

DIGITAL EQUITY PLAN



Northern Berkshire
County, Massachusetts
*Adams, Cheshire,
Lanesborough, Florida
and North Adams*

APRIL 2024

PREPARED FOR



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The contributions of the Digital Equity Steering Committee and project stakeholders join the comments of residents and stakeholders who participated in meetings and surveys throughout the Digital Equity planning process.

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01

Introduction

In a society where technology is deeply ingrained in our daily lives, it's vital to examine its impact on learning, work, and social interactions.

In Northern Berkshire County, the communities of Adams, North Adams, Cheshire, Lanesborough, and Florida grapple with a significant digital divide, resulting in disparities between those who have access to affordable high-speed internet options and those who do not. This gap severely hampers residents' ability to participate equitably in society, democracy, and the economy. Given the swiftly changing political, economic, and technological landscapes, municipalities must ensure equal access to resources, especially for marginalized populations.

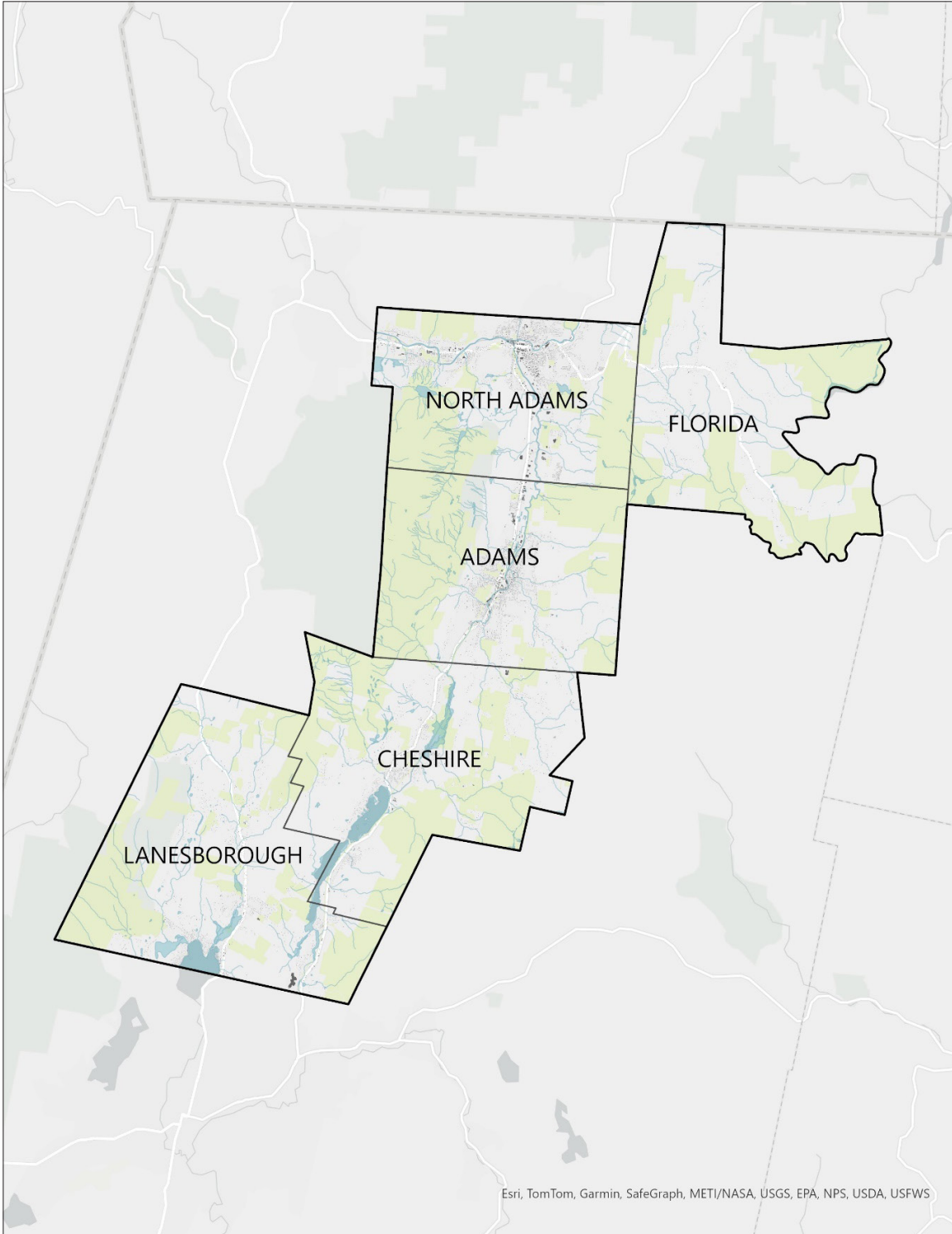
Digital equity serves as a cornerstone for broader social equity, as people of all ages require access to online resources for navigating various aspects of life. This necessity is particularly evident in critical areas such as education, healthcare, employment, personal finances, and political engagement. Implications of the digital divide were further underscored by the COVID-19 pandemic. The pandemic starkly illuminated the indispensable role of affordable high-speed internet options, digital devices, digital literacy, and underscored the adverse effects on communities unable to fully access and utilize digital resources.

Communities in Northern Berkshire County face more significant challenges to internet access and availability than other areas in Massachusetts. Before community needs such as digital literacy and device access can be addressed, residents must first secure reliable internet connections as a foundational necessity.

In response to these pressing challenges, communities in Adams, North Adams, Cheshire, Lanesborough, and Florida embarked on an extensive eight-month planning process to craft a Digital Equity Plan. Facilitated by MBI and with the guidance of Vanasse Hangen Brustlin, Inc. (VHB), this plan embodies robust municipal collaboration and community input, squarely addressing the digital divide in Northern Berkshire County. It presents a unified vision to enhance digital inclusion in these communities, positioning them to pursue state and federal funding. Serving as a roadmap for decision-making and investments in services and infrastructure, the plan aims to enhance access to high-speed internet, digital devices, and digital training across each community.

Northern Berkshire County Communities

Figure 1: Five Northern Berkshire County Digital Equity Plan Communities



02

What is Digital Equity?

The internet is a necessity in modern life for the exchange of commerce and information, access to government services and telehealth, social connectivity, and participation in school and employment. For equal opportunity to participate in our society and democracy, individuals, households, organizations, and businesses need fast and reliable broadband connectivity, as well as the skills and appropriate devices required to utilize the internet. A divide exists in Northern Berkshire County between those who can consistently afford and access these resources and those who cannot, exacerbating inequalities and creating challenges in everyday life.

The Problem: The Digital Divide

Digital equity planning addresses inequities in access to broadband internet, technology, and supportive resources, known as the digital divide. The National Digital Inclusion Alliance (NDIA) defines the digital divide as “the gap between those who have affordable access, skills, and support to effectively engage online and those who do not.”¹ This gap disproportionately impacts marginalized groups, including households with low incomes, older adults, minority households, people with disabilities, and people in rural areas, all of whom are less likely to have broadband service at home.²

According to the U.S. Census, approximately 16 million households nationwide are without an internet subscription, 12 million are without internet access, and eight million are without a computer.³ Several factors can limit reliable access to internet service with the speed and capacity to accomplish everyday tasks, including the quality and affordability of services provided by internet service providers (ISPs) companies offering subscription internet services. Subscribers can face confusion and unaffordability paying for bundles, including services or equipment they don't need (e.g., internet, television, home phone services).

Even with reliable internet service, users must have consistent access to a web-enabled device and the knowledge and skills necessary to participate online safely and effectively. Device access can be restricted by affordability, newness of hardware and software, and appropriateness of devices to the user's needs. The availability of training opportunities and resources, fear or shame associated with learning new skills, and privacy concerns can all limit digital literacy.

The Work: Digital Inclusion

Municipalities can address the digital divide by investing in digital inclusion initiatives. Digital inclusion refers to the "activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs)."⁴ ICTs, an extension of information technologies (IT), refers to the hardware, software, and systems that comprise our unified communications systems. The NDIA has identified five elements as integral to ensuring all individuals and households can effectively utilize these technologies.

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

Digital Inclusion requires communities to intentionally address historical, institutional, and structural barriers to access and use technology.



Downtown North Adams, MA

The Goal: Digital Equity

The goal of addressing the digital divide through digital inclusion initiatives is to support digital equity for all individuals and groups within a community. Digital equity is “a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy, facilitating lifelong learning and access to essential services.”⁵ This plan focuses on three pillars of digital equity work, including broadband internet access, device access, and digital literacy. Communities can support digital equity by increasing subscribership to internet service, addressing infrastructural issues, expanding the availability of digital literacy training opportunities, and facilitating access to appropriate devices.

