare Options	Capacity at childcare centers is limited, with many parents being put on wait lists. Although some vouchers are available to offset the cost of childcare, there is simply not enough availability to meet demand. The impact of this lack of childcare not only affects working families who must take care of children rather than earn wages but also affects child development and early socialization.

Based on social determinants, geographic, and demographic information of the LENOWISCO area, the following observations can be made:

- The gap between mean and median HH income indicates large income disparities.
- The number of people who are low income earners is greater than the number of middle income earners.
- Community resources are limited or not available, especially for those in rural/remote areas of Southwest Virginia.
- According to Community Needs Assessment primary data[9], a large segment of individuals of working age (i.e. 15-44) are not in the workforce.
- Internet is accessed mostly for social media and entertainment purposes[10] meaning there is a knowledge gap and awareness of utilizing the internet for other purposes such as workforce, education and health.

General Community Economic and Workforce Status

AppCAA utilized additional data resources from the U.S. Census[11] and Appalachian Regional Commission[12] to further identify current and past economic drivers for the LENOWISCO service area.

Based on the data from the U.S. Census regarding Persistent Poverty Areas in the United States, the following observations were made:

- In the AppCAA service area, roughly a quarter of the population lives in poverty, this particularly affects children and the elderly.

[9] Buchanan, S. (2024). *AppCAA Community Needs Assessment.* Data collected from AppCAA clients 2022-2023.
[10] Data from AppCAA Broadband Survey, conducted in February 2024 of clients from Lee, Scott, and Wise counties and Norton City.
[11] EASTGATE REGIONAL BROADBAND FEASIBILITY STUDY (2021), *available at* https://eastgatecog.org/media/a4a249ae-ca98-4b69-aedd-f4d16ed96c4f/4jf12A/Broadband%20Lake-to-River%20Backbone%20Fiber%20Expansion/eastgate-regional-broadband-feasibility-study-final-version.pdf?download=false.
[12] In addition to expedited permitting, access to rights-of-way, and/ or easements.

- With the loss of the coal industry, professions in the area have shifted to the healthcare and service industries, with less job stability and fewer benefits.
- Healthcare facilities are consolidating in the Southwest Virginia region, driving the need for greater telemedicine options.

Data made available from the Appalachian Regional Commission regarding Economic Distress in Appalachian counties indicates that:

- Lee and Wise Counties are classified as "distressed," meaning they are the most economically depressed areas, with Wise having a three-year average unemployment of 5.7%;
- Scott County qualifies as "at-risk" with a three-year poverty rate of 15.4%;
- Tourism, entrepreneurship and workforce development are possible sectors for expansion.

Community Income Data that Supports Eligibility for Federal Funds (eg CRA eligibility)

According to the the Federal Reserve Bank of Dallas' report, "*Closing the Digital Divide: A Framework for Meeting Community Reinvestment Act Requirements*", the Community Reinvestment Act (CRA) encourages banks to make loans and investments and provide services to low- and moderate-income (LMI) communities. The report notes that each year, the CRA catalyzes more than $100 billion in capital to LMI communities throughout the United States and provides an opportunity to help address the digital divide. AppCAA is planning to obtain certification to become a Community Development Financial Institution (CDFI) due to the high levels of poverty in LENOWISCO and lessened access to credit. As a CDFI, AppCAA will be able to expand its financial services and technical assistance to generate investment in community development.

AppCAA identified the following additional demographic data to assist in determining the service areas' eligibility for CRA investment and the need for AppCAA to become a CDFI:

- Deposit Market Share by Location:

Location	Deposit Market Share for Virginia
Lee	0.15%
Scott	0.05%
Wise	0.20%
Norton	0.06%
Average for LENOWISCO area	0.07%

Federal deposit market share is very low for all service areas, with Scott county having the lowest share of deposits despite having seven FDIC-backed institutions. These data

indicate that individuals living in these areas generally do not have excess cash on hand for savings.

Home Mortgage Disclosure Act Market Share
Data for Lee, Scott, Wise Counties and Norton City for the period 2022.

Selected Variables	# of Records	$ Amount
Loan Originated	1,068	138,110,000
Application approved but not accepted	61	6,955,000
Application denied	550	55,990,000
Application withdrawn by applicant	248	34,610,000
File closed for incompleteness	182	21,400,000
Purchased loan	99	15,165,000
Preapproval request denied	0	0
Preapproval request approved but not accepted	5	415,000

Opportunity Zones
Opportunity Zones (OZ) are a federal initiative to generate economic development and tax benefits for private investment in low-income census tracts. Designated in 2018, the benefits accrued to the OZ will continue until 2028. When designated, Virginia had 901 eligible tracts but was able to nominate only 212 tracts, meaning that Opportunity Zones are the most economically distressed areas. The AppCAA service area has seven OZs, with Wise County having more OZ than any other county in the Commonwealth, pointing to persistent poverty and lack of investment in this area.

County/Area	Opportunity Zone ID/Census Tract ID
Lee	51105950500
Scott	51169030600
Wise	5119593130
	51195931400
	51195930900

	51195931700
Norton	51720960100

Based on the general demographic and additional market share related data above, the LENOWISCO area is eligible for investment through the CRA and could benefit from the presence of an additional CDFI in the service area.

Documented Presence of Covered Populations

Specific to both the digital equity and Broadband Equity, Access, and Deployment (BEAD) programs, the LENOWISCO area has identified the following impact to covered populations, as defined in the Infrastructure Investment and Jobs Act (IIJA).

Covered Population	Presence in LENOWISCO (Scale 1 to 5, i.e 1 = Low)	Potential Impact (i.e, Low, Moderate, High)
Individuals who live in covered households (i.e. at or Below 150% FPL)	Rating: 5 (20,858 persons)	High (Roughly 25% of the service area's population is a member of a covered population.)
Aging individuals	Rating: 4 (18,338 persons)	Moderate (Older populations may be reluctant to adopt new technology or realize its value.)
Incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility	Rating: 2 (1,000 persons)	Low (Incarcerated and formerly incarcerated individuals have few programs to learn digital skills and may lag behind in internet usage.)
Veterans	Rating: 3 (4,642 persons)	Medium (Veterans may need customized support to help access internet-based resources and digital devices.)
Individuals with disabilities	Rating: 4 (17,699 persons)	Medium-high (People with disabilities may not have assistive technology to access and use broadband internet and/or carers to facilitate internet use.)
Individuals with a language barrier	Rating: 1 (497 persons)	Low (Language barriers prevent access to internet-based information and services.)
Individuals who are English learners	Rating: 1 (53 persons)	Low (Inability to use English language prevents full access to benefits and services

		and hinders their fully integrating into the community.)
Those with low levels of literacy	Rating: 4 (11,945 persons)	Medium-high (Low literacy keeps individuals from fully benefiting from high speed internet access.)
Individuals who are members of a racial or ethnic minority group	Rating: 3 (6,223 persons)	Medium (Racial or minority group members usually experience economic disadvantages that may hurt their ability to access devices or high speed internet services.)
Individuals who primarily reside in a rural area	Rating: 5 (63,443 persons)	High (Individuals living in rural areas receive less high-speed internet information and fewer services than those in quasi-urban areas.)
Other priority populations	N/A	N/A

In general, LENOWISCO's current and ongoing broadband efforts will create a high impact on populations in rural areas and those living in poverty by extending infrastructure, expanding digital navigation efforts, and providing assistance for device and internet access. The availability of high speed internet will improve educational and work prospects for residents in the service area. AppCAA will continue to engage and seek feedback and participation from the covered populations with the greatest impact to ensure that the proposed project creates positive and measurable outcomes.

C. State Data

Previous Broadband Studies

The proposed project area, Lee, Scott, and Wise Counties and Norton City, have been included in previous broadband studies linked in this plan:

Broadband Plan/Study Name	Date Completed	Relation to LENOWISCO Area's Proposed Project
Virginia Digital Opportunity Plan	January 2024	The top priority for broadband in the Commonwealth is to provide all Virginia homes, businesses, and community anchor institutions with an option for broadband service that enables full participation in the 21st century and beyond. The Five-Year Action Plan will present Virginia's strategy to be the first state to meaningfully address these three components of the digital divide:

		1. Broadband Access – Locations with no options for broadband service: Virginia's BEAD allocation will enable the Commonwealth to be the first large state to obligate funding to connect every unserved home, business, and community anchor institution to high-speed, reliable, broadband. **2. Broadband Affordability** – Broadband access available, but the service is unaffordable: Full utilization of the Affordable Connectivity Program, as well as other innovative solutions, will focus on affordability of the service once access to broadband is no longer a barrier. **3. Broadband Adoption** – Utilizing services from online job applications to telehealth: The Virginia Digital Opportunity Plan will chart a course to ensure that Virginians have the technological skills and capacities necessary for full participation in the economy, our society, and our democracy.
Regional Digital Opportunity Plan	August 2023	The Regional Digital Opportunity Plan highlights how increased connectivity can improve earning potential and educational attainment for residents of SWVA; however, barriers for those living in poverty, with disabilities, and in rural areas need to be addressed through digital equity initiatives to bridge the gap.

This LENOWISCO Connectivity Plan aligns with and expands upon the Commonwealth and the Regional plans. In particular, the plan seeks to introduce digital literacy and navigator programs at AppCAA, make available more low or no-cost devices, advocate for subsidies for internet service provision, Promote meaningful participation in the digital world and increase awareness around the benefits of high speed internet. The digital equity focus of this plan further operationalizes infrastructural investments made by the Commonwealth of Virginia.

State Priorities

According to the Commonwealth of Virginia's BEAD Five-Year Action Plan, the following priorities are being implemented:

Priorities from BEAD Five-Year Action Plan	Description
Provide universal broadband access across the Commonwealth of Virginia	The Commonwealth of Virginia will allocate funding through broadband deployment grants to reach all unserved areas of the Commonwealth.
Reducing costs and barriers to	The Commonwealth of Virginia will assist in the

deployment	streamlining of broadband deployment for internet service providers in the legislative and executive administration arenas by promoting streamlined permitting processes and cost-effective access to poles, conduits, easements, and rights of way, including the imposition of reasonable access requirements.
Engagement with relevant stakeholders to inform selection of activities to receive federal funding beyond broadband deployment to unserved areas	The Commonwealth of Virginia will continue to work with stakeholders, including local and tribal governments, internet service providers, and others to develop plans and programs, as well as to promote transparency in selection of broadband deployment grants.
Reducing the cost of broadband service for consumers	Through promoting full utilization of existing federal subsidy programs, like the Affordable Connectivity Program (which ended in April 2024 but was part of the BEAD plan), the Commonwealth of Virginia will reduce the cost of broadband services for Virginians, while also ensuring service options provided by internet service provider's account for middle class affordability.
Increasing opportunities for community based organizations and other stakeholders to support broadband adoption and digital inclusion	Building capacity statewide and locally to tackle broadband affordability and adoption will be critical to overcoming these challenges. The Commonwealth of Virginia will continue to utilize existing and begin new communication with these groups to prepare them for this investment.
Develop and implement sustainable programs to support broadband affordability and adoption	The Commonwealth will continue to work with local partners to understand the specific needs in the areas of broadband affordability and adoption and work with these partners to develop and implement programs to address these challenges.

Summary of Virginia BEAD Action Plan Priorities Impacting LENOWISCO Plan

Increasing Economic Competitiveness

To ensure that Virginia is the best state to locate and start a business of any size, access to broadband infrastructure for the business and its workers is paramount. Corporate leaders are building telecommunication capabilities at sites, but equally focused on ensuring that employees have access to high speed internet regardless of their location. Universal broadband access will be key to Virginia's competitiveness to attracting and retaining businesses of all sizes.

Bolstering Virginia's Education System
Like economic competitiveness, connectivity is also critical to reinventing a strong education system. Learning in the 21st century goes beyond the physical classroom and eliminating the barriers to lack of access, affordability, and adoption of broadband will be key to ensuring all students in Virginia, regardless of age or location, have equal opportunity for a strong education from preschool through high school, and beyond in post-secondary education.

Safeguarding Virginia from Recurrent Environmental Challenges and Crime
Safeguarding Virginia from recurrent environmental challenges also calls for ensuring that when broadband networks are built, they are built in a way that is resilient to the climate challenges that Virginia faces today and will face in the coming decades. Reducing crime in the Commonwealth can be addressed by making sure those recently released from incarceration are digitally literate and understand how to navigate the online world through areas like online communications, applying for a job, and online banking. Making sure broadband is accessible and affordable, combined with adoption and digital literacy programs will assist in meeting these goals.

D. Comparison of LENOWISCO Service Area Plan and the Commonwealth's Five Year Action Plan

The LENOWISCO Service Area Action Plan centers on digital equity and inclusion, with less emphasis on infrastructural development needs to promote broadband adoption. The proposed projects for Lee, Scott, and Wise Counties and Norton City are focused on increasing opportunities for community-based organizations and other stakeholders to support broadband adoption and digital inclusion.

Virginia Five Year Action Plan	LENOWISCO Service Area Action Plan
Goal: To the extent funding is available, conduct state-wide needs assessments and develop programs to reach full broadband adoption.	**Goal:** Address the long-term broadband access needs of the community.
Objective: Development and implement programs that support smart farming, building and operating business online, and telehealth, among others.	**Objective:** Develop a cohesive, coordinated regional approach to promoting digital opportunities.
Objective: Support sustainable, long-term programs to provide devices, including computers and tablets, to those in need	**Objective:** Provide comprehensive technical support and training to meet the individual specific needs of the local population.

Objective: Develop and promote digital literacy and navigator programs in partnership with multiple institutions across the Commonwealth	**Objective:** Promote digital opportunities in a way that creates the greatest impact.

Broadband Sectoral Impact
Virginia's BEAD Five-Year Action Plan further describes how broadband connectivity impacts the following:

Workforce Development	Virginia's priorities for Workforce Development are to provide services that help individuals enter and advance in the workplace through job placement assistance, training and education, and recruitment assistance, while supporting employers with training and employee placement. High speed Internet access provides channels for sharing information, learning new skills for professional development, and completing basic job functions in a number of professions. To promote equity and help close the digital divide, broadband programs will require a highly trained workforce and workplaces that are diverse, equitable, inclusive, and accessible to every worker. Furthermore, the jobs created through investments in high-speed Internet must be good jobs that offer fair compensation, a safe workplace, equitable access, and opportunities for long-term advancement. These efforts will have lasting positive economic, social, and health benefits for years to come.
Economic Development	A joint study by the U.S. Chamber of Commerce and Amazon found that in Virginia alone, universal broadband would mean at least $2.24 billion increased annual sales, $1.29 billion annual value added, 9,415 added jobs, and $452.4 million in annual wages. And other studies show that broad use of connected technology could lead to increases in agricultural output of up to 18%, which would mean billions more in economic impact in Virginia.
Aging in Place	Connectivity allows older citizens to receive telehealth visits; provides an outlet to reduce social isolation; and delivers information about nutrition, health and safety. Subsidies make connectivity possible for many older citizens living on limited incomes.
Educational Attainment	Children without access to the internet have worse educational outcomes than do their peers with a reliable connection. During COVID-19 around 10% of Virginia's schoolchildren did not have home access to tele-education.