Several types of devices can access the internet and serve as tools for work, school, and social connection, including cellular phones, tablets, and computers, each with benefits and drawbacks for the user. Cellular phones are one of the most portable web-based devices, offering multiple connection options and long battery life, but they cannot replace the functions of a computer. Tablets provide accessibility benefits and long battery life but cannot make calls without a cellular data plan. Laptops and desktop computers are necessary for many jobs and applications and have ample storage. However, computers have a shorter battery life and are the least affordable of these three devices.

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Our Process

The digital divide significantly impacts municipalities in Northern Berkshire County, presenting obstacles to broadband internet access and device availability for individuals, households, and businesses. To address this gap, the five communities, under the guidance of the Digital Equity Steering Committee, developed this Digital Equity Plan in partnership with residents and various local and regional stakeholders. This Plan leverages existing initiatives at the local, state, and federal levels, aiming to identify potential collaborations, synergies, and local champions for digital equity.

The Digital Equity Steering Committee

The Digital Equity Steering Committee (The Committee) is comprised of representatives from Adams, North Adams, Cheshire, Lanesborough, and Florida. The Committee is a collective of municipal employees and elected officials dedicated to enhancing information and technology resources in Northern Berkshire County. With 11 members representing various aspects of town administrations, IT services, school districts, and municipal governments, the Committee collaborated with VHB to shape this plan. The responsibilities of the Committee included offering guidance, overseeing plan development, organizing public engagement initiatives, and fostering communication with the community.

Public Engagement

The process of planning for Digital Equity encompassed various points of engagement with stakeholders and the public. These interactions aimed at updating residents on digital equity planning activities and collecting input on community needs. Public engagement yielded vital insights that played a pivotal role in shaping the goals and recommendations for the communities. The formulation of this plan significantly depended on the feedback obtained from the following engagement activities:

Stakeholder Interviews: The VHB consultant team conducted multiple group interviews with stakeholders in digital equity. These sessions centered on exploring the primary challenges and opportunities associated with their work, involving the following groups:

1. Cheshire, Lanesborough, and Adams Schools
2. North Adams and Florida Schools
3. Libraries
4. Councils on Aging
5. Public Housing
6. Business Community

All meeting notes from stakeholder interviews are available in the **Appendix** of the Digital Equity Plan.



Public Meeting #1 Group Discussion



Tabling Event #2 Public Input

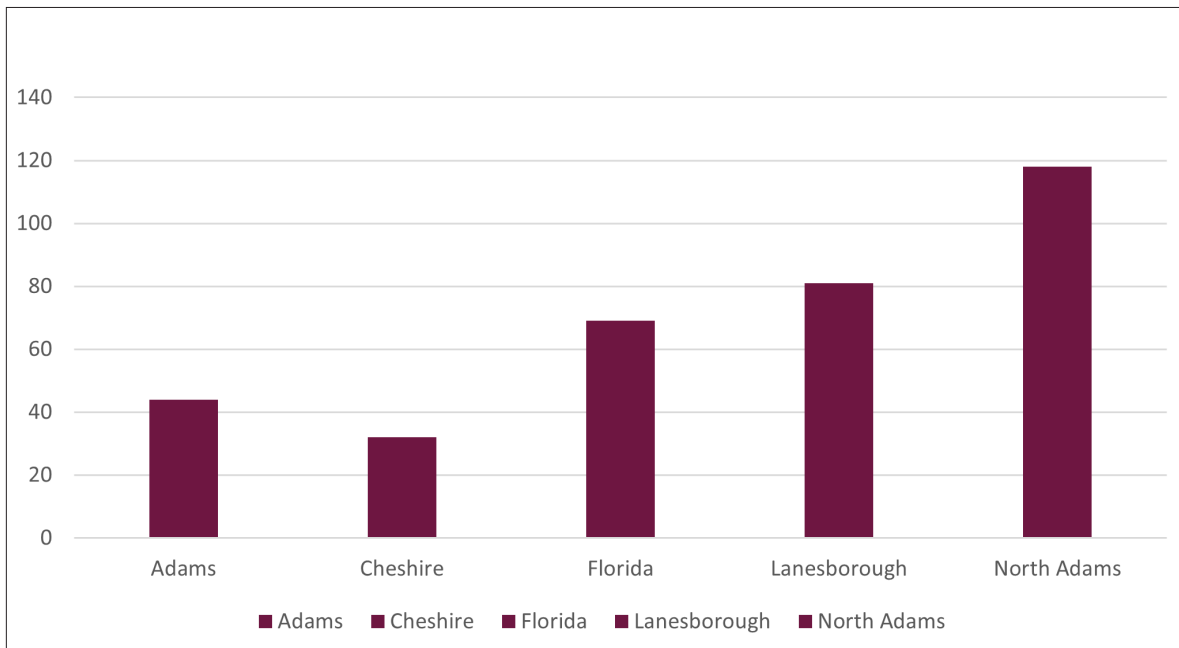
Tabling Events: The Team attended three tabling events throughout the five communities encompassed in this plan. These events included Coffee in the Court in the Town of Adams, the Indoor Farmer’s Market in the City of North Adams, and the Festival of the Trees in the Town of Cheshire. The objective of these tabling events was to inform the community about the Digital Equity Plan and solicit input from residents regarding digital equity issues and opportunities.

Public Meeting: The Team organized a public meeting during the planning process to communicate updates on ongoing efforts and gather community input. This interactive session included a presentation by the consultant team followed by group discussions about digital equity.

During the public meeting, approximately 20 participants provided feedback on issues they have experienced regarding broadband internet access, access to devices, and digital literacy, as well as opportunities to improve access to these resources in the region.

» **Statewide Digital Equity Survey:** MBI launched a Statewide Digital Equity Survey to better understand Massachusetts residents’ needs regarding internet access and digital equity. As of January 9, 2024, Northern Berkshire County participants comprised a sample group of 344 responses including 44 from the Town of Adams, 32 from the Town of Cheshire, 69 from the Town of Florida, 81 from the Town of Lanesborough, and 118 from the City of North Adams.

Figure 2: MBI’s Statewide Digital Equity Survey Responses by Municipality



Source: MBI Statewide Digital Equity Survey (Adams, Cheshire, Florida, Lanesborough, North Adams January 2024).

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Regional Needs

The digital divide most significantly impacts each of the Northern Berkshire County municipalities through the need for reliable and affordable high-speed internet access. Identifying specific community needs surrounding broadband and device access is necessary to help bridge the digital divide. This section focuses on regional needs concerning device access as well as broadband access, availability, infrastructure, affordability, and adoption throughout Northern Berkshire County.

Broadband Access

Access to broadband service is a necessity for everyday function in the modern world. Reliable internet is necessary for participating in society, accessing essential services, pursuing educational and economic opportunities, and maintaining social connections. Recognizing broadband access as a basic need emphasizes the importance of efforts to promote universal broadband access and ensure that all individuals and communities have equal opportunities to bridge the digital divide and succeed in the digital age.

MBI's Statewide Plan assessed broadband availability, affordability, and adoption across the Commonwealth:

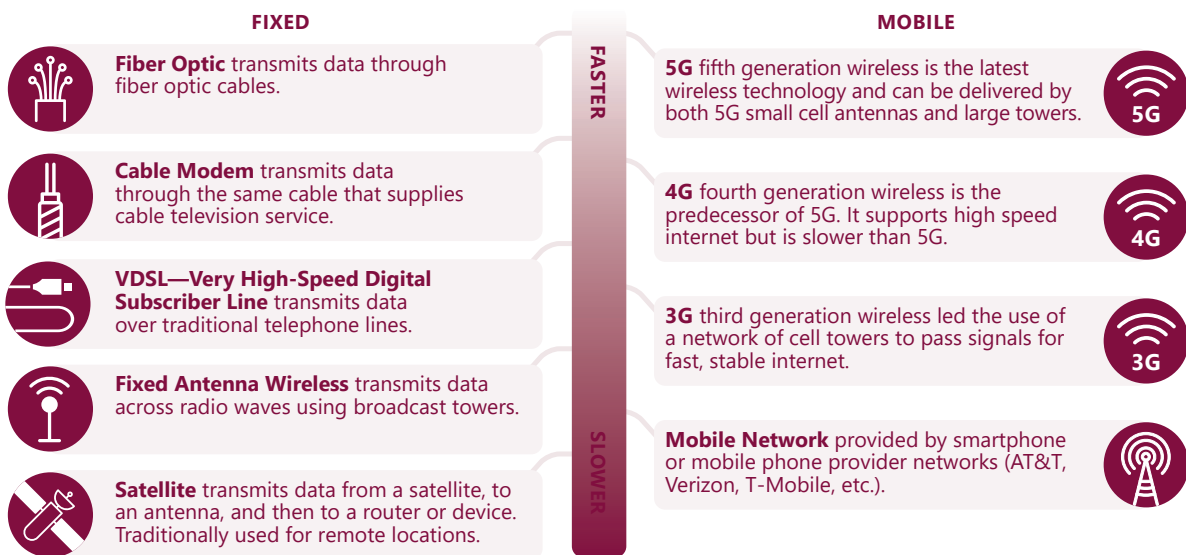
Availability refers to an individual's ability to get high-quality, high-speed internet available for them to use, regardless of their ability to pay for this service.