Summary of the State Digital Equity Priorities

According to the Commonwealth of Virginia's BEAD Digital Equity/Opportunity Plan, the following priorities are being implemented across both the BEAD and Digital Equity Act programs. The LENOWISCO Service Area Action Plan will support and extend the digital equity priorities of the Commonwealth's plan through the approaches below:

Virginia's Priorities	Virginia's Priorities' Description and Mitigation Measures	LENOWISCO Service Area Action Plan Complementarity
Provide universal broadband access across the Commonwealth of Virginia	The Commonwealth of Virginia will allocate funding through broadband deployment grants to reach all unserved areas of the Commonwealth.	AppCAA will help identify underserved areas and their particular needs to inform geographies of focus. AppCAA will apply for grants to provide digital education/navigation to marginalized groups.
Affordability: Reducing costs and barriers to deployment	The Commonwealth of Virginia will assist in the streamlining of broadband deployment for internet service providers in the legislative and executive administration arenas by promoting streamlined permitting processes and cost-effective access to poles, conduits, easements, and rights of way, including the imposition of reasonable access requirements.	AppCAA will collate information about broadband availability and provide feedback to the Commonwealth on the efficacy of efforts to reduce barriers to deployment for covered populations in the LENOWISCO Service Area.
Access: Engagement with relevant stakeholders to inform selection of activities to sustain federal funding beyond broadband deployment to unserved areas	The Commonwealth of Virginia will continue to work with stakeholders, including local and tribal governments, internet service providers, and others to develop plans and programs, as well as to promote transparency in selection of broadband deployment grants.	AppCAA will provide feedback and information to the Commonwealth on specific needs and gaps in the LENOWISCO Service Area that disproportionately affect covered populations in underserved areas to better target grantmaking.
Affordability: Reducing the cost of broadband service for consumers	Through promoting full utilization of existing federal subsidy programs, like the Affordable Connectivity Program, the Commonwealth of Virginia will reduce the cost of broadband services for Virginians, while also ensuring service options provided by internet service providers account for middle class affordability.	AppCAA will supply information about the economic constraints facing low and middle income families in the LENOWISCO Service Area in obtaining reliable, fast internet.
Digital Skills and Literacy: Virginians will have access to digital learning resources and sustainable devices	Reduce the broadband adoption gap by more than 5% between covered and non-covered population by making digital literacy training available to all Virginians.	AppCAA will monitor grant and capacity development opportunities to build on its experience in designing approaches to expand broadband to underserved groups via digital navigation activities.

Access: Develop and implement sustainable programs to support device access	Increase the percentage of covered populations who have access to a computing device that can connect to the internet by 5% and 10% using laptop or tablet, respectively.	AppCAA will seek out funding to bring to the region to implement digital opportunity programs to help support this goal of the Commonwealth through digital literacy training and device acquisition.
Adoption: Virginians will be equipped with the knowledge and skills to fully utilize broadband services, whether it be at their home or business	Increase individual comfort and understanding of online privacy and cybersecurity.	AppCAA will coordinate with other area organizations (e.g. MEOC, Lonesome Pine Regional Library) to provide targeted outreach materials on cybersecurity and privacy as well as posting online cybersecurity and privacy tips and integrating messaging into existing AppCAA programs (e.g. Housing Counseling, weatherization).

E. Applicant Grant Readiness

The Appalachian Community Action and Development Agency (AppCAA) has obtained the following federal registrations and information, as required to apply federal funding programs:

- Assigned and active Federal Tax ID: 540785849
- Assigned and active Unique Entity Identification (UEI) number: L2FJRA4GEL61
- Completed entity registration in SAM.gov: 4PM03

F. Current Internet Adoption and Use

This section provides the LENOWISCO Service Area with a diagnosis of the current health of broadband infrastructure and services in the community. The results of this Connectivity Plan will enable the residents of Lee, Scott and Wise Counties and Norton City to strategically target and prioritize areas in order to bridge the digital divide and offer equitable broadband opportunities to all residents and businesses, while minimizing risk and amplifying the likelihood of success.

Data analyzed by AppCAA include, but were not limited to:

- Availability: FCC Broadband Data Collection files, information from local service providers, speed test analysis.
- Affordability: Census data, AppCAA Community Needs Assessment 2024, individuals who have used the ACP.
- Adoption: Census data (American Communities Survey one- and five-year estimates), AppCAA Community Needs Assessment 2024 (participant survey); FCC internet access services reports (however, these data are delayed by over a year).

Currently Available Internet Services

To perform the analysis of currently available internet services, the AppCAA team collected and evaluated data from publicly available broadband data sources and local datasets, and then compiled these sources to reflect the competitive landscape, including:

- An inventory of existing fiber networks within the county, including ownership and availability for use by other network providers;
- An overview of current broadband providers' services, pricing strategies and coverage areas;
- To the best extent possible, the locations of existing fiber and broadband-related electronics; and
- The available broadband speeds by provider.

The sections that follow outline current ISP service offerings and pricing, existing broadband networks, and priority areas within Lee, Scott, Wise Counties and Norton City for additional broadband infrastructure investment.

Truth on the Ground

The FCC Broadband Deployment Data identifies the following ISPs in the AppCAA service area with the corresponding broadband technology and speeds they are currently providing. For the LENOWISCO area, Viasat, Starlink, and HughesNet offer satellite internet services; Xfinity provides cable; with Point Broadband and Scott County Telephone fiber connections are available. Always On is the fixed wireless provider.

There are currently six technologies deployed in Lee, Scott, and Wise Counties and Norton, both for residential and business purposes:

1. Wired Broadband: Asymmetric DSL, Cable, and Fiber
2. Wireless Broadband: Fixed Wireless and Satellite

These broadband services and prices are offered by eight (8) ISPs:

- In Lee County, Viasat, Starlink, and HughesNet offer satellite internet services; Xfinity provides cable; with Point Broadband and Mountainet offering fiber connections. T-mobile and Verizon provide fixed wireless service. Point Broadband available for $59/monthly. MountaiNet also offers a fiber connection for $79/monthly. Viasat has greater coverage, but slower speeds for $49.99/monthly.
- In Norton City, Viasat, Starlink, and HughesNet offer satellite internet services; Xfinity provides cable; with Point Broadband fiber connections. Always On is the fixed wireless provider. Viasat, Starlink, and HughesNet offer satellite internet services; Xfinity provides cable; with Point Broadband fiber connections. Xfinity plans begin at $35/monthly; Viasat $49.99/monthly; Starlink costs $120/monthly. Always On is the fixed wireless provider. In Norton, one provider, Point Broadband, offers download speed of 1 Gbps, higher than 20 Mbps upload.
- In Scott County, Scott County Telephone Cooperative and MountainNet offer the fastest connections with top download speeds of 1 Gbps. Viasat's satellite connections have a top speed of 30 Mbps; Hughes Net's top speed is 25 Mbps; and Starlink 50-220 Mbps.

Always On fixed wireless has a top speed of 25-150 Mbps. Viasat costs $64.99/mo; HughesNet is $49.99/mo; Always On is $60/mo; SCTC is $39.95/mo; Starlink costs $120/mo.

- In Wise County, Xfinity offers cable connection with 91% coverage and a top download speed of 1.2 Gbps. Viasat Internet and HughesNet provide 100% coverage at download speeds of up to 30 Mbps and 25 Mbps, respectively. Xfinity costs $35/monthly; Viasat costs $64.99/monthly; HughesNet is $49.99/monthly.

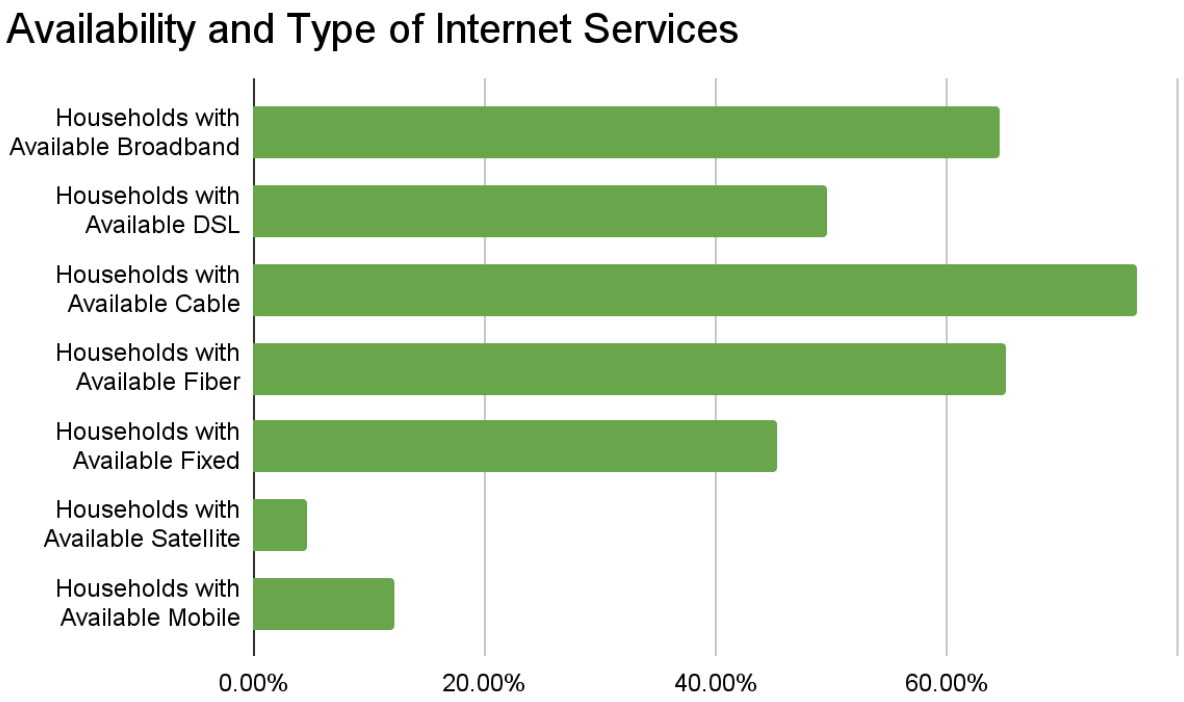
Internet Affordability

AppCAA collected broadband usage data from the Regional Digital Opportunity Plan for Southwest Virginia, which illustrates the overall profile of internet affordability and adoption percentages:

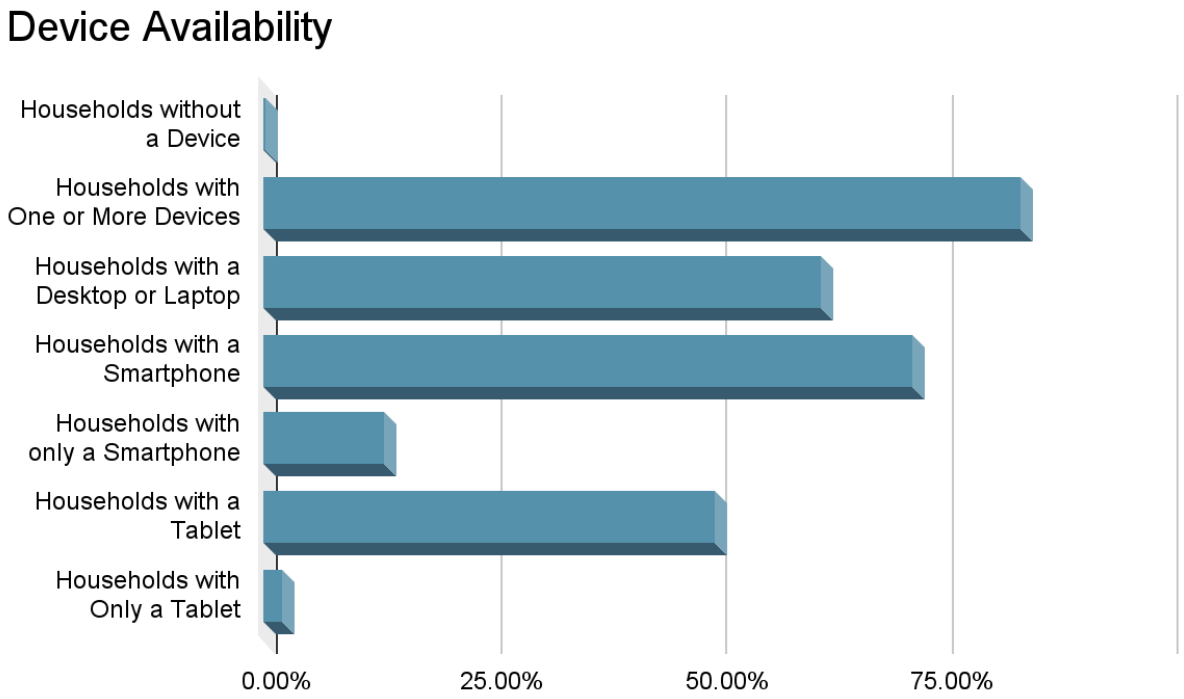
Available Internet/Usage Statistic	Number/Percentage per Household				
	Lee Co.	Norton City	Scott Co.	Wise Co.	Total/Average
Number of Total Households	23,423	3,981	21,566	37,383	32,421
Percentage of Households with Available Broadband of Any Kind*	56.6%	65.3%	68.3%	68.1%	64.33%
Percentage of Households with Available DSL*	37.00%	49.20%	57.70%	54.70%	49.65%
Percentage of Households with Available Cable*	28.40%	94.20%	92.30%	90.90%	76.45%
Percentage of Households with Available Fiber	93.81%	74.70%	17.90%	74.50%	65.23%
Percentage of Households with Available Fixed Cellular	48.36%	47.40%	24.48%	61.15%	45.35%
Percentage of Households with Available Satellite	7.00%	3.40%	3.90%	4.20%	4.63%
Percentage of Households with Available Mobile (Cellular) Internet Only	14.50%	16.00%	8.20%	10.30%	12.25%
Percentage of Households without a Device	0.10%	0.00%	0.20%	0.20%	0.13%
Percentage of Households with One or More Devices	81.6%	89%	78.9%	86.2%	83.9%
Percentage of Households with a Desktop or Laptop Computer	55.40%	69.20%	60.50%	62.20%	61.83%

Percentage of Households with a Smartphone	69.20%	79.20%	64.60%	74.50%	71.88%
Percentage of Households with only a Smartphone	15.50%	12.80%	11.80%	13.10%	13.30%
Percentage of Households with a Tablet	45.00%	56.40%	46.70%	52.40%	50.13%
Percentage of Households with Only a Tablet	2.80%	0.00%	1.90%	3.80%	2.13%

*This data comes from the [INSERT YEAR] US Census. Respondents reporting that a technology is 'available' does not mean they have subscribed to the service and may still face barriers to adoption.



The majority of households in the LENOWISCO Service Area have the ability to access broadband internet, and with planned buildouts, this percentage is expected to increase.



Observations

Based on the internet usage and median household income information of the LENOWISCO area, the following observations can be made:

- Nearly all of the residents in the service area have access to a device, which may reduce the need for device provision. Participants in the service area need assistance in using new devices to access the internet and leverage the "internet of things."
- A majority of residents own a smartphone so technologies and accessibility have to consider mobile accessibility issues.
- Without subsidies, the cost of internet access is out of reach for many of the residents of the service area (roughly 40% of those earning less than $20,000 do not have an internet subscription in the service area).

Local Statistics on Meaningful Uses

To obtain local statistics on meaningful uses of broadband in the community, data was obtained from the HealthIT.gov database; Johns Hopkins's Disability Health Research Center[13] as shown in the table below:

Patient Health Portal (PHR) or Electronic Health Portal (EHR) Use/Adoption	Roughly 85% of residents have used a patient portal to access test results; however, roughly 30% have used it to download their medical records.