Affordability refers to an individual's ability to pay for high-speed internet, regardless of the availability of high-speed internet.

Adoption was calculated by MBI as the combined outcome of both availability and affordability, whether residents subscribe to high-speed internet plans.

Availability

Residents of Northern Berkshire County have among the fewest available high speed internet options anywhere in the State. Across the five communities, various speed and connection options exist, ranging from wired digital subscriber line (DSL) connections to fiber optic, cable, and wireless options like satellite or fixed wireless, transmitted via radio waves.



According to the Federal Communications Commission (FCC), a Broadband Serviceable Location (BSL) is “a business or residential location in the United States at which mass-market fixed broadband Internet access service is, or can be, installed.” The FCC has recently updated the definition of the term “broadband” to be a high-speed (a speed of 100 megabits per second (Mbps) for downloads and 20 Mbps for uploads) internet connection consisting of either wireline or wireless infrastructure. Residential BSLs include residential structures such as single-family homes (including habitable unoccupied homes), homes with multiple housing units, townhouses, apartments, and condos. Individual units within multi-family housing are not considered individual BSLs.⁶

The FCC classifies BSLs into three separate categories:

Unserved Location: a BSL that has no access to broadband service or is lacking access to reliable service with speeds less than 25 Mbps for downloads and 3 Mbps for uploads.

Underserved Location: A BSL that is not an unserved location and is lacking access to reliable service with speeds less than 100 Mbps for downloads and 20 Mbps for uploads.

Served Location: A location that can connect to and utilize internet at speeds of at least 25/3 Mbps (the federal fixed broadband speed benchmark, though in recent years efforts have been made to push this minimum to 100/20 Mbps).

These classifications serve to quantify the quality and speed of available service and pinpoint areas in Northern Berkshire County where residents without access are being overlooked and networks should be extended or improved. These classifications also serve as a qualifier for different types of funding from the federal government. For example, unserved locations are eligible for both Capital Project Fund and BEAD grants, while underserved locations have the possibility to be eligible for BEAD funding.

Table 1: Number of Unserved and Underserved Locations per Municipality

Community	Number of Underserved Broadband Serviceable Locations	Number of Unserved Broadband Serviceable Locations	Total Number of Broadband Serviceable Locations
Adams	1 (0.02%)	13 (0.35%)	3,646
Cheshire	0 (0.00%)	22 (1.29%)	1,706
Florida	98 (26.85%)	256 (70.14%)	365
Lanesborough	4 (0.27%)	59 (3.97%)	1,485
North Adams	2 (0.04%)	8 (0.14%)	5,677

Source: FCC BDC Data: Number of Unserved and Underserved BSLs by Region, September 2023

Table 1 shows the substantial amount of unserved and underserved locations within Northern Berkshire County’s communities. While there are multiple unserved locations in each community, the Town of Florida displays a significant need for reliable high speed internet options due to significantly higher numbers of unserved and underserved locations than neighboring communities.

Available Internet Speed

Having access to high internet speed is crucial for achieving digital equity. Without high-speed internet, individuals may face barriers to essential online resources. Slow internet speed can disrupt critical video calls such as remote working opportunities, telehealth, online learning, webinars, and job interviews. A lack of available high-speed internet limits the ability to fully participate in the digital world and for communities to benefit from various online opportunities.

“In Northern Berkshire County, 40% of survey respondents to MBI’s statewide survey reported their internet as being “Not good enough to meet my household’s needs.”

At peak hours, internet traffic and usage can significantly reduce internet speed throughout networks. This results in residents experiencing internet speeds that are much lower than advertised by providers. Speed test software such as Ookla highlights discrepancies between speeds reported by Internet Service Providers (ISPs) and speed tests conducted in individual households.⁷

Table 2: Internet Speed Test Data per Municipality

Community	Total Tests	Unique ID Tests	Speeds Less than 25/3	Speeds Less than 100/20	Speeds at Least 25/3	Speeds at Least 100/20	Speeds at Least 100/100
Adams	1,939	319	92	667	1,650	329	15
Cheshire	658	114	30	270	533	90	0
Florida	2,133	67	608	1,448	1,191	24	0
Lanesborough	680	165	64	260	542	109	14
North Adams	3,442	565	226	1,183	2,930	713	16

Source: MBI: Ookla, Feb 2022

Table 2 shows Ookla speed test data for each of the five communities in Northern Berkshire County. The Town of Florida stands out with 29% of all speed tests performed recording less than the minimum 25/3 threshold, potentially indicating those locations to be “unserved”. In Lanesborough, 9% of speed tests performed did not meet this 25/3 benchmark, along with 5% of tests in Adams and 5% of tests in Cheshire.

Additionally, during tabling events in Cheshire and North Adams multiple residents expressed concerns regarding unreliable internet access and lagging speeds depending on the provider, time of day, and weather conditions.

Available Internet Service Providers and Competition

Charter Communications, Inc. (Spectrum) is the only high-speed ISP serving the communities of Adams, Cheshire, Lanesborough, and North Adams. Communities with only one widely available ISP often face challenges due to their limited options. Limited competition can result in lack of plan flexibility, higher prices, inadequate network upgrades, poor service quality, and risk of service disruption and prolonged downtimes for residents.

92% of survey respondents to MBI’s statewide survey in Adams, Cheshire, Lanesborough, and North Adams reported Spectrum as their internet service provider.

Although it is the only major high-speed internet provider in the other four communities, Spectrum does not have any presence in the Town of Florida. Survey respondents in Florida reported utilizing a mix of providers and internet service types with residents reporting their providers to be Verizon Communications (42%), WiValley (18%), Space Exploration Technologies (Starlink) (7%), Hughes Network Systems (5%), GoNetSpeed (5%), and AT&T (5%).

Table 3: Residential Internet Service Providers and Advertised Speeds in Northern Berkshire County

Internet Provider	Internet Type	Community Served	Speed
Charter Communications, Inc. (Spectrum)	Cable	Adams (99.6% coverage) ¹⁸ Cheshire (98.4% coverage) Lanesborough (99.2% coverage) North Adams (99.6% coverage)	1000/35 Mbps
T-Mobile USA, Inc.	Fixed Wireless 5G	Adams (42% coverage) Cheshire (8% coverage) Lanesborough (16% coverage) Florida (1.3% coverage) North Adams (0.2% coverage)	25/3 Mbps 100/20 Mbps
WiValley/GoNetSpeed	Fixed Wireless	Florida (54% coverage)	50/10 Mbps 25/3 Mbps
Verizon	Fixed Wireless DSL	Adams (13.4% availability) ⁹ North Adams (10.2% DSL availability)	50 Mbps (Fixed Wireless) 10 Mbps (DSL)
Earthlink	Fixed Wireless	Adams (79.4% availability) Cheshire (16.5% availability) Lanesborough (29.8% availability) North Adams (24.6% availability)	100/20 Mbps
AlwaysOn	Fixed Wireless	Adams (79.4% availability) Cheshire (16.5% availability) Lanesborough (29.8% availability) North Adams (24.6% availability)	25-150 Mbps
Consolidated Communications	DSL	Lanesborough (5.8% availability)	50 Mbps
Starlink	Satellite	All	50–220 Mbps
Hughesnet	Satellite	All	25 Mbps
Viasat	Satellite	All	50 Mbps

Source: MBI Broadband Map 2023 and Broadband Now, 2023

Table 3 encompasses information from both the MBI Broadband map viewer and BroadbandNow to show a comprehensive list of ISPs, internet types, coverage, and advertised speeds for each of the five Northern Berkshire County communities.

Satellite internet is often one of the only ways to get broadband service in rural areas. It requires a satellite dish with special hardware to send and receive data to a satellite in the earth’s orbit. Some satellite services, such as Starlink, are capable of offering broadband speeds and are getting faster as technology continues to improve.¹⁰ However, is not ideal for a community to rely solely on satellite internet for high speed connectivity due to extremely high upfront equipment costs for satellite installation, limited bandwidth and data caps, and the potential for signal lag, latency, and weather interference. Additionally, Florida residents have noted that satellite internet providers, such as Starlink, do not participate in the Affordable Connectivity Program (ACP) or other federal programs to allow for discounted internet subscriptions for low income families, restricting satellite internet service from being affordable for low income households.