[13] Resource can be located at: https://disabilityhealth.jhu.edu/snap-methods/

Online Social Service Enrollment, Account Management and Use	Online enrollment in social services like SNAP in Virginia is less efficient than 26 other states.
Number or Percentage of Local Workers Requiring a Computer	Roughly 80% of local workers require a computer for their jobs.

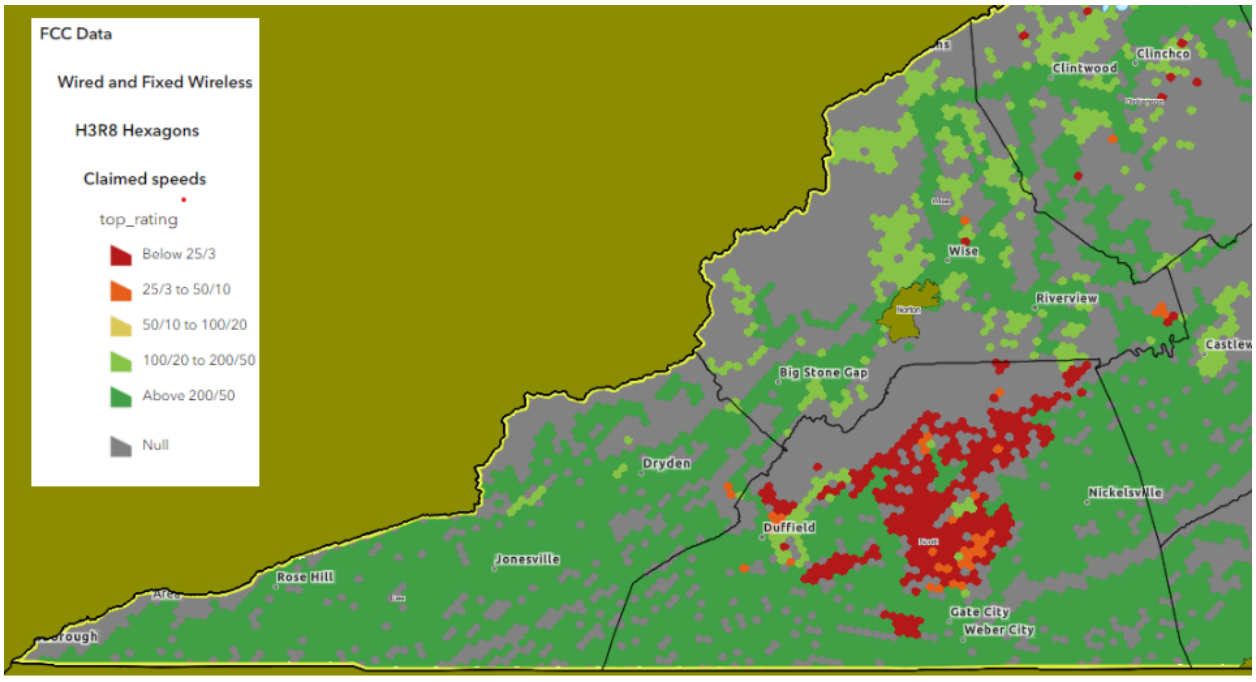
Observations

Based on the local statistics and meaningful uses information of the LENOWISCO Service Area, the following observations can be made:

- Patients prefer to speak to health providers in person rather than use a health portal; however, use has been increasing for accessing personal health information.
- Concerns about privacy and security limit the full use of patient portals for sharing health data;
- Roughly a quarter of patients do not use patient portals because of discomfort with computers and technology;
- Virginia can make significant improvements to online portals for social services to make the technology more adaptable and accessible to the needs of low income residents.

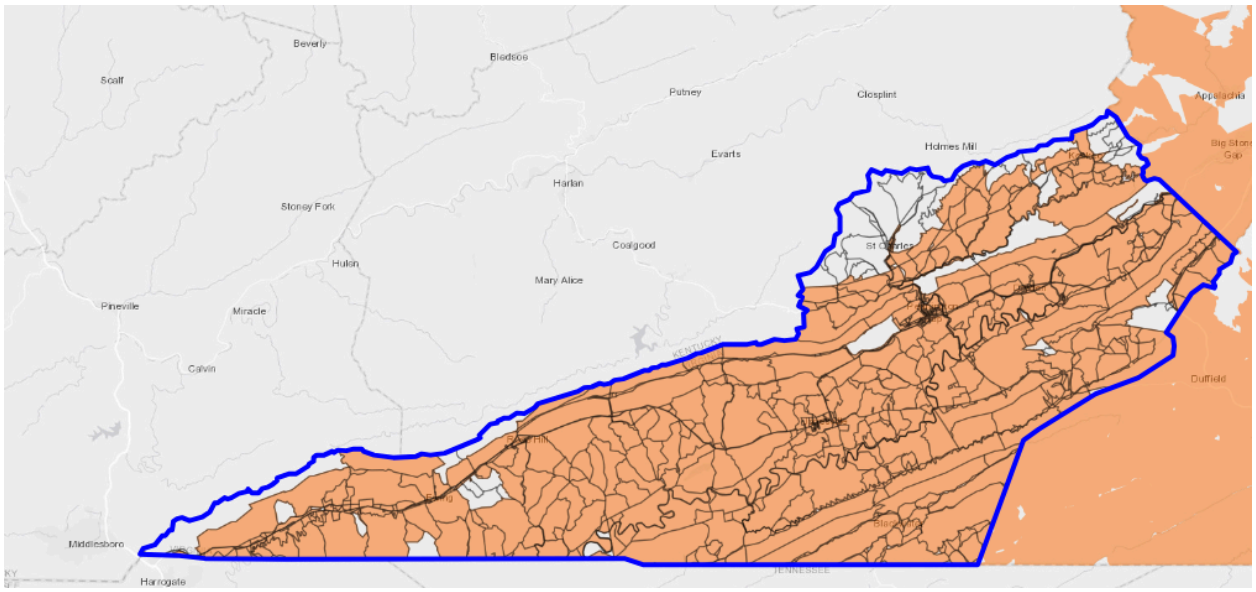
Current Broadband Coverage

The following broadband speed map is based on the FCC Broadband Deployment data representing the highest ISP-reported speed per county.

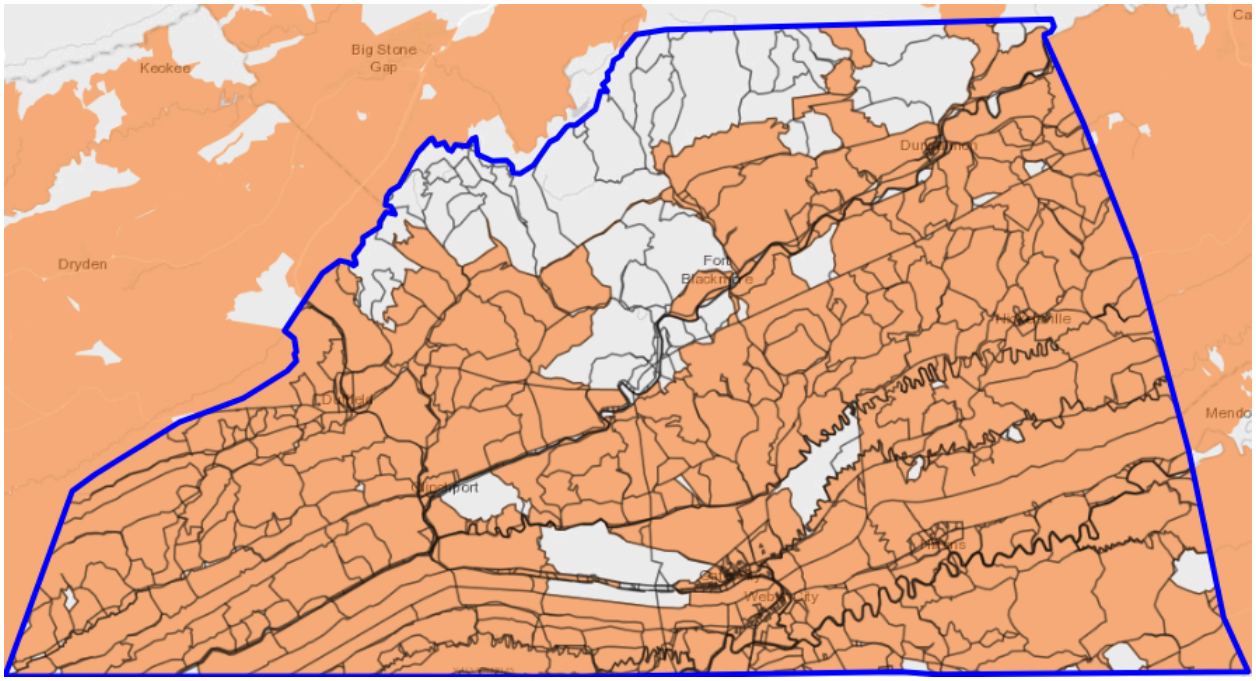


The breakdown of download and upload speeds in the map below allows for improved targeting and prioritization of census blocks in need of enhanced broadband.

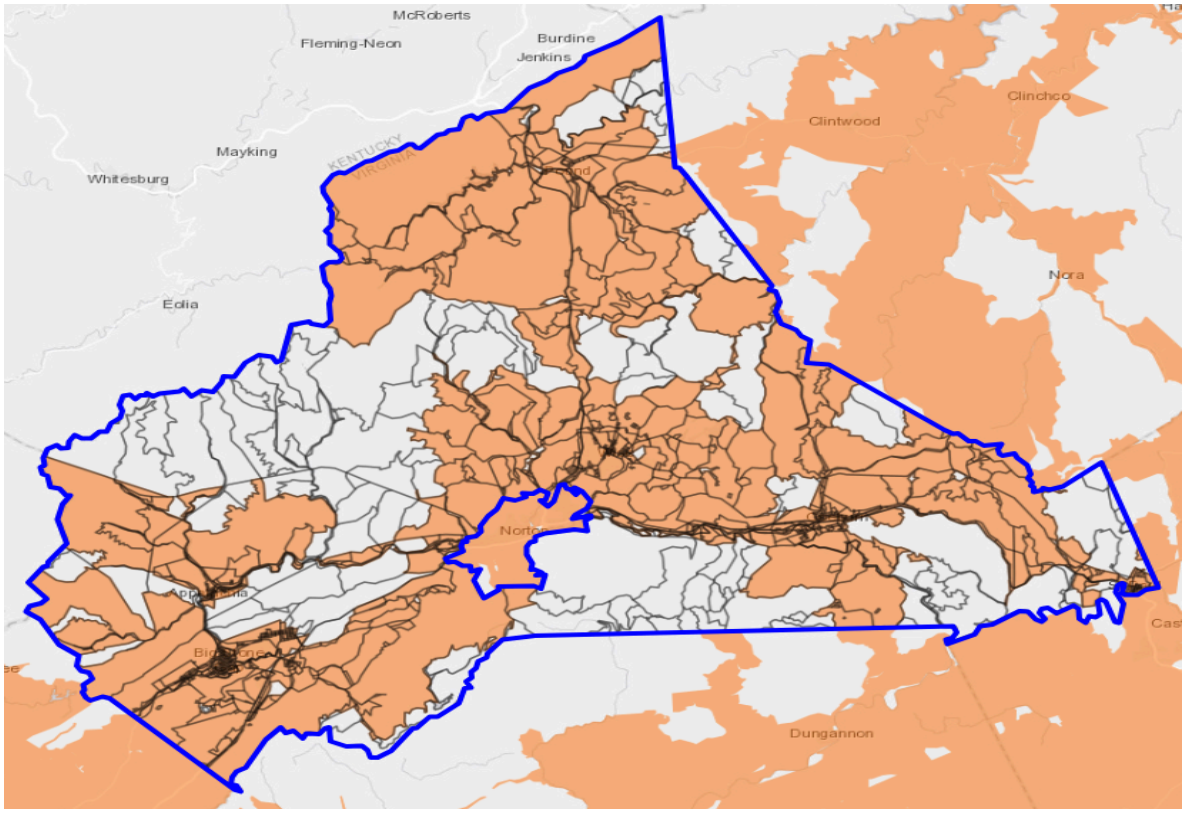
Lee County (shaded area is broadband coverage as of December 2023, per FCC Data)



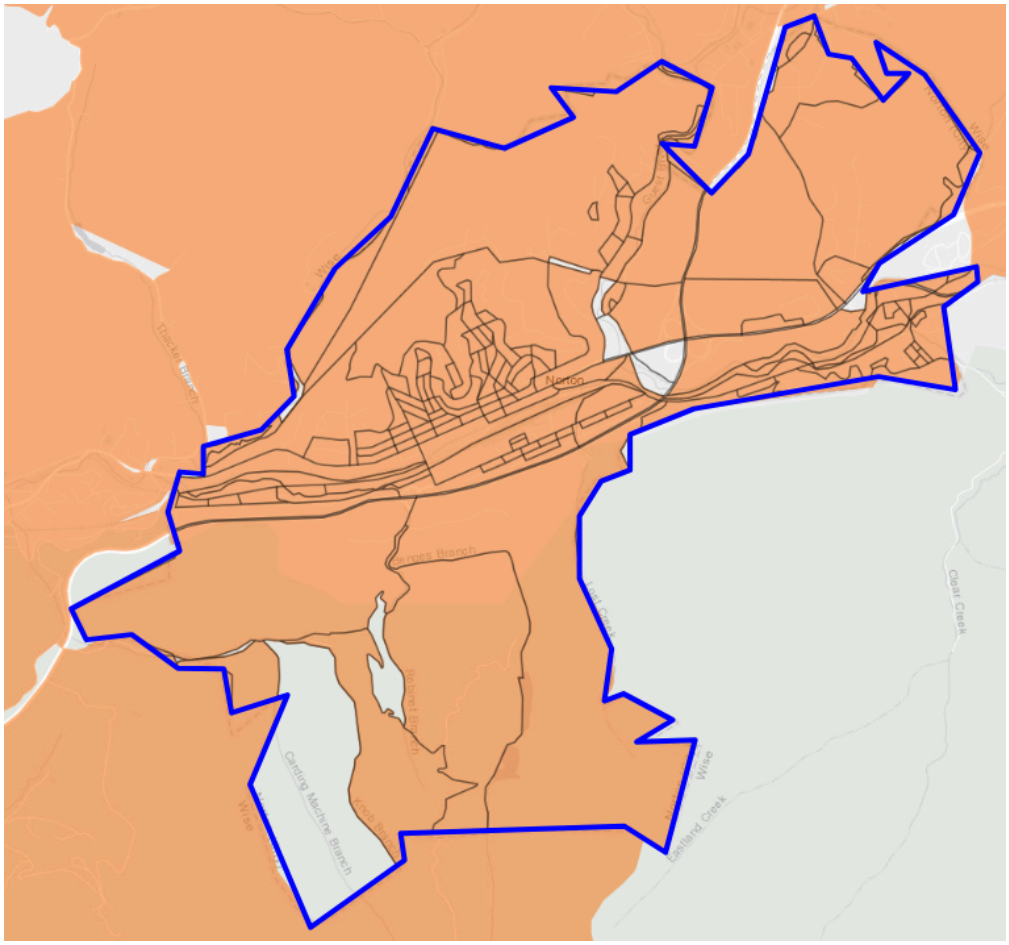
Scott County (shaded area is broadband coverage as of December 2023, per FCC Data)



Wise County (shaded area is broadband coverage as of December 2023, per FCC Data)



Norton City (shaded area is broadband coverage as of December 2023, per FCC Data)



Fiber is widely accepted to be the fastest, longest lifespan, robust, most reliable, and most secure broadband technology and it is capable of providing high symmetrical download and upload speeds. The above maps show some minimal extension needed, as the LENOWISCO Service Area is nearly completely covered by fiber internet.

With coverage nearing completion and funding deployed to reach pockets that are unserved, there will be access to fiber, as well as other types of internet. The focus is now on internet accessibility through affordability, as many citizens remain in poverty in the Lenowisco area. Furthermore, education will be needed on the importance of internet adoption.

SECTION 2

Digital Equity

2. Digital Equity

A. Introduction and Vision for Digital Equity

The LENOWISCO area has developed a vision for achieving digital equity through increased broadband access as shown below:

Problem Statement	Southwest Virginia residents have diminished access to high-speed internet due to cost, service and device availability, which limits economic growth, educational attainment, and information sharing while increasing isolation.
Vision Statement	Individuals and households within Southwest Virginia have the connectivity, devices, and knowledge they desire to safely access online resources including employment, education, and essential services.
Mission Statement	To leverage broadband tools and technology to improve economic achievement, education outcomes, and wellbeing for all of Southwest Virginia's residents while raising awareness of the need for high speed internet.
Values	Community improvement, trusted partnerships, integrity and accountability.

Alignment with Existing Goals

The LENOWISCO area's digital equity vision, mission, and values support and are aligned with the following goals of the Commonwealth:

- The Vision is aligned with the goal of: *Support[ing] the development or expansion of sustainable, long-term programs utilizing telehealth/telemedicine, smart farming, precision agriculture, small business development and other identified uses targeting the needs of covered populations, including aging individuals, individuals with language barriers and low literacy, and individuals with a disability.*
- The Mission Statement aligns with the Objective: *Design and implement awareness campaigns to inform communities about existing broadband services and resources; and Leverage partnerships to utilize various communication channels, including print, digital, and social media platforms to reach a wide audience across the Commonwealth.*

Additionally, the LENOWISCO area's goals are also aligned with the Commonwealth of Virginia's digital equity priorities and goals in the following ways:

- The goals meet Virginia's Key Priority of *Addressing an Identified Component of the Digital Divide* by determining barriers to access beyond broadband infrastructure, to include socio-economic, linguistic, and education level challenges.

Planning Process Summary

The LENOWISCO area's development of its digital equity vision, mission, goals, and values involved participation from the following stakeholders:

- Representatives from Board of Supervisors from Lee, Scott and Wise counties;
- Representatives from the Norton City Council;
- Area churches and civil society groups;
- Adult education stakeholders.

Representatives of civil society, social services, and governmental entities coordinated with AppCAA and its stakeholders to identify and create the digital equity planning components and will be responsible for implementing the respective strategies to achieve its vision.

B. Community Digital Equity Asset Mapping

As part of the LENOWISCO Service Area's digital equity planning process, a Digital Equity Asset Mapping tool was developed, consisting of the following:

- Digital Equity organizations
    - Community technology centers
- Organizations running digital inclusion programs
    - Public libraries
    - Senior and community centers
- Organizations serving covered populations
    - Public housing authorities
    - University agricultural extension programs
- Anchor institutions
    - Municipally owned buildings, i.e., City Hall
    - Libraries
    - Schools (K-12 and higher education)
    - Community Centers
- Other community assets
    - ISPs
    - Gathering spaces
    - Policymakers

Asset Mapping Tool Development, Data Collection, and Dissemination

To develop the Digital Equity Asset Mapping tool, AppCAA followed the steps below:

1. Identified community "anchor institutions" including schools, community organizations, non-profits, and governmental bodies.
2. Performed outreach to anchor institutions develop tool for collecting information;
3. Documented anchor institutions' purposes, geographies, covered populations, and digital training programs.
4. Collected data and reported in spreadsheet (Appendix Part B)

Throughout the digital equity planning process, the AppCAA leveraged partnerships with the government and social services stakeholders to assist with gathering asset data and promoting awareness of the Digital Equity Community Survey and Asset Mapping inventory to develop the tool. The partners contributed significantly by identifying digital equity barriers for priority populations, assisting with community engagement convenings, and being actively involved with the plan implementation phase.

AppCAA developed a comprehensive strategy for disseminating the Asset Mapping tool data within the community. Methods utilized included:

- Social media advertising was used to reach more than 8,000 residents in the service area.
- Social media postings on Facebook, X, and LinkedIn to raise awareness about the process and to hold virtual fora.
- Press releases were issued in traditional print media.

C. Meaningful Community Engagement

Identifying Priority Populations

Based on the demographic and internet usage of the LENOWISCO Service Area, the following covered groups have been identified as priority populations most at risk for being impacted by the digital divide:

- Households at 150% poverty level or below;
- Populations with language barriers/English language learners;
- Aging individuals who are 60+ years of age;
- Persons with disabilities (PWD);
- Incarcerated individuals;
- Veterans;
- Students lacking internet or device access and parents concerned about content children access online and related behavioral problems.

The greatest physical barriers to digital equity that impact all residents of Lee, Scott, and Wise Counties and Norton City are topography and remoteness. These challenges affect overall high speed internet access and are the primary barrier to digital equity, once the infrastructure overcomes these challenges, digital literacy, broadband and device affordability, and cybersecurity can be addressed along with particular issues affecting covered populations.

Stakeholder Engagement and Collaboration

As part of an inclusive digital equity planning process, AppCAA understands that it must work collaboratively with additional stakeholders, including Community Anchor Institutions to ensure that identified priority/covered populations in the community are engaged throughout the planning and implementation processes to ensure that equitable internet for all is achieved.

Priority Population	Stakeholder Name	Role(s)	Data Collected
Covered households (i.e. Living in poverty, at or below 150% FPL)	LENOWISCO Planning District Regional Planning District, County Social Services, Community Action Agencies	Informants living in poverty on the constraints to service area populations accessing high speed internet and related services	Quantitative and qualitative information about the status and needs of households living in poverty.
Populations with language barriers (including individuals with low literacy and English language learners)	Lee, Scott and Wise School Systems; Regional Adult and Career Education (MyRACE1)	Provide information on the specific needs of those with language barriers, including those with low literacy and English language learners.	The number and increase/decrease in populations with language barriers over the recent past. Data on how the needs of low literacy individuals differ from English learners.
Aging individuals who are 60+ years of age	Mountain Empire Older Citizens	Provide information on the needs of older citizens and how to improve their digital navigation skills and avoid scams.	Geographic spread of older residents, their numbers and specific needs.
Persons with disabilities (PWD)	Centers for Independent Living (Junction Center)	Information on the services available for PWD and guaranteeing accessibility for different needs.	Data on the type of disability and other demographic characteristics by geographical area.
Incarcerated Individuals	Virginia Department of Corrections and regional jail	Resource on use of internet and technology in carceral institutions and barriers facing reintegrating individuals.	Data on the number of individuals reentering society and their locations as well as information on digital programs for those incarcerated. Number of classes and other activities for incarcerated individuals to gain digital skills.
Veterans	Veterans Groups in Service Area (e.g. VFW, DAV)	Provide detailed information on the barriers facing veterans when accessing broadband internet.	Data on high-speed internet access for veterans, device availability and usage.

Individuals who are members of a racial or ethnic minority group	Local Community Groups, Appalachian African American Cultural Center, University of Virginia, Wise.	Provide information on broadband needs for racial and ethnic minorities and how to facilitate their connectivity.	Quantitative data on geographical location, demographics, and technology gaps for racial and ethnic minorities. Qualitative information on satisfaction with services.
Students and Parents	Lee, Scott and Wise School Systems; Parent-Teacher Organizations	Informants on the impact of social media on grades, behavioral problems, and emotional wellbeing. Respondents on student needs and issues witnessed at home as a result of internet usage. Protecting students from online predators.	Information and data on internet use and its impact on students in the classroom and their academic performances. Qualitative information on the needs of students and the level of digital literacy of parents to support their children.

Through a diverse and collaborative approach, AppCAA will have the capacity to utilize participation, feedback, and data from each of the priority populations to measure efficacy and progress towards meeting digital equity and complement overall State digital equity goals. Examples of meaningful data from priority population stakeholder engagement include:

- Measures of high speed internet accessibility for rural populations;
- Number of digital literacy/navigator and broadband related initiatives launched in service area to address needs of those with language barriers;
- Application of ADA standards for Web Accessibility for websites of community anchor institutions;
- Level of access to devices and internet for incarcerated persons and change over time;
- Student internet and device usage;
- Parental involvement in student issues and application of digital technology to improve digital navigation skills.

Outreach and Engagement Plan

LENOWISCO area stakeholders understand that it must utilize a variety of outreach strategies and methods to facilitate participation and engagement from the community's digital equity planning and priority population stakeholders. AppCAA values the feedback, engagement, support and buy-in from the community, especially from trusted partners who represent the covered populations that are most impacted by the digital divide.

As a result of the digital equity planning process, the following Outreach and Engagement Plan was developed for continuous ongoing feedback of AppCAA's proposed digital literacy programming.

Outreach and Implementation for Digital Literacy Programming:

Component	Description	Key Activities	Timeline	Responsible Party
Update Community Needs Assessment	Assess the digital equity needs of the target communities.	Develop survey tool, Test tool, collect data, clean and analyze data, present findings, community validation meeting	Q1 State Fiscal Year July 1, 2025-June 30, 2026)	AppCAA Digital Equity Team
Validate Stakeholder Mapping	Identify key stakeholders and partners for collaboration.	Identify local nonprofits, government agencies, and businesses interested in digital equity. Describe their scope and targeted populations.	Q1 FY2026	AppCAA Digital Equity Team
Community Engagement	Engage with underserved communities to understand their specific challenges and needs.	Host community meetings and workshops to gather input. Offer virtual meetings for individuals without transportation or PWD.	Q1 FY2026	Outreach Task Force
Digital Literacy Programs	Develop and implement digital literacy programs.	Create a curriculum for digital skills training; Partner with libraries and community centers to offer workshops.	Q2-Q3 FY2026	AppCAA team, Consultants
Device Distribution	Ensure access to affordable devices for underserved populations.	Establish partnerships with device manufacturers; Organize device distribution events.	Q1-Q2 FY2026	AppCAA team
Technology Hubs	Establish community technology hubs.	Identify suitable locations and secure funding; Equip hubs with computers and internet access.	Q1-Q2 FY2026	AppCAA team
Policy Advocacy	Advocate for policies	Engage with policymakers and	Ongoing	AppCAA team

	supporting digital equity.	advocate for digital inclusion legislation.		
Private Sector Engagement	Collaborate with businesses for support.	Reach out to local companies for sponsorship and support; Organize corporate volunteer programs.	Ongoing	AppCAA team
Progress Monitoring	Continuously track and evaluate progress.	Collect data on key performance indicators; Adjust strategies based on results.	Ongoing	AppCAA Agency Planner

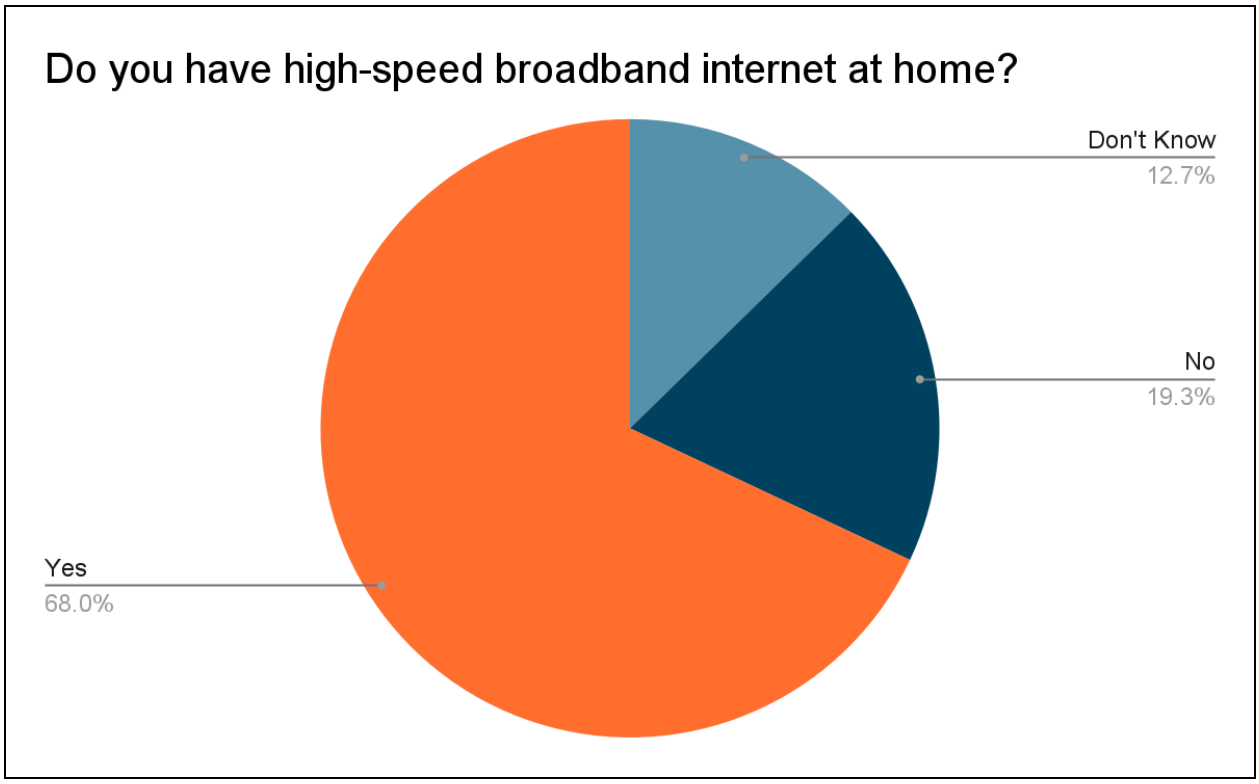
Community Survey

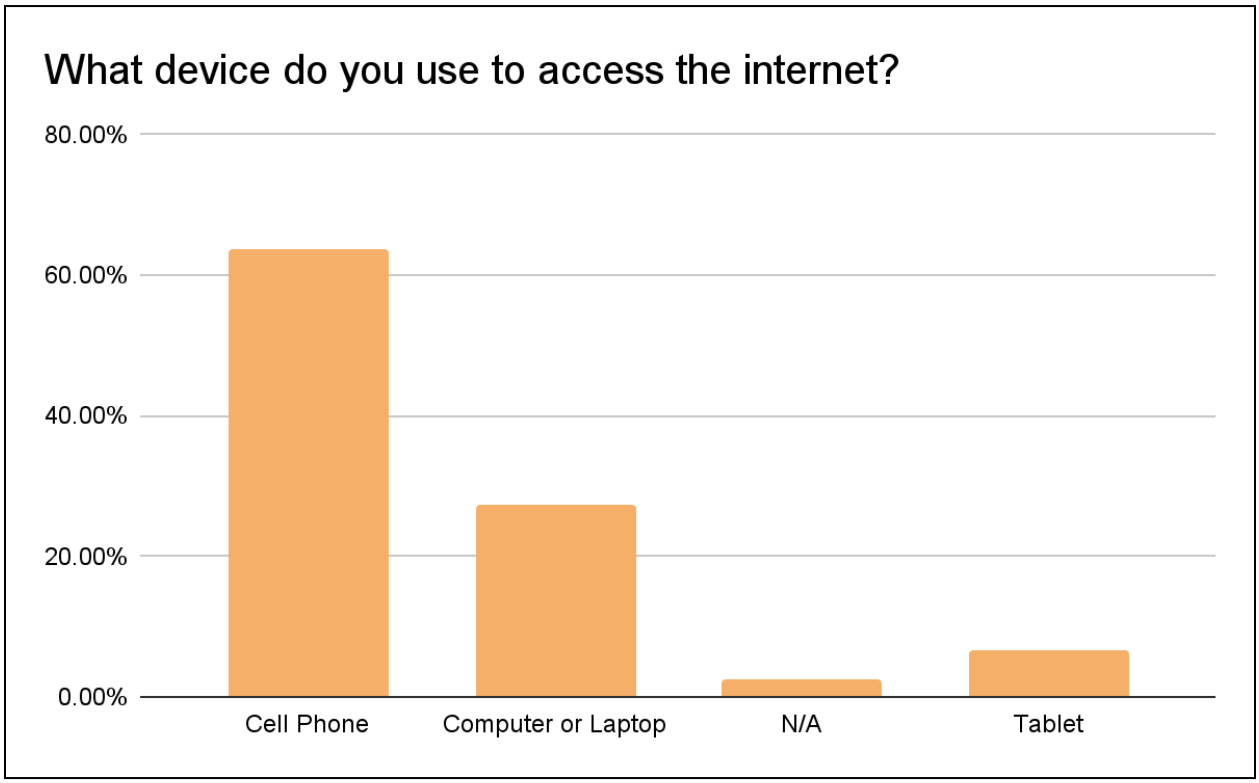
AppCAA developed a Digital Equity Community Survey to seek direct feedback from identified stakeholders and priority populations to capture needs, unique challenges, and recommended engagement strategies to increase broadband access and adoption.