Table 4: Internet Competition and Coverage per Municipality

Community	Service Coverage of at least 25/3 Mbps from 1 or more Providers	Service Coverage of at least 100/20 Mbps from 1 or more Providers	Service Coverage of at least 100/20 Mbps from 2 or more Providers
Adams	99.67%	99.67%	0%
Cheshire	98.53%	98.53%	0%
Florida	65.21%	0%	0%
Lanesborough	99.26%	99.26%	0.07%
North Adams	99.63%	99.63%	0%

Source: MBI Basecamp: Providers, Coverage, and Competition by Municipality, June 2022

Table 4 shows that while nearly all of Adams, Cheshire, Lanesborough, and North Adams have coverage from one provider (Spectrum) with speeds of 100/20, only 65% of the Town of Florida is covered at the minimum service speed of 25/3. The Town of Florida does not have any Broadband Serviceable Locations with at least 100/20 Mbps service.

Infrastructure

Rural infrastructure, including broadband networks, cell towers, and fiber optic cables, provide the foundation for internet connectivity. Without adequate broadband infrastructure, rural communities can suffer from limited or unreliable internet access, exacerbating the digital divide between urban and rural areas.

Fiber internet offers significantly faster speeds compared to most broadband technologies with speeds ranging from 100 Mbps to 1 Gbps (1,000 Mbps) and higher. Fiber-optic connections can deliver symmetrical speeds, where both upload and download speeds tend to be equal. In addition to this, fiber infrastructure is considered the most advantageous option for communities due to smooth performance and significantly better reliability, bandwidth, cost effectiveness, and low latency (delay).

In rural Northern Berkshire County, fiber infrastructure exists, but is limited compared to Spectrum's existing broadband network. This is primarily due to lack of interest from ISPs to install fiber networks in rural areas due to distant and sparse populations, rough terrain, and lower population densities, all of which result in limited revenue potential.

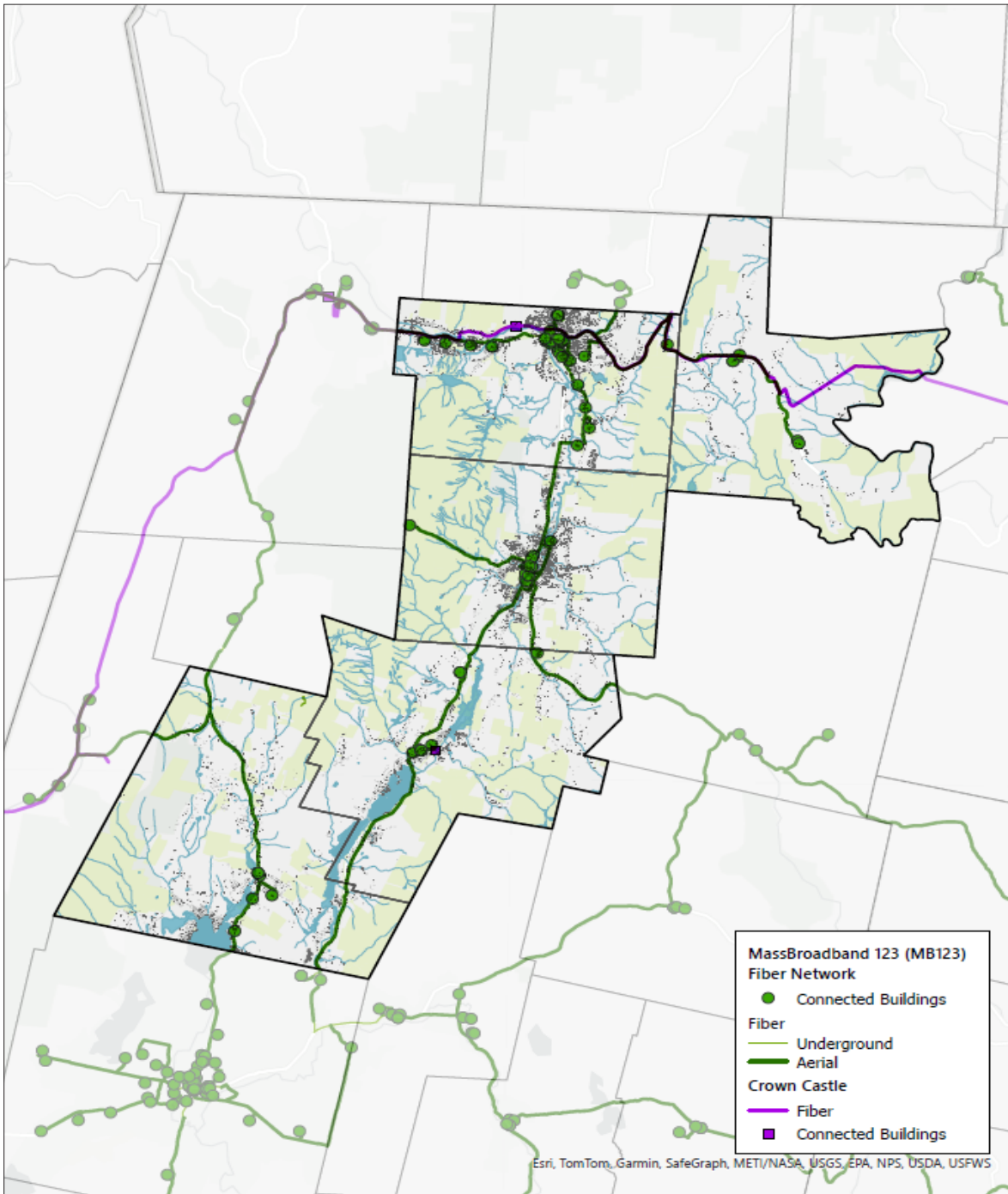
There are two known fiber networks running through Northern Berkshire County, Crown Castle and MassBroadband 123. In early 2014, MBI completed the construction of the MassBroadband 123 fiber network. This system consists of approximately 1,200 miles of fiber-optic network connecting 123 communities in western and north central Massachusetts, including each of the five communities in Northern Berkshire County, to high-speed Internet.¹¹ The MassBroadband 123 (in green **Figure 3**) is operated by Local Linx and was built to connect local Community Anchor Institutions (CAIs) to the fiber network.

The Crown Castle network (in purple in **Figure 3**) travels along Route 2 through North Adams and Florida and does not serve any commercial or residential buildings in the five communities at this time.

Local Linx manages the MassBroadband 123 network by offering wholesale services to ISPs. These ISPs can then provide broadband services to various public entities, such as public safety organizations, schools, libraries, medical facilities, town halls, and other CAIs that are already part of the network. If ISPs wish to expand the network to connect additional CAIs and businesses in the area, they can request quotes from Local Linx for new extensions. Additionally, ISPs have the option to purchase dark fiber connections, high-speed lit services to support backhaul for Fiber to the Premise (FTTP) networks, and colocation services to house equipment within MassBroadband 123 facilities.¹²

While the MassBroadband 123 fiber network does not serve individual residential households, it provides secure, high speed internet to CAIs which can serve as digital hubs to offer free internet services or Wi-Fi to the public. This existing fiber network has the potential to serve as a starting point for future fiber networks to build out from the existing artery.

Figure 3: Northern Berkshire County Fiber Map



Source: MassBroadband 123 and Crown Castle.