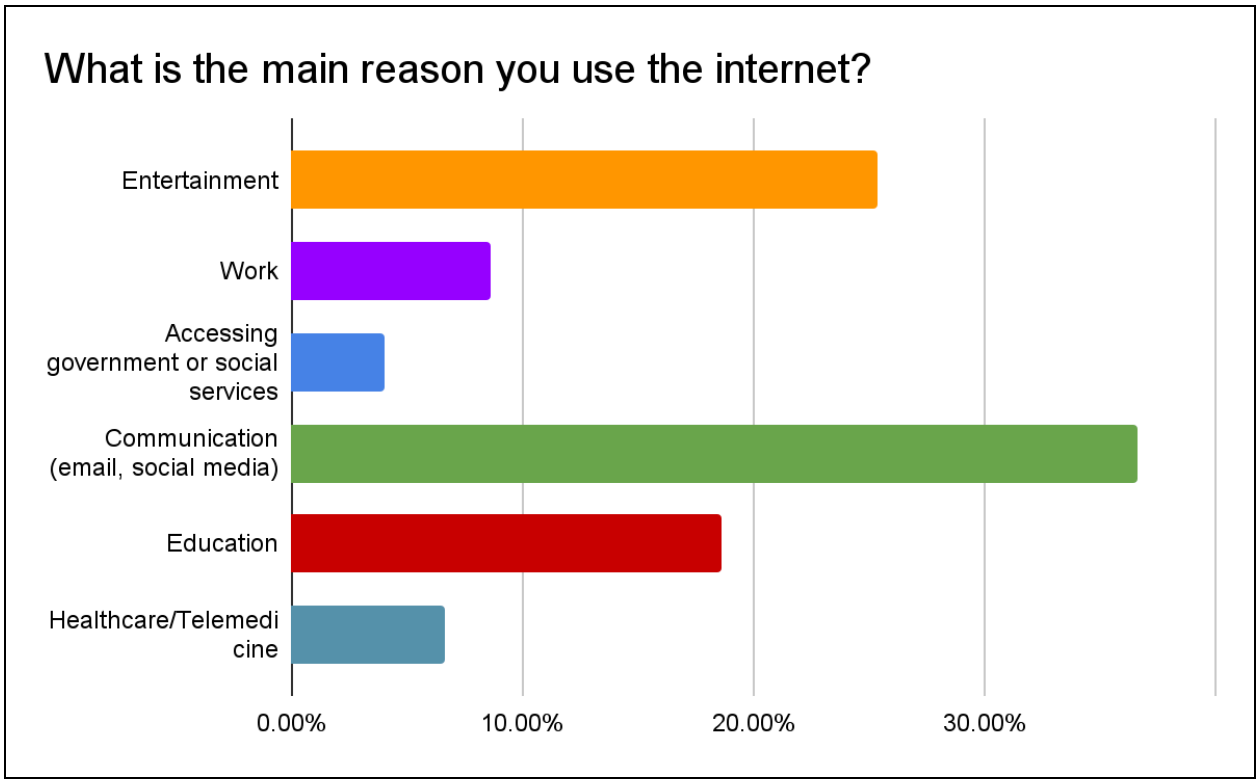
To conduct the Digital Equity Community Survey, AppCAA sent out the questionnaire to all clients via the client management system between January and March 2024. Collectively, the Digital Equity Community Survey reached 149 respondents/participants, which is considered low compared to other surveys conducted in the community. All AppCAA clients are members of covered populations.

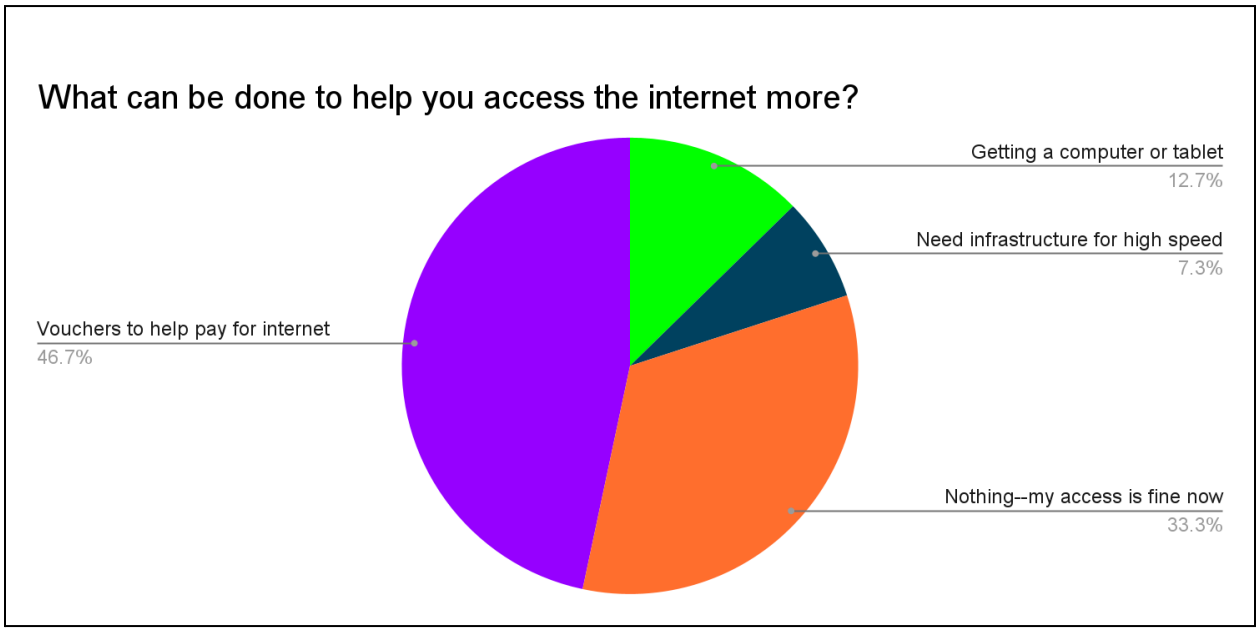
In general, the Digital Equity Community Survey responses indicated the following themes and trends:

- A majority of respondents have high-speed internet in their homes but this is a lower percentage compared to Virginia overall and the US overall;
- Most respondents were of working age, between 18 and 44;
- Respondents use the internet daily, mostly for social purposes;
- The ending of the ACP subsidy will severely diminish the ability of roughly 50% of the households in the AppCAA service area to access the internet;
- The community does not fully exploit the internet for employment, educational or healthcare needs due to lack of knowledge about platforms and their utility.


Do you have high-speed broadband internet at home?
Don't Know
12.7%
No
19.3%
Yes
68.0%


What device do you use to access the internet?
80.00%
60.00%
40.00%
20.00%
0.00%
Cell Phone
Computer or Laptop
N/A
Tablet





Community Engagement Activities

In addition to the Digital Equity Community Survey, AppCAA City engaged the local community to obtain feedback and encourage participation in the digital equity plan development process. This included:

- One-on-one meetings with key informants from each county, including: representatives from social services, local government, and community groups;
- Email messages to AppCAA clients to inform them of and then to conduct survey;
- Meetings with LENOWISCO Planning District on the survey and validating results;
- Presentation of results to AppCAA's Board.

Community Engagement Findings

The following key findings and observations resulted from the community engagement process:

- Broadband/Internet access is important for families who need connectivity for schoolwork and remote employment;
- Digital literacy programs are needed to: alleviate fears about technology; provide websites/resources for reliable technical assistance; and increase the number of individuals in the service area using telehealth and banking services;
- Increasing low or no-cost device access will help with workforce development, decreasing the isolation of aging individuals; and remote education;
- Broadband affordability is a major barrier in getting low income households connected to the internet;
- Greater education about online security and privacy should be prioritized, especially for students prone to cyberbullying and aging adults who may fall for scams.
- Increasing the use of online forms by improving their accessibility is a cross-cutting theme for all broadband activities.

D. Understanding Barriers to Digital Equity

The LENOWISCO area digital equity planning process has contributed to its understanding of unique barriers to achieving digital equity across a wide range of covered populations. The table below summarizes the respective unique barriers for each of the covered populations present in the community:

Covered Population	Description
Individuals who live in covered households (at or below 150% FPL)	Internet affordability; Device access; digital literacy
Aging individuals	Digital literacy and cybersecurity and privacy
Incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility	Broadband and Device Access; Digital Literacy
Veterans	Broadband and Device Access; Digital Literacy; Digital Navigation
Individuals with disabilities	Online accessibility; Digital Navigation

Individuals with a language barrier	Digital literacy and Digital Navigation
Individuals who are English learners	Digital literacy and Digital Navigation
Those with low levels of literacy	Digital literacy and Digital Navigation
Individuals who are members of a racial or ethnic minority group	Broadband and Device Access
Individuals who primarily reside in a rural area	Broadband and Device Access; Digital Literacy; Digital Navigation; Cybersecurity and Privacy
Other priority populations (Parents and Students)	Broadband and Device Access; Digital Literacy; Cybersecurity and Privacy

E. Developing Implementation Strategies

New and Existing Programs

Based on the unique barriers to achieving digital equity identified in the previous section, the LENOWISCO Service Area identified the following existing programs and proposed new programs addressing the respective needs/barriers of the applicable covered populations:

Covered Population	Needs Addressed	Existing Program Name or Description of New Program	Existing or New Program	Lead Entity of Existing Program	Funding /Sustainability
Individuals who live in covered households (At or Below 150% FPL)	Broadband and Device Affordability and Access, Transportation/ Portability of Internet/ Service	Digital navigator program where staff members can connect people with internet plans, devices, conduct digital literacy training and support those with barriers to access and affordability. One staff member in each Community Action Agency.	New Program	Virginia Community Action Partnership (VACAP)	Capacity Building Grants from Virginia State Broadband Office, LISC, CRA (Truist, Bank of America), Internet Service Providers (Cox, Comcast, Verizon, etc), Virginia Funders Network, National Foundations
Aging individuals	Digital Literacy Skills and Cybersecurity	Digital navigator program where staff members can connect people with internet plans, devices, conduct digital literacy training and support those with barriers to access and	New Program	Area Agencies on Aging or Community Action Agencies or other community nonprofits.	Capacity Building Grants from Virginia State Broadband Office, LISC, CRA (Truist, Bank of America), Internet Service Providers (Cox, Comcast,

		affordability. One staff member in each Community Action Agency.			Verizon, etc), Virginia Funders Network, National Foundations
Incarcerated individuals, other than individuals who are incarcerated in a Federal Correctional facility	Broadband and Device Access, Digital Literacy Skills	Virginia CARES (Community Action Re-Entry System) is a heralded, statewide network of Community Action Agencies (CAAs) originally formed in 1981 to address the successful reentry and deinstitutionalization of returning citizens in the Commonwealth of Virginia. The agency presently provides pre-release services in 14 prisons and 9 city/county jails and 6 regional jails, and post-release programs in 26 cities/towns and 32 counties in Virginia. Since 1981 Virginia CARES has worked with more than 104,000 returning citizens.	New Program	Virginia CARES	Digital Equity Capacity Grant from Virginia Broadband Office. Look into DOJ or other federal/state prison grant programs.
Veterans	Broadband and Device Affordability and Access, Transportation/ Portability of Internet/Service /Cybersecurity	Those who identify as Veterans would fit into other covered populations.	New Program	Veterans Groups (e.g. VFW), Virginia Department of Veteran Services; Veterans' Administration (VA)	VA/FCC "Lifeline" Program for Veterans; VA's ATLAS (Accessing Telehealth through Local Area Stations) program
Individuals with disabilities	Internet accessibility and devices for those with disabilities.	The program would make sure all resources in the community are accessible and referrals for assistive technology.	New Program	Community Action Agency	Consumer Technology Association (CTA) Foundation grants
Individuals with a	Broadband and Device Affordability	Would be built into an existing program, an adult education center	New/ existing Program	Community Action or other nonprofits or	Leverage funds from other programs and

language barrier	and Access, Low Digital Literacy skills	that focuses on digital literacy for English as a Second Language individuals.		local government	mainstream these individuals into digital literacy programs.
Individuals who are English learners	Broadband and Device Affordability and Access, Low Digital Literacy skills	Would be built into an existing program, an adult education center that focuses on digital literacy for English as a Second Language individuals.	New Program	Community Action or other nonprofits or local government	Leverage funds from other programs and mainstream these individuals into digital literacy programs.
Those with low levels of literacy	Broadband and Device Affordability and Access, Low Digital Literacy skills	Would be built into an existing program, an adult education center that focuses on digital literacy for English as a Second Language individuals.	New Program	Community Action or other nonprofits or local government	DoE grants for adult education
Individuals who are members of a racial or ethnic minority group	Broadband and Device Affordability and Access, Transportation/ Portability of Internet/Service	Digital Navigator program that can connect people with internet plans, devices, conduct digital literacy training and support those that have barriers to access and affordability. One staff member in each Community Action Agency.	New Program	Virginia Community Action Partnership (VACAP)	Capacity Building Grants from Virginia State Broadband Office, LISC, CRA (Truist, Bank of America), Internet Service Providers (Cox, Comcast, Verizon, etc), Virginia Funder's Network, National Foundations
Individuals who primarily reside in a rural area	Broadband and Device Affordability and Access, Transportation/ Portability of Internet/Service	Digital Navigator program that can connect people with internet plans, devices, conduct digital literacy trainings and support those that have barriers to access and affordability. One staff member in each Community Action Agency.	New Program	Rural LISC, People, Inc, AppCAA	Capacity Building Grants from Virginia State Broadband Office, LISC, CRA (Truist, Bank of America), Internet Service Providers (Cox, Comcast, Verizon, etc), Virginia Funder's Network, National Foundations

Implementation Strategies and DEA Measurable Objectives

The LENOWISCO Service Area Digital Equity Plan includes implementation strategies to address the following needs for each of the covered populations in the community:

Digital Literacy Programs:

Objective - Improve digital literacy and technology skills among underserved populations.

- Digital Navigator programs established to help those who are in covered households to self-manage benefits enrollments, access telehealth appointments and health information, manage budgets, and obtain further education.
    - Activities and peer education groups set up for those with special digital navigation needs, including: aging individuals, persons with disabilities, English language learners, etc.
    - Deliver Digital Navigation lessons via different means and formats to address individual learning needs.
- Make digital literacy programs available for all levels of knowledge in a variety of settings, including through technology hub and mobile activities.
- Establish a web-based directory where individuals who are part of covered populations can ask for assistance and be linked with digital resources (e.g. Cyber-Seniors).

Online Accessibility and Inclusivity of Public Resources and Services:

Objective - Ensure everyone has the same opportunity to engage with public resources and services online to increase civic participation.

- Support ADA compliance audits for websites of local government, social services, and businesses.
    - Identify local governmental, social services and business websites that are or not in compliance;
    - Develop and disseminate how to do an ADA compliance and Web Accessibility Initiative assessment;
    - Recognize those websites that are in compliance or that have come into compliance as a result of the audits.

Awareness and Use of Cybersecurity and Online Privacy Tools:

Objective - Empower individuals, organizations, and communities to protect their digital assets, personal information, and online activities from cyber threats and privacy breaches.

- Provide digital literacy courses in a variety of settings (e.g. libraries, churches) to assist aging residents in understanding online threats and privacy issues.
- Collate a library of videos on how to identify scams, protect personal information online, and other cybersecurity issues that may be viewed online.
- Disseminate scam alerts from trusted sources (e.g. law enforcement).
- Make information available to parents and children about privacy issues and how to monitor a child's online activities and protect their identities.
- Develop and deliver an online course about Artificial Intelligence and provide tools on how to recognize possible scams impersonating family members or presenting misleading information.

Availability and Affordability of Consumer Devices:

Objective - Ensure access to affordable devices and software.

- Device donation, repair, and redistribution programs specifically targeting those most in-need and pre-qualified via TANF, Medicaid, etc.
- Explore partnership agreements with hardware manufacturers to distribute refurbished devices at no cost to users and software companies for free versions of products.
- Provide information and education on Open Source (i.e. no-cost) tools available for use without software fees and guidance on their different functionalities.
- Partner with schools and libraries to make sure devices are available for students and adult learners;
- Provide devices for college-enrolled students who meet income guidelines via donate, repair or redistribute initiatives based in institutions of higher learning.

Community Technology Hubs:

Objective - Establish community centers equipped with technology resources.

- Establishment of public wi-fi centers for students and adult learners at libraries and public spaces where they can access high speed internet.
- Procurement of equipment and materials and identification of space for technology hubs where residents can access high speed internet.

Public-Private Partnerships:

Objective - Foster collaboration between government, businesses, and nonprofits.

- Community Action Agency acts as conveners to link local government, businesses, and community groups (like churches and advocacy groups) to improve use of high speed internet.
- Participatory monitoring framework and guiding committee formed comprising stakeholders from government, communities, businesses, and nonprofits.
- Hold quarterly monitoring meetings to guarantee coordination is taking place and maximum impact achieved through cross-sectoral partnerships.

Digital Inclusion Policies:

Objective - Implement policies that promote digital equity.

- Advocate for the inclusion of covered populations in planning committees and policy development processes to enhance digital equity.

Technical Support for Devices Available to Covered Populations:

Objective - Provide maintenance to support the use and life of devices.

- Link covered populations to online, real time, and no-cost technical assistance (e.g. support.com);
- Provide referrals for assistive technology for low-income persons with disabilities (PWD) to access the internet (e.g. Braille readers[14], speakers, monitors, etc).

[14] For example, the Association of Blind Citizens has an Assistive Technology (AT) Fund that will cover up to 50% of the cost of AT devices.

Funding Sources for Implementation Strategies

The LENOWISCO Service Area has estimated the following costs and potential funding sources, based on the unique needs identified in the Digital Equity Plan, needed to support existing programs and the implementation of new digital inclusion strategies:

Program need	Funding need	Potential Funding Source(s)
Digital Navigator Program	$300,000	Digital Equity Planning Grant (NTIA)
ADA Compliance Audit and Assistive Technology referrals for PWD	$25,000	Consumer Technology Association Foundation
Technology Hub with Mobile Outreach	$750,000	National Science Foundation;
Refurbished devices	$100,000	Alliance for Technology
Coordination/Monitoring Meetings for Government, Nonprofits, Businesses and Communities	$12,000	Appalachian Regional Commission
TOTAL	$1,1870,000	

The plan intends to utilize the potential funding sources detailed above, in addition to the Digital Equity Act grant programs, to address the digital inclusion needs of the community.

Timeframes for Implementation Strategies

To fund, develop, and implement the respective digital inclusion strategies detailed above, stakeholders in the LENOWISO Service Area anticipate that they can achieve the following milestones and timeframes over the next five years:

Quarter / Year	Project Goal/Objective	Digital Equity Milestone(s) Activity	Outcome/Indicator
Q1 2025	Finalize scope of work and performance monitoring plan	Finalize decisions regarding responsibilities and tasks of each partner. Recruit, interview, and hire staff as needed. Review current data collection methods and tools	Finalized plan for delivering digital equity programs in the region
Q2 2025	Garner feedback from the community	Hold inception meetings with stakeholders and define	At least 2 focus groups completed and data collected from 100 surveys

	on digital literacy programming	community participation in program implementation	
Q3 2025	Program Implementation	Procure start-up equipment and onboard administrative staff as needed, hold coordination meeting with responsible partners	Partners and equipment in place to start on work
Q4 2025	Program Implementation	Hire digital navigators, assign geographies, roles and responsibilities	Staff hired to complete scope of work
Q1 2026	Program Implementation	Recruit clients for digital literacy programming	Start with 400 clients a year over four years
Q2 2026	Program Implementation	Begin implementation of digital literacy and cybersecurity/privacy activities	Number of training hours completed, plus wrap around services number of hours completed
Q3 2026	Program Implementation	Solicit proposals for digital access and broadband/internet access activities	Obtaining device partner and internet provider for clients
Q4 2026	Program Sustainability	Award funds and begin implementation of digital access and broadband/internet access activities	Clients receive devices after completing training and help with internet plans
Q1 2027	Program Sustainability	Accessibility audit for social services' websites and recognition for those in compliance	Ensuring privacy of clients data and training for cybersecurity of clients
Q2 2027	Program Sustainability	Midline assessment of progress for activities and associated report. Collect data from clients completed training and devices given out	Number of hours completed in digital literacy training, number of hours in wrap around services, number of devices given out, number of internet plans started
Q3 2027	Program Audit	Update Digital Opportunity Plan	Updated implementation plan
Q4 2027	Program Sustainability	Sustainability strategies developed for activities	Bring on additional funding sources, gather feedback from participants to fine tune programming for clients. Bring in new partners as needed

F. State-Aligned Digital Equity Evaluation Plan

Stakeholders from the service area understand the importance of alignment of the community's Digital Equity Plan with the Commonwealth of Virginia's Digital Equity Plan to:

- Track progress towards achieving digital equity:
    - The capability to monitor and measure advancements in achieving digital equity and a process in place to assess and document progress towards achieving Plan goals.
- Demonstrate how progress furthers State priorities:
    - The Digital Equity Plan will align with and contribute to the broader priorities, objectives, and goals of the State to advance digital equity.

As the LENOWISCO service area implements its Digital Equity Plan, it will measure impact and progress toward addressing the unique challenges and barriers to affordability, access, and adoption faced by priority populations. The table below reflects the impact and progress towards addressing the respective barriers and will continue to be expanded throughout the Plan's implementation:

Outcomes	Impact	Progress
Economic and Workforce Development	High speed Internet access provides channels for sharing information, learning new skills for professional development, and completing basic job functions in a number of professions.	Progress is ongoing in this area; partners in the LENOWISCO service area are providing workforce support activities that leverage emerging high speed internet availability to help individuals enter and advance in the workplace. Progress is measured in reduction in wage gap and increased employment (reported by the Census Bureau).
Education Outcomes	All students in Virginia, regardless of age or location, have equal opportunity for a strong education from preschool through high school, and beyond in post-secondary education via adoption of broadband.	Progress is ongoing in this area, as students are receiving devices from schools and broadband extends to more residences. Monitoring reports from schools and community centers will validate progress.
Health Outcomes	Use the internet to promote healthy lifestyle choices that can combat chronic disease, educate the public about emergency preparedness and threats to their health, and track disease outbreaks in Virginia.	In progress: the internet is being used for health information but skepticism about technology prevents some covered individuals from accessing telehealth and other internet-based benefits. Progress in this area will be measured by the percentage increase in baseline of

		use of digital tools to manage health and safety.
Civic and Social Engagement	Civic and social engagement will ensure the Plan is making progress and meeting the needs of covered populations	In progress: AppCAA and LENOWISCO stakeholders are consulting with community members and civic groups to assist in program planning and monitoring.
Other Essential Services	Identify how digital opportunity programs align with other essential services delivered by the Commonwealth	Not started: congruence of essential services with broadband programs will be determined once the latter are launched

SECTION 3

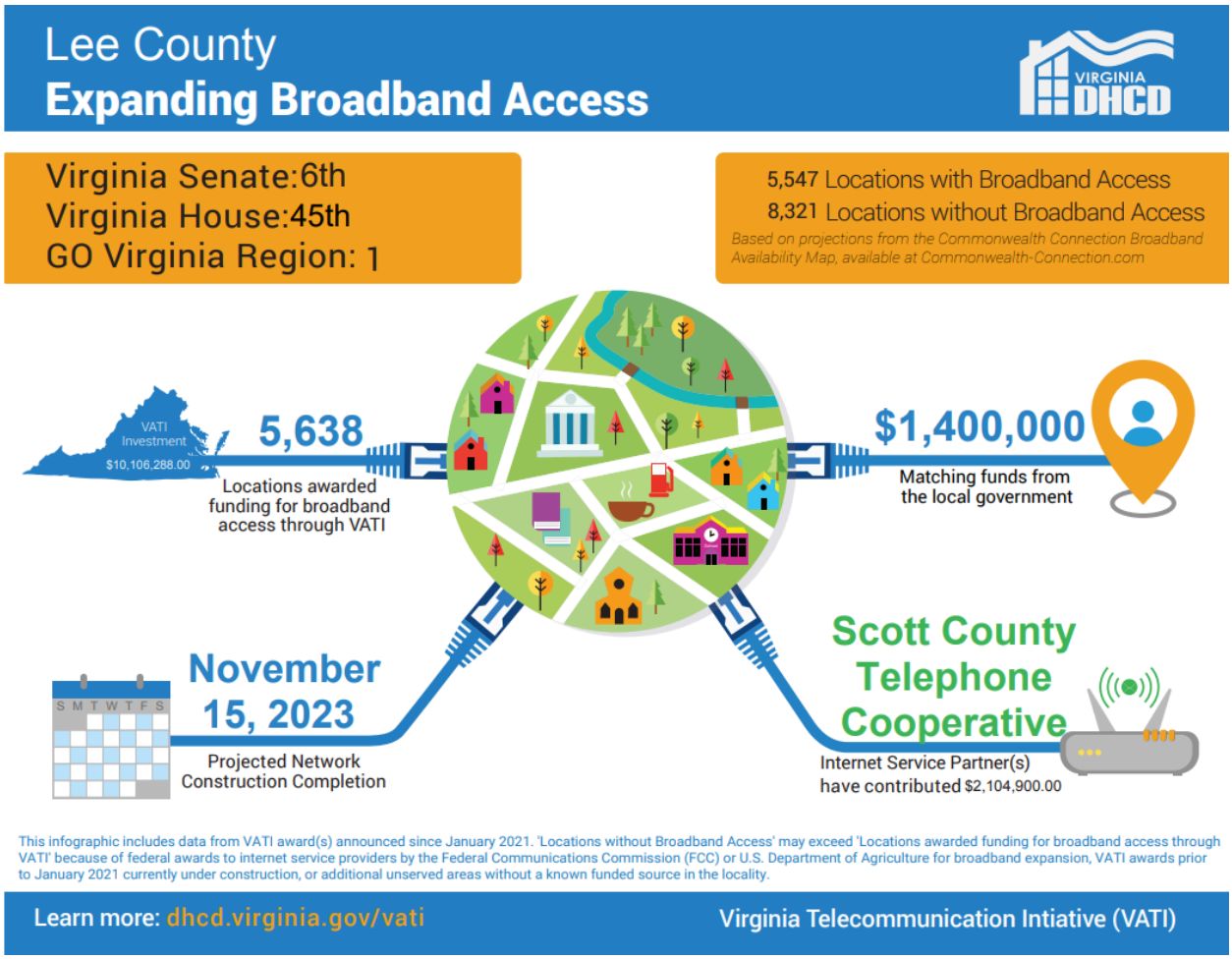
Financial Plan

3. Financial Plan

A. Community Profile Infographics and Funding Needs

Below are the Community Profile Infographics for each LENOWISCO target area, including matching funds from local governments.