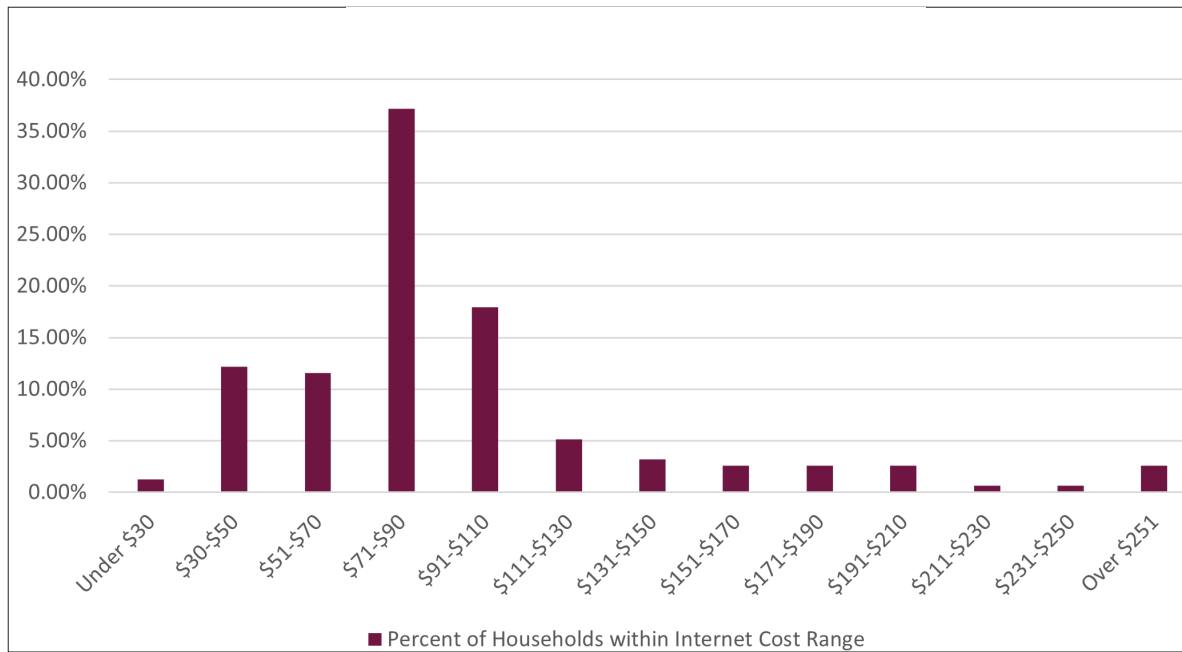
Affordability

The second pillar of broadband access is affordability; a household may have the ability to connect to the internet, but the cost of a monthly internet subscription may be prohibitive to receiving that connection. MBI's statewide survey for the five municipalities provided a look at internet costs, revealing that the majority of households (37%) pay between \$71 and \$90 per month for their monthly internet subscription. **Figure 4**, indicates that some households pay much higher monthly costs ranging between \$100 and \$200 per month to over \$300 per month.

Lack of affordability in communities can often be attributed to lack of cable internet provider options. Other than fiber, cable is the most reliable household internet technology available. Although there are satellite and DSL providers in the area, there is only one cable provider that has a monopoly in most of the communities. The existence of one cable internet provider in the area results in a lack of competition to drive prices down because residents are forced to stay with the only provider available, no matter the cost or quality of service provided. In the long term, the most effective solution to reduce internet costs and increase internet adoption in Northern Berkshire County is to enhance market competition. With limited to no competition currently in the broadband market, attracting additional ISPs will be critical to drive down costs in these communities.

ACP is an FCC benefit program that helps ensure that households can afford the broadband they need for work, school, healthcare and more. ACP provides a discount of up to \$30 per month toward internet service for eligible low-income households.¹³ However, in January 2024, the FCC announced the termination of ACP as early as April 2024. To mitigate the impending gap between ACP enrollees and affordable internet, communities should strive to promote alternative internet options to eligible households. This includes encouraging enrollment in ISP discount programs such as Spectrum Internet Assist and Comcast Internet Essentials, as well as government subsidy programs like Lifeline which provides a discount on phone service for low-income consumers.¹⁴

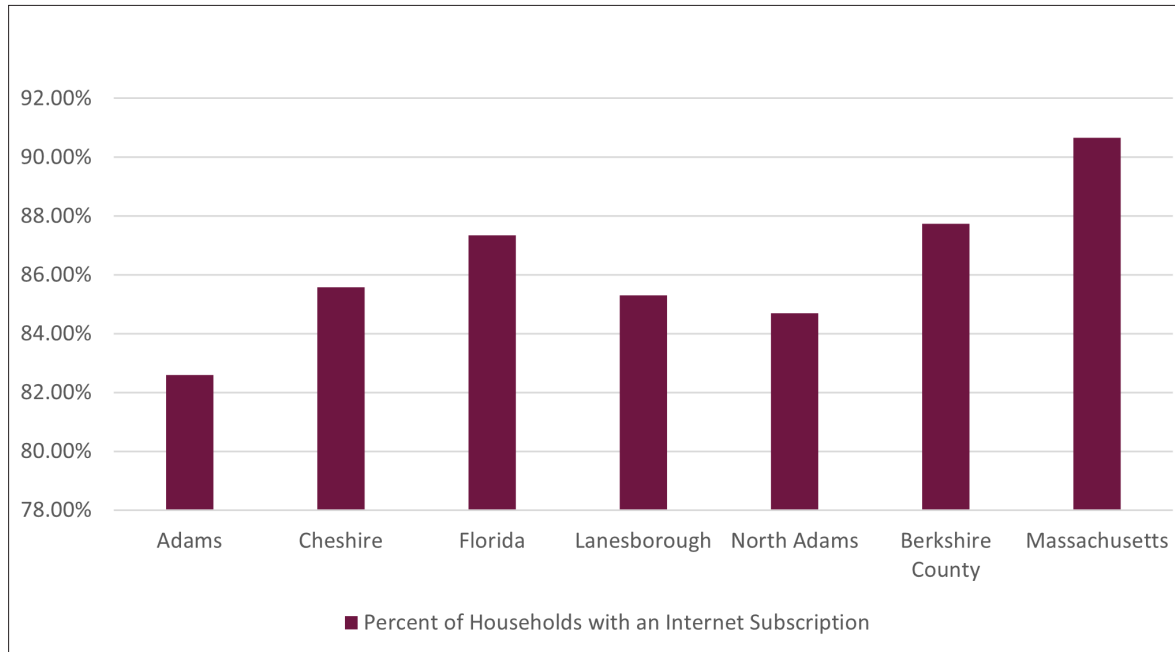
Figure 4: MBI Survey Reported Monthly Internet Costs



Source: MBI Statewide Digital Equity Survey (Adams, Cheshire, Florida, Lanesborough, North Adams January 2024).

Adoption

Internet “adoption” refers to BSLs who subscribe to internet services. According to the 2022 American Community Survey, each of the five communities has a lower percentage of households with internet subscriptions than both Berkshire County (88%) and the State (91%). The Town of Adams has a significantly low subscription rate with only (83%) of households in the Town subscribing to internet. Low adoption rates can be attributed to lack of available infrastructure (i.e. no cable running to the household business), high subscription costs, or mistrust of or disinterest in the internet. Addressing challenges to broadband access and affordability can result in increased adoption of broadband services in Northern Berkshire County’s households.

Figure 5: Percent of Households with Internet Subscription

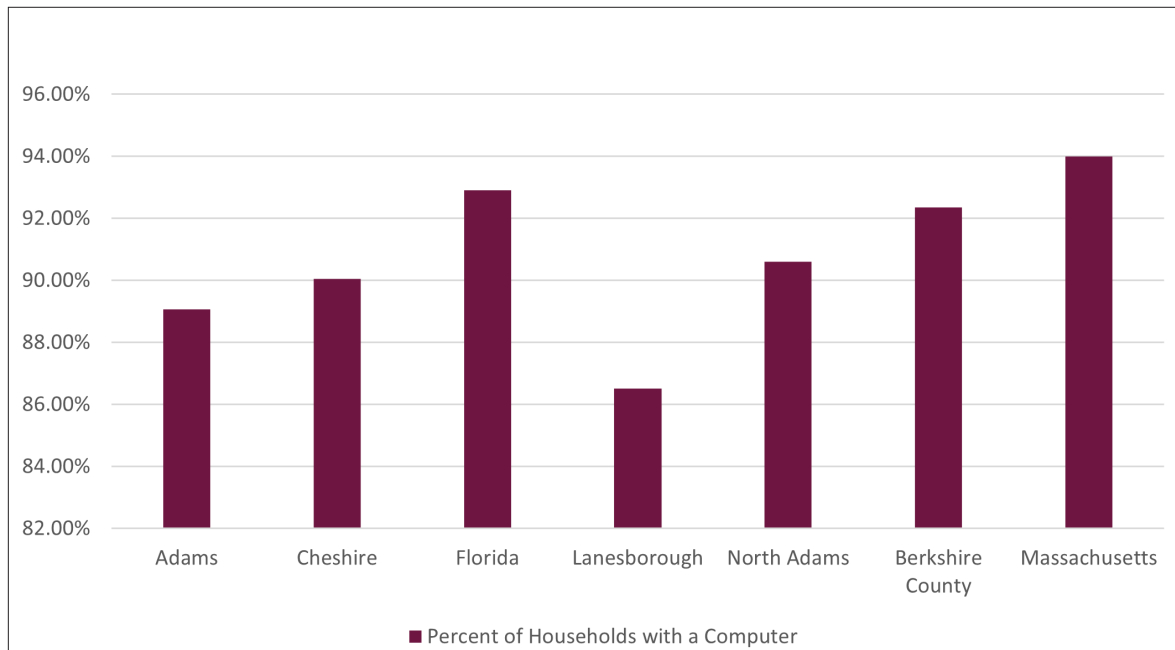
Data Source: American Community Survey, U.S. Census, 2022.

Device Access

According to the U.S. Census, most households in the five Northern Berkshire County communities have a computer. The Town of Florida has the highest percentage of households with computers (93%) slightly higher than that of Berkshire County (92%) and lower than that of the State (94%).¹⁵ Alternatively, Lanesborough stands out as having the least households with a computer at 87%. One computer is not always sufficient to meet the needs of a household. Regarding which devices are used to connect to the internet, MBI statewide survey respondents in Northern Berkshire County reported 81% use a cellphone for internet access, 68% use a laptop, and 34% still report using a desktop computer.

Additionally, while a high percentage of Northern Berkshire County's residents report having at least one computer, there is a gap in computer access for approximately 1,345 households.¹⁶ The largest gap is in the Town of Lanesborough where 16% of households do not have a computer. This is followed by 12% in Adams, 11% in Cheshire, 10% in North Adams, and 8% in Florida. There is potential to improve community awareness of publicly accessible devices throughout the region and nonprofit partners and organizations that can help with device purchase.

Figure 6: Percent of Households with a Computer



Data Source: American Community Survey, U.S. Census, 2022.

Digital Equity Hubs

Digital Equity Hubs are critical public resources for residents, students, and employees to access internet services and devices outside their homes. Northern Berkshire County’s CAIs, including public libraries, schools, and councils on aging (COAs), and more, act as community hubs that provide free access to public computers, hotspots, and devices.

Education

As with districts nationwide, school districts in Northern Berkshire County have significantly expanded their use of classroom technology in response to the COVID-19 pandemic. Utilizing funds from the American Rescue Plan (ARPA), districts in the region have transitioned to one-to-one institutions, providing each student with a Chromebook for academic work. Additionally, some districts offer hotspots for eligible students through partnerships with T-Mobile and their Project 10Million program.

Increased internet connectivity and the use of digital devices in schools have addressed some needs of students and faculty, however, other challenges continue to emerge. Stakeholders from Northern Berkshire County School Districts noted two such challenges: (1) the upkeep of devices obtained through COVID-era funding initiatives, and (2) students’ increased reliance on digital devices highlighted internet connectivity issues at home. To

address these challenges, school districts need to pursue additional state funding to enhance or replace student Chromebooks. These Chromebooks are extensively used and are estimated to have a lifespan of four to five years.¹⁷ Moreover, many school districts have transitioned most of their textbooks to online material, underscoring the importance of ensuring students’ access to devices and the internet as a top priority.

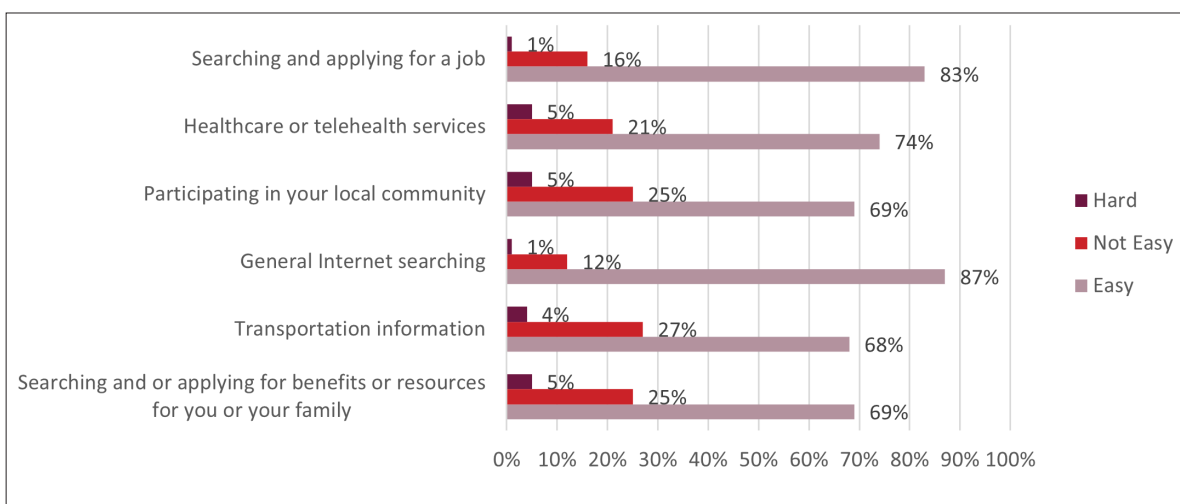
Digital Literacy

Digital literacy is a crucial aspect of digital equity, referring to the proficiency of technology users in understanding and effectively utilizing the internet. Residents of Adams, Cheshire, Florida, Lanesborough, and North Adams have expressed a need for increased digital literacy classes and training opportunities catering to different skill levels. These programs would focus on navigating online applications and addressing device-related issues.

MBI’s statewide survey responses for the five municipalities regarding the difficulty level of various internet activities reveal that residents are challenged with tasks such as “Searching and/or applying for benefits or resources for you or your family” (with 25% of respondents finding this activity “Not easy”) and “Participating in your local community” (22% of respondents reporting this activity as “Not easy”).

For preferred digital literacy training formatting, 59% of MBI survey respondents indicated a preference for a do-it-yourself training module, 13% expressed a preference for in-person support from a friend or instructor, and 21% indicated a preference for online classes. Only 6% of respondents reported a preference for in-person classes.

Figure 7: Please rank the level of difficulty for what you use the internet for



Source: MBI Statewide Digital Equity Survey (Adams, Cheshire, Florida, Lanesborough, North Adams January 2024).

Virtual formats, such as online training and webinars, offer convenience and flexibility, enabling users to learn at their own pace and on their own schedule. These formats are particularly beneficial for individuals with mobility limitations or those residing in remote areas, as they can participate from anywhere with internet access. They encompass a variety of engaging methods, including video tutorials, online quizzes, and web conferencing, enhancing interactivity.

In-person classes remain valuable. They provide hands-on learning experiences and direct interaction, which can be advantageous for individuals who prefer this approach or encounter challenges with virtual learning. In-person training fosters face-to-face engagement, facilitating immediate feedback and deeper comprehension.

Offering opportunities for both in-person and virtual trainings, allows organizations to accommodate diverse learning styles, accessibility requirements, and personal preferences, thereby maximizing participation and learning outcomes. It is essential to promote awareness of these training options among residents and encourage everyone to take advantage of them.

05

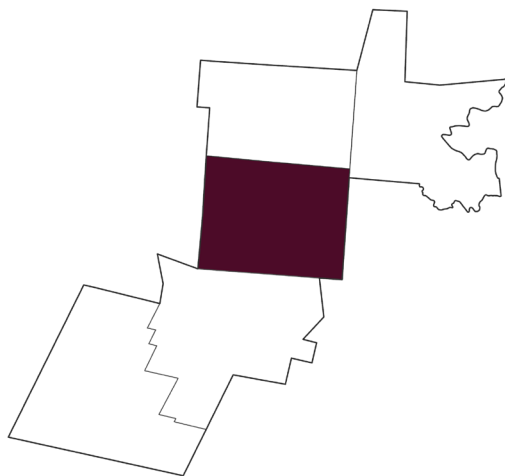
Community Assessments

The Northern Berkshire County study area consists of five communities which each have their own unique identities, needs, and local and regional organizations which are working to expand broadband internet access and digital capacity among residents, businesses, and institutions. Connectivity varies across these communities and organizations due to unaffordable device and service costs, gaps in digital literacy training accessibility, lack of synergy between existing resources and programs, and more.



North Adam's Farmer's Market During Pop-up Event #2

Community Profile: ADAMS



Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

POPULATION

Population 2022 estimate	8,149
Population density Per square mile	354
% Children Age 18 and under	15%
% Older Adults Age 65 and over	25%
Median age	48
% Black, Indigenous, people of color	5%
% with disabilities Physical, mental, intellectual, and developmental	18%
% Limited English speaking households	6%

Source: American Community Survey 5-Year Estimates (2018-2022)

COMPUTERS

% Households with no computing device Desktop, laptop, tablet, or phone	11%
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BROADBAND