Wise County (includes Norton City)

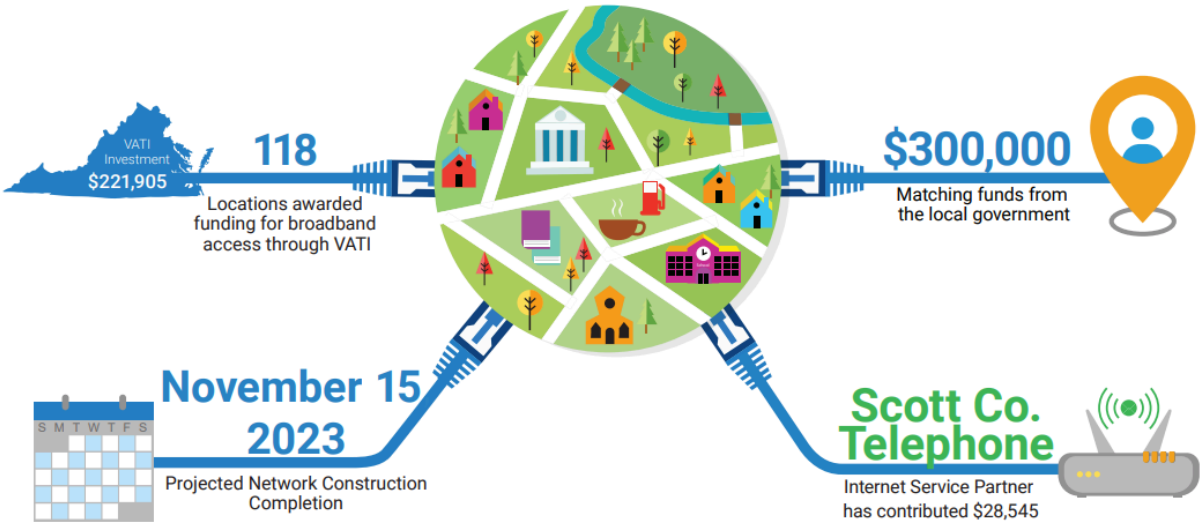


Scott County

Scott County
Expanding Broadband Access

Virginia Senate: 6th
Virginia House: 45th
GO Virginia Region: 1

3,243 Locations with Broadband Access
10,858 Locations without Broadband Access
Based on projections from the Commonwealth Connection Broadband Availability Map, available at Commonwealth-Connection.com

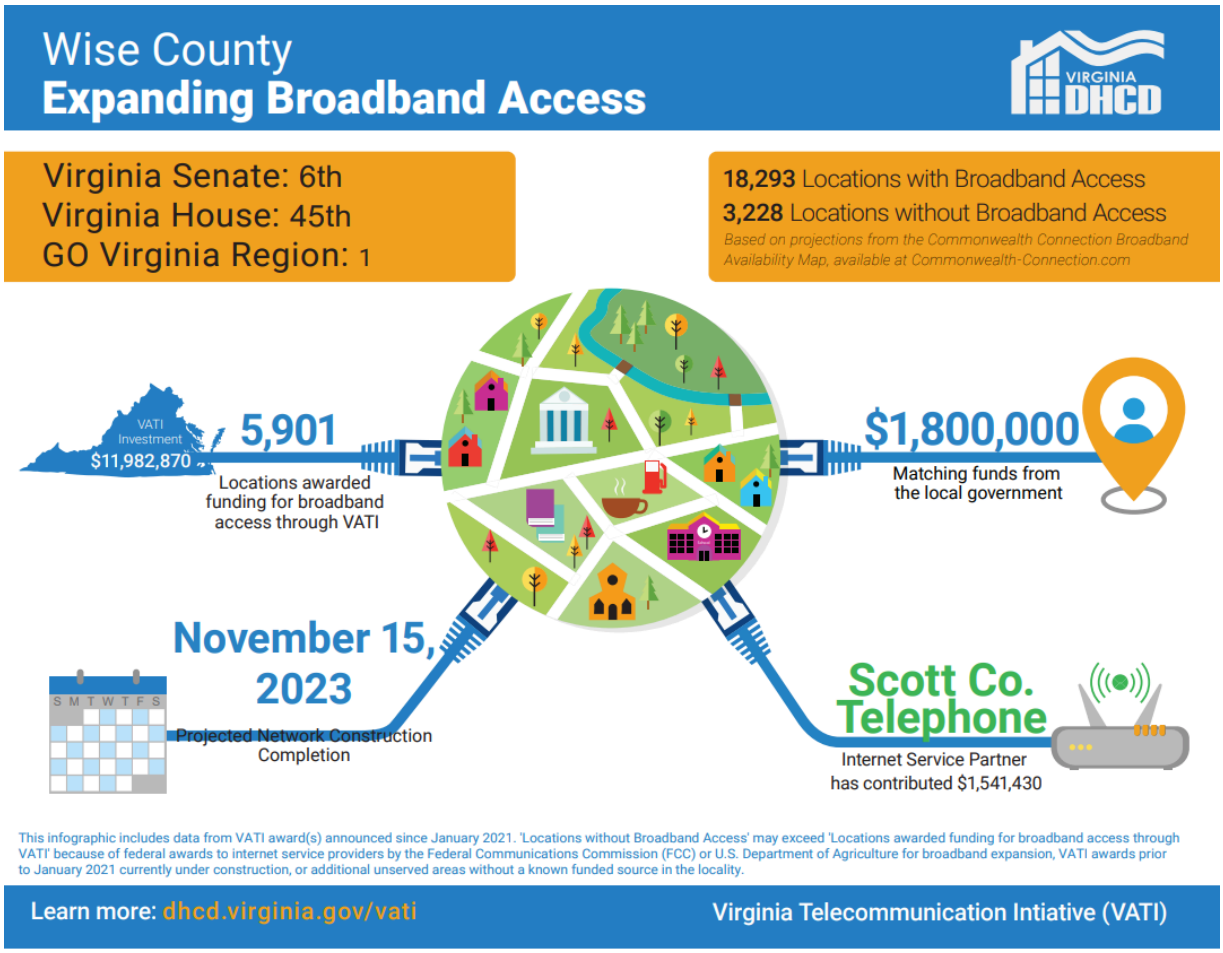


This infographic includes data from VATI award(s) announced since January 2021. 'Locations without Broadband Access' may exceed 'Locations awarded funding for broadband access through VATI' because of federal awards to internet service providers by the Federal Communications Commission (FCC) or U.S. Department of Agriculture for broadband expansion, VATI awards prior to January 2021 currently under construction, or additional unserved areas without a known funded source in the locality.

Learn more: dhcd.virginia.gov/vati

Virginia Telecommunication Intiative (VATI)

C. Wise County



B. Funding Strategy and Remaining Gaps

Since the counties of Lee, Scott and Wise and the City of Norton have roughly 95% of their broadband infrastructure complete, the LENOWISCO Service Area understands that funding gaps exist and additional grant funding will be required to support the financial sustainability of the broadband network infrastructure project. As described below, the LENOWISCO Service Area is proposing to utilize a combination of grant funding, ISP match, and local match for Digital Equity initiatives. Covering the need for Digital Equity may require a combination of federal and/or state broadband grant funding awards to close the gaps collectively.

The funding strategy for this plan originates in the Digital Equity needs of the LENOWISCO area and with the objectives set out in this plan. Bearing these needs in mind, AppCAA will reach out to stakeholders to form partnerships and generate support for improved community digital integration. After mapping the resources and possible funding sources, historical information will be used to devise budget needs, develop risk mitigation measures as well as program metrics. Community meetings will be held to keep stakeholders apprised of developments.

C. Funding Ecosystem Assessment

Focusing on Digital Equity, the funding ecosystem is fairly limited but likely to grow in the future. Through a review of grant opportunities available in the Commonwealth and nationally, some programs were identified to consider, including the National Telecommunications and Information Administration (NTIA) (Digital Equity Act grants) and grants from the Appalachia Regional Commission (Connect Humanity). Further grant opportunities will be sought from groups that provide social services in the area. These grants will be leveraged via in-kind donations from institutions, organizations, and the private sector.

Eligible Project Activities

Project	Needs	Agency	Potential Funding Program(s)
Digital Equity (focusing on connectivity and healthcare access)	Planning,Training & Devices	Federal Communications Commission (FCC)	• Rural Healthcare Program (RHP)
Documenting Best Practices in Rural Areas	Program learning	DHCD	• Digital Opportunity Case Study Pilot Program
Digital Navigation for Seniors	Capacity development	Community Tech Network	• DigitalLift program
Digital Equity (focusing on people living in poverty)	Digital Literacy (i.e. understanding how to use highspeed internet for educational and job opportunities)	AppCAA	• Contributions from private firms • Integration of digital equity into AppCAA programs

Preparing for Grant Funding Opportunities

This document will serve as key to applying for the above mentioned sources for Digital Equity. The LENOWISCO Service Area will coordinate closely with Virginia's Broadband Office and other key stakeholders to ensure that any grant proposal is aligned with State planning efforts and to include the LENOWISCO Service Area's needs. Lastly, due to the varying amount of local matching funding required to pursue these opportunities, we suggest that the LENOWISCO Service Area identify sources and amounts of in-kind contributions to determine the respective capacity to secure grant funding.

Local and Statewide In-kind Contributions

In addition to the grant programs mentioned above, the LENOWISCO Service Area intends to work with local and Commonwealth governments, organizations, and individuals to leverage

in-kind contributions to accelerate Digital Equity. These contributions will be: space, utilities, man hours, materials and equipment, among others. Potential partners for in-kind contributions include:

- Groups Representing Vulnerable Populations: Local organizations providing services to at-risk youth, seniors, persons with disabilities, and veterans will be recruited to provide meeting spaces for training and awareness raising.
- Libraries: The LENOWISCO community plans to coordinate with the Lonesome Pine Regional Library system to compile digital resources and provide outreach to community members on how to protect privacy and avoid scams through sharing of materials.
- Private Firms: AppCAA will approach local businesses for in-kind contributions as needed. AppCAA has experience in receiving small grants and in-kind contributions from financial and retail institutions.
- Volunteers: AppCAA maintains a roster of volunteers who assist in various activities, from food banks to tax preparation. The volunteers can be mobilized when needed to support outreach campaigns on Digital Equity, help to collate and maintain digital resources, and support the logistics of workshops and other initiatives.

D. Digital Equity Integration for Sustainability

AppCAA's service delivery model is moving away from analog business and programmatic processes to digital. This change presents an opportunity to incorporate digital equity principles into AppCAA's services for the people of Southwest Virginia. For example, in its Housing Counseling programs, clients are already provided with information about housing-related scams and basic privacy protection, but with updates these training modules can add in information about data privacy, digital resources for employment and education, and referrals for devices. Going forward, AppCAA will be working with stakeholders and reaching out for expert advice on how to design these modules to deliver the greatest impact for the people of the LENOWISCO area.

APPENDIX

Appendix

A. Community Survey on Digital Needs

AppCAA's Digital Equity Community Survey

Section 1: Demographics

1.1. Name:

1.2. County of Residence:

1.3. Age:

Section 2: Current Broadband Access

2.1. Do you currently have access to a reliable high-speed broadband internet connection at your place of residence?
[ ] Yes [ ] No [ ] I don't know

2.2. If you answered "No" or "I don't know" to the previous question, please briefly explain the challenges or barriers you face in accessing broadband internet:

(Open-ended response)

2.3 Will you be able to access the internet after the end of the Affordable Connectivity Plan (ACP) subsidy ends?
[ ] Yes [ ] No [ ] I don't know

Section 3: Internet Use and Adoption

3.1. How often do you use the internet for personal, educational, or work purposes?
[ ] Daily [ ] Weekly [ ] Monthly [ ] Rarely [ ] Never

3.2. What are the primary reasons for using the internet? (Check all that apply)
[ ] Education [ ] Work or employment [ ] Healthcare and telemedicine [ ] Communication (email, social media, etc.) [ ] Entertainment [ ] Accessing government services [ ] Other (please specify)

3.3. What type of device do you use to access the internet?
[ ] Tablet [ ] Smartphone [ ] Laptop [ ] Desktop computer [ ] Other

3.4. Have you encountered any specific challenges or limitations in using the internet for your needs? If so, please describe:

(Open-ended response)

Section 4: Strategies and Recommendations

4.1. What strategies or initiatives do you believe would be most effective to increasing access to high speed internet in your community?
(Open-ended response)

B. Asset Inventory

Organization Name	Type of Resource	Description	Populations Served	Targeted Populations
United Way of Southwest Virginia	Computer access, computer classes/workshops, technical support	Childhood Success program offers computer access and classes.	Bland, Buchanan, Carroll, Dickenson, Floyd, Giles, Grayson, Lee, Montgomery, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe, Bristol, Galax, Norton, and Radford.	Other
People Incorporated of Virginia	Other	We may provide computers to WIOA clients when it is required for their participation in training. They have to be eligible for the WIOA program first before they are considered for this supportive service. The VA Career Works One-Stop Centers offer public computer access for the purpose of job search/employment.	Bland, Bristol, Buchanan, Carroll, Galax, Grayson, Other, Washington, Wythe, Smyth, Russell, Dickenson, Pulaski, Giles, Montgomery, Floyd, Radford	Individuals with low levels of literacy, Individuals with disabilities, Individuals living in households below 150% of the poverty level, English language learners, Incarcerated individuals, Veterans, Dropouts, Public Assistance Recipients

Mount Rogers Regional Adult Education Program	Computer access, computer classes/workshops, Computer loan, wifi access	We have 10 Chromebooks that we loan throughout the Mount Rogers Region. We also have 5 older hp laptops that we loan across the region.	Bland, Bristol, Carroll, Galax, Grayson, Smyth, Washington, Wythe	English language learners, Incarcerated individuals, Individuals living in households below 150% of the poverty level, Individuals with disabilities, Individuals with low levels of literacy, Older population, Racial or ethnic minorities, Residents of rural areas, Veterans
Virginia Highlands Community College	Computer classes/workshops, computer access, wifi access, wifi hotspot	Provides access to computers, internet access, and computer training	Bristol, Smyth, Washington	English language learners, Individuals living in households below 150% of the poverty level, Incarcerated individuals, Individuals with disabilities, Individuals with low levels of literacy, Older population, Racial or ethnic minorities, Residents of rural areas, Veterans
Scott County Public Schools	Computer access, computer classes/workshops	All students in Pre-K through grade 12 have devices to use from home. Pre-K through fifth grade students have iPads, while students in grades 6-12 have Chromebooks. The curriculum includes technological skills for each grade level. Plans are to continue to incorporate greater internet safety awareness and information. An internet safety plan has been developed and is being implemented. The curriculum in the business departments of all high	Scott	Students

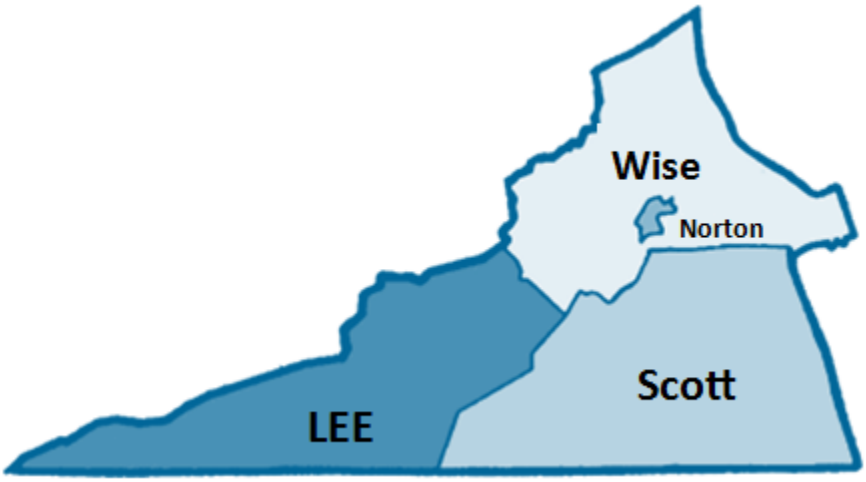
		schools has been revised and upgraded to focus on information technology. Equipment in each department has been upgraded to support the revised curriculum. All four high schools have Certiport testing Software for CTE credentialing testing.		
Southwest Virginia Workforce Development Board	Computer access, computer classes/workshops, computer loan, wifi access, technical support	The entity provides workforce development opportunities to various groups in multiple counties	Buchanan, Dickenson, Lee, Tazewell, Norton, Wise, Scott	Incarcerated individuals, Individuals living in households below 150% of the poverty level, Individuals with disabilities, Individuals with low levels of literacy, Residents of rural areas
Southwest Virginia Community College	Computer access, Computer classes/workshops, technical support, wifi access	Provides training classes and devices.	Buchanan, Dickenson, Russell, Tazewell	Residents of rural areas, youth living in poverty
Mountain Empire Community College	Computer access, computer classes/workshops	MECC is the community college for the area. It provides computer classes for skilled and unskilled learners	Dickenson, Lee, Norton, Scott, Wise	Individuals living in households below 150% of the poverty level, Individuals with disabilities, Older population, Racial or ethnic minorities, Residents of rural areas, Veterans
Lonesome Pine Regional Library	Computer access, computer loan, wifi access, wifi hotspot	Public library, 21 hot spots cost $9020.11; 23 ipads, 23 chrome books, 8 lap tops, Grant money	Wise, Scott, Norton, Lee, Dickenson	Residents of rural areas