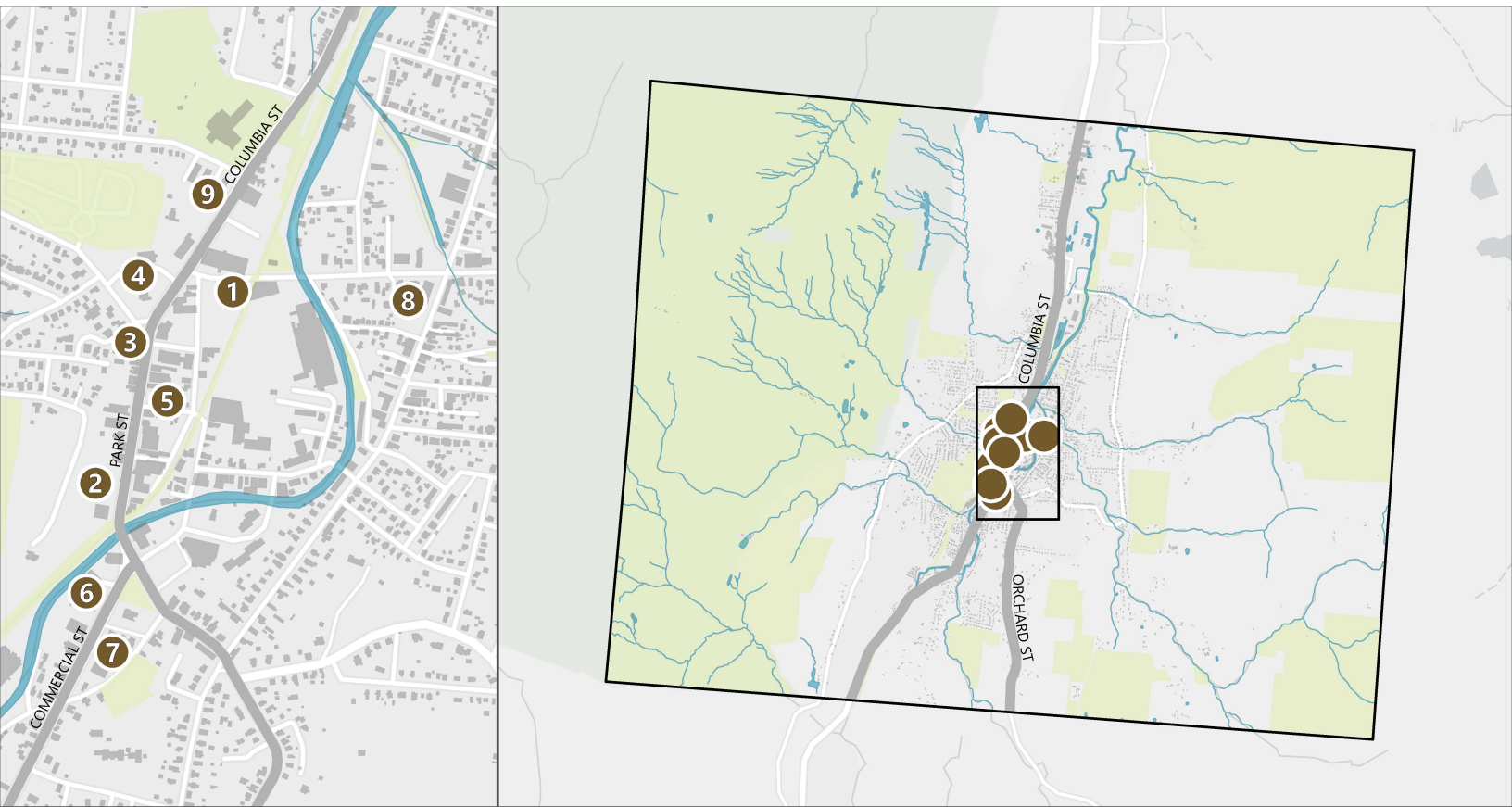
% Households without an internet subscription	17%
% Households using only cellular data plan	11%
Primary service type	Cable
Primary provider	Charter/ Spectrum

INCOME

Median household income	\$54,677
Household income less than \$25,000 Adjusted full-time salary for MA minimum wage	27%
Household income less than \$35,000	35%
Household income less than \$50,000 Less than the approximate living wage for household with two or more people	52%

HOUSING

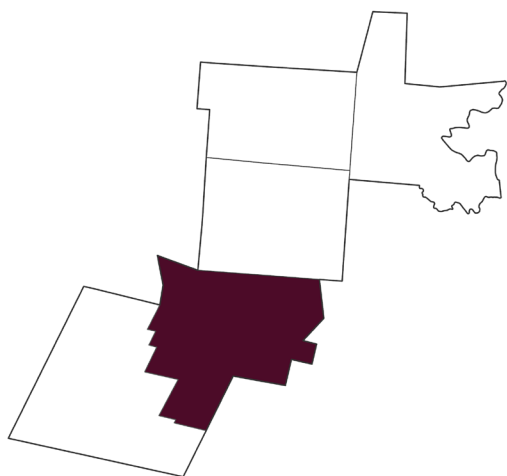
Total housing units	4,336
% Occupied housing	88%
% Owner-occupied	61%
% Renter-occupied	39%



Map Credits: MassGIS

Index	Institution	CAI Type	Address
1	Adams COA/ Visitor's Center	Civic Center	3 Hoosac Street
2	Adams Town Hall	Civic Center	8 Park Street
3	Adams Free Library	Library	92 Park St
4	Columbia Valley	Public Housing	21 Maple St
5	Adams Police Department	Public Safety	4 School Street
6	Berkshire Arts and Technology Charter Public School	School	1 Commercial Street
7	Hoosac Valley Elementary School	School	14 Commercial Street
8	St. Stanislaus Kostka School	School	108 Summer Street
9	Adams Housing Authority	Public Housing	4 Columbia Street

Community Profile: CHESHIRE



Esri, Tom Tom Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

POPULATION

Population	3,239
2022 estimate	
Population density	177
Per square mile	
% Children	15%
Age 18 and under	
% Older Adults	26%
Age 65 and over	
Median age	52
% Black, Indigenous, people of color	4%
% with disabilities	26%
Physical, mental, intellectual, and developmental	
% Limited English speaking households	6%

Source: American Community Survey 5-Year Estimates (2018-2022)

COMPUTERS

% Households with no computing device	9%
Desktop, laptop, tablet, or phone	

BROADBAND

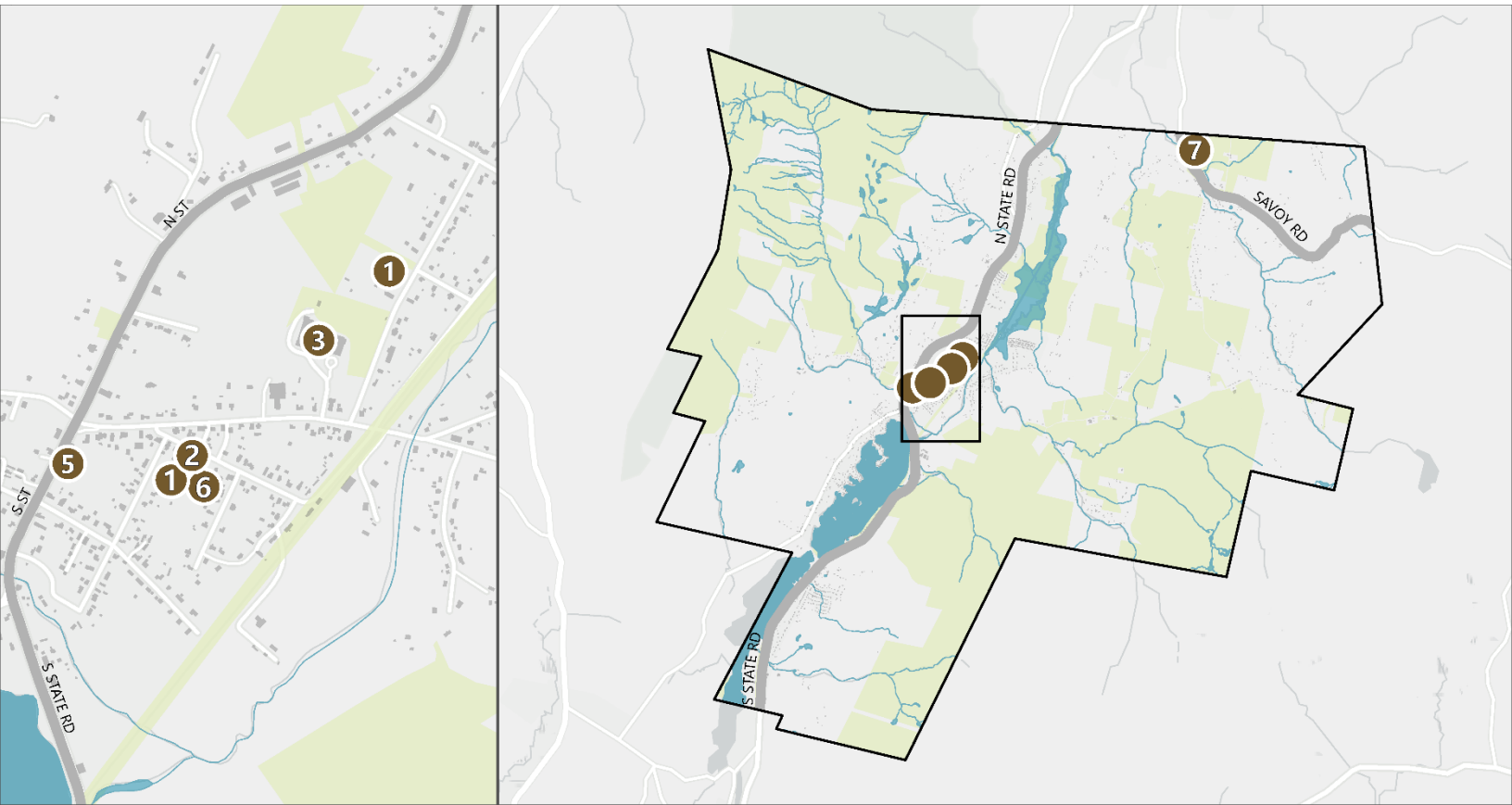
% Households without an internet subscription	14%
% Households using only cellular data plan	2.3%
Primary service type	Cable
Primary provider	Charter/ Spectrum