C. Broadband Infrastructure

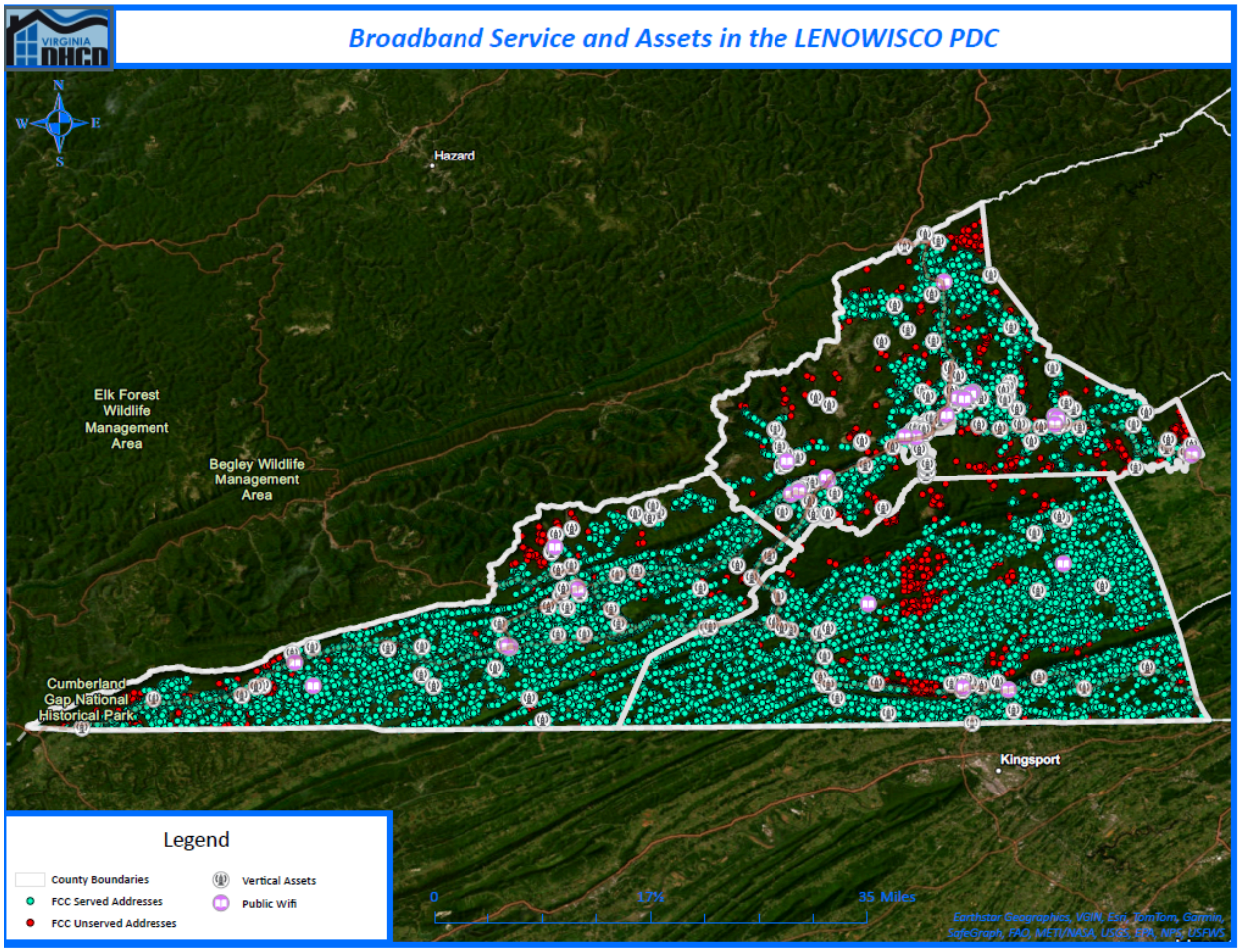
A. Service Area GIS

Through the development of the AppCAA Service Area Connectivity Plan, it has defined a proposed project service area as shown below. Lee, Scott, Wise and Norton Officials, the LENOWISCO Planning District, and the Commonwealth of Virginia have already planned out the infrastructural aspect of the plan; this plan instead focuses on digital equity as the main

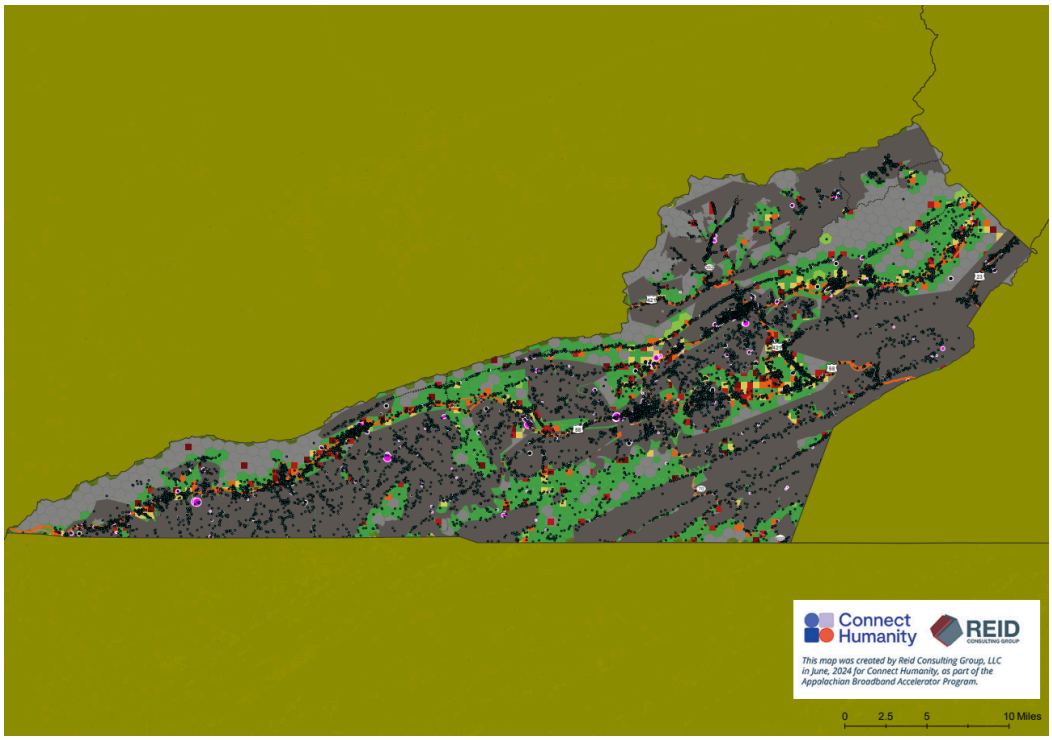
barrier to high speed internet access.



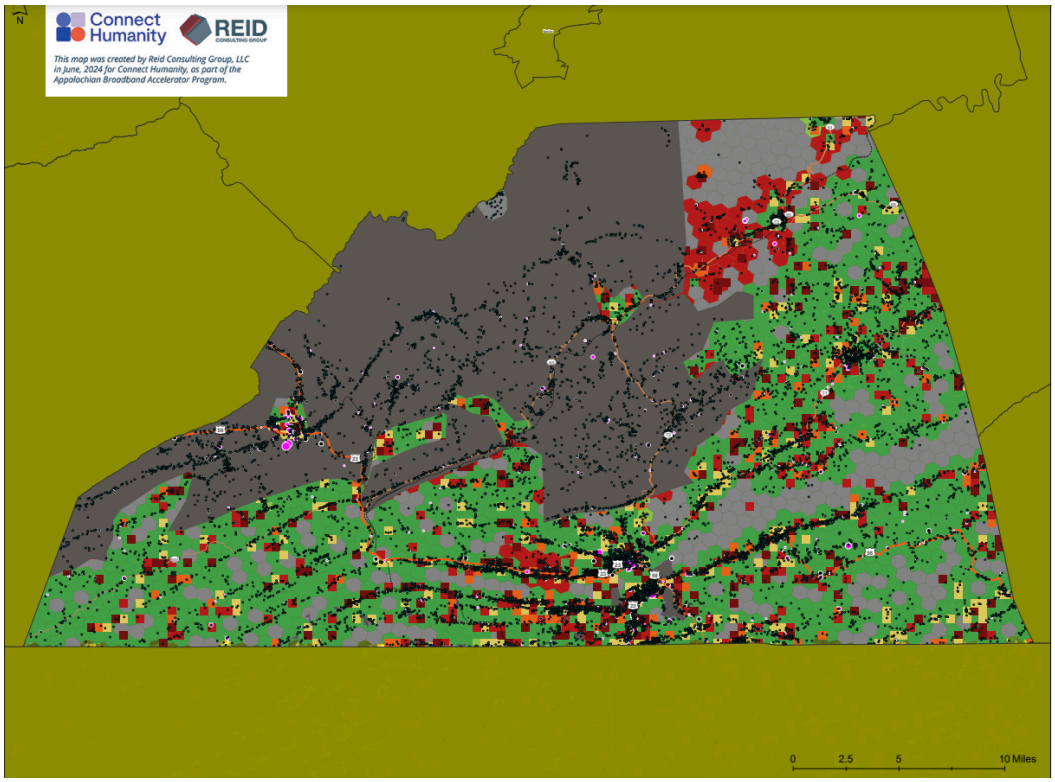
The following GIS maps were obtained, analyzed, and utilized to develop the design, technical details, and specifications of the proposed network infrastructure:



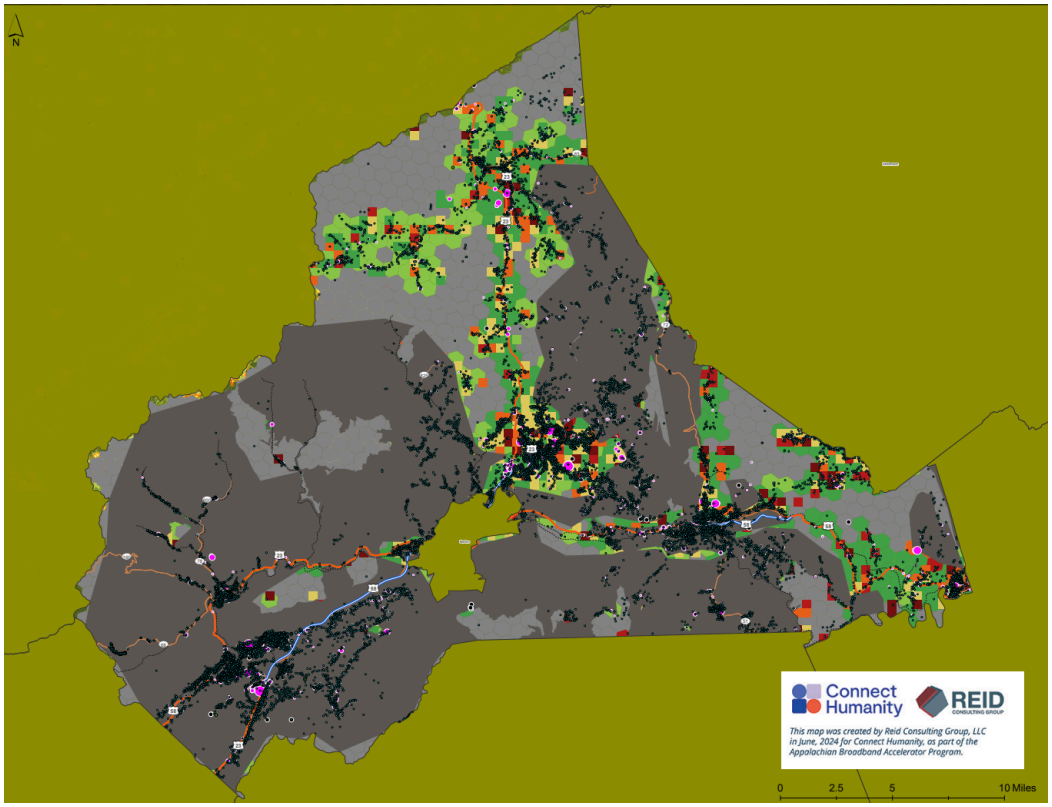
Lenowisco Service Area
Lee County



Scott County



Wise County (including the City of Norton)



GIS mapping assets that were inventoried as part of the Connectivity Plan:

- Maps generated by town/county/state GIS mapping office
- Base map of project area to include boundaries, subdivisions, parcels and street centerlines
- To the extent available, maps of existing infrastructure including water, sewer and conduits
- To the extent available, existing fiber infrastructure in the community
- To the extent known to the public or from providers willing to share
- To the extent known, already-funded broadband expansion projects in the community (confirm any overlap with the proposed project area)
- Vertical infrastructure, such as towers, water towers, tall buildings/rooftops
    - In some rural areas this could include grain silos, some larger barn rooftops or other privately owned structures
- Address list for all homes and businesses
- Planned/phased broadband expansion routes
- Rights-of-way and easements
- Broadband Serviceable Location Fabric data points from the FCC

B. Network Overview

The Scott County Telephone Co. and Point Broadband network is a state-of-the-art telecommunications fiber infrastructure designed to provide high-speed internet access to

homes and businesses in a rural area. The preliminary last-mile route design provides broadband connectivity to 95% of the area's population by 2026. Network construction has largely been completed.

C. Environmental, Historical, and Cultural Preservation Requirements

Federal funding means complying with certain environmental, historical, and cultural preservation requirements when federal funding is being utilized to deploy broadband network infrastructure. The project deployed a last mile fiber network. Before the commencement of any new construction activities, LENOWISCO area completed all applicable environmental screening, including those outlined in the National Environmental Policy Act (NEPA), the National Historic Preservation Act, the Endangered Species Act, and other applicable environmental regulations. The area is largely farmland with pockets of development and a national forest.

Overview and Phases

The LENOWISCO Virginia Telecommunications Initiative started Phase 3 of its broadband expansion in July 2023 and has already deployed its broadband network infrastructure to 95% of the service area. For the purposes of this plan, the focus will be on Digital Equity and how to guarantee those living in poverty and other marginalized groups are able to access high speed internet.

Maintenance and Growth

Since the broadband infrastructure has been deployed, the LENOWISCO Virginia Telecommunications Initiative has devised long-term plans to ensure that assets are maintained to support the network's financial sustainability and growth. A summary of the maintenance and growth plans is provided below:

- The LENOWISCO Virginia Telecommunications Initiative will maintain the network in coordination with Scott County Telephone Cooperative and Point Broadband service providers. Further network expansion into the five percent remote and most costly areas remaining will be funded via federal and state grants.
- The fiscal stability of the LENOWISCO broadband network will support growth and expansion into areas not funded by BEAD or other state or federal grant support.

D. Technology Risks

Cybersecurity Risk Management Plan

The Lenowisco area understands that it must meet certain cybersecurity requirements as part of any federal or state funds made available for digital equity activities. The internet providers that receive federal funding for broadband buildout have adopted similar measures. The following is a description of the area's status with respect to developing its Cybersecurity Risk Management Plan:

- The Lenowisco area has a Cybersecurity Risk Management Plan in place that is either operational or ready to be operationalized upon receiving grant funding for internet adoption and accessibility

- The Lenowisco area's Cybersecurity Risk Management Plan reflects the latest version of the National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity (currently Version 1.1) and the standards and controls set forth in Executive Order 14028 and specifies the security and privacy controls being implemented.
- The Lenowisco area's Cybersecurity Risk Management Plan will be reevaluated and updated on a periodic basis and as events warrant.
- The Lenowisco area understands that it must submit its Cybersecurity Risk Management Plan to the State of Virginia prior to the allocation of funds. If the area makes any substantial changes to the plan, a new version will be submitted to the State within 30 days.