INCOME

Median household income	\$72,485
Household income less than \$25,000	9%
Adjusted full-time salary for MA minimum wage	
Household income less than \$35,000	24%
Household income less than \$50,000	29%
Less than the approximate living wage for household with two or more people	

HOUSING

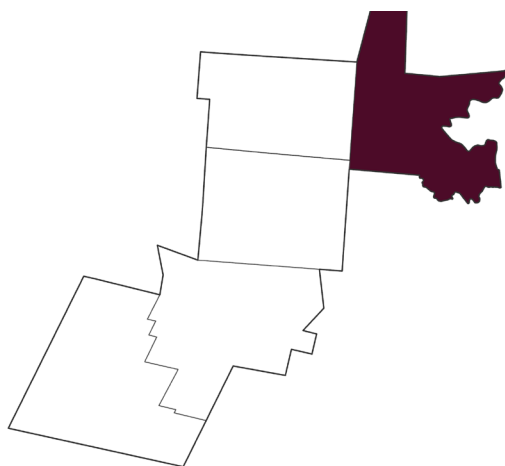
Total housing units	1,539
% Occupied housing	91%
% Owner-occupied	89%
% Renter-occupied	11%



Map Credits: MassGIS

Index	Institution	CAI Type	Address
1	Cheshire Senior Citizens Club	Civic Center	119 School Street
2	Cheshire Town Hall	Civic Center	80 Church Street
3	Youth Center Inc.	Civic Center	191 Church Street
4	Cheshire Public Library	Library	23 Depot Street
5	Cheshire Volunteer Fire Department	Public Safety	29 South Street
6	Cheshire Police Department	Public Safety	90 Church Street
7	Hoosac Valley Middle and High School	School	125 Savoy Road

Community Profile: FLORIDA



Esri, Tom Tom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

POPULATION

Population	796
2022 estimate	
Population density	32
Per square mile	
% Children	17%
Age 18 and under	
% Older Adults	20%
Age 65 and over	
Median age	48
% Black, Indigenous, people of color	2%
% with disabilities	18%
Physical, mental, intellectual, and developmental	
% Limited English speaking households	3%

Source: American Community Survey 5-Year Estimates (2018-2022)

COMPUTERS

% Households with no computing device	7%
Desktop, laptop, tablet, or phone	

BROADBAND

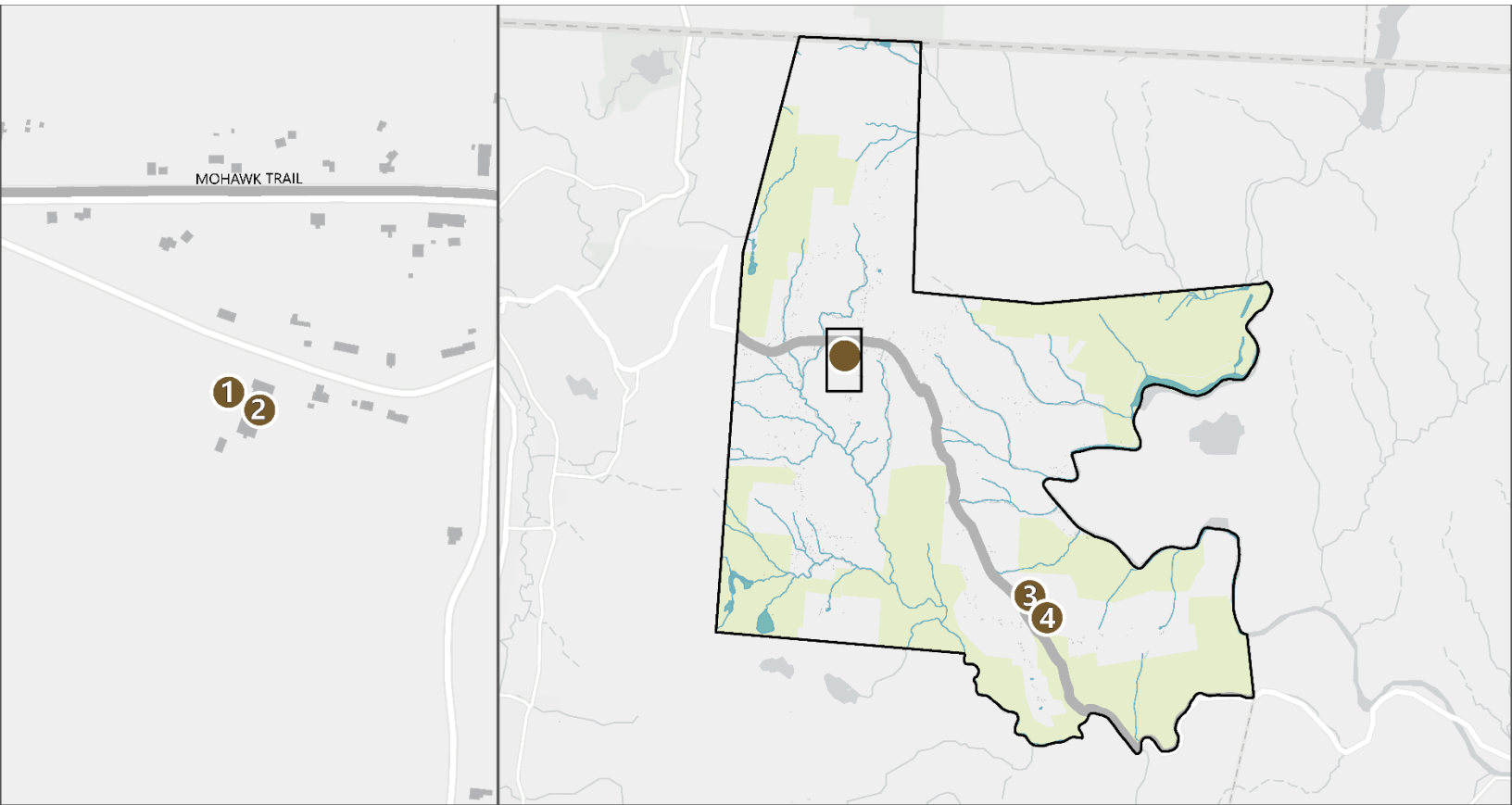
% Households without an internet subscription	10%
% Households using only cellular data plan	19%
Primary service type	Cable
Primary provider	WiValley

INCOME

Median household income	\$83,125
Household income less than \$25,000	10%
Adjusted full-time salary for MA minimum wage	
Household income less than \$35,000	15%
Household income less than \$50,000	25%
Less than the approximate living wage for household with two or more people	

HOUSING

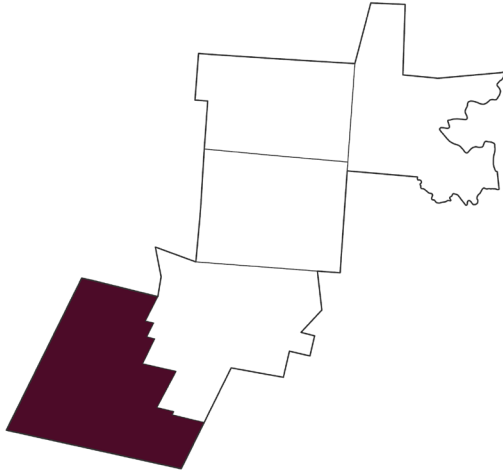
Total housing units	362
% Occupied housing	90%
% Owner-occupied	85%
% Renter-occupied	14%



Map Credits: MassGIS

Index	Institution	CAI Type	Address
1	Florida Free Library	Library	56 North County Road
2	Abbott Memorial School	School	56 North County Road
3	Florida Senior Center	Civic Center	367 Mohawk Trail
4	Florida Town Hall	Civic Center	367 Mohawk Trail

Community Profile: LANESBOROUGH



Esri, Tom Tom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

POPULATION

Population 2022 estimate	3,037
Population density Per square mile	102
% Children Age 18 and under	20%
% Older Adults Age 65 and over	25%
Median age	52
% Black, Indigenous, people of color	
% with disabilities Physical, mental, intellectual, and developmental	13%
% Limited English speaking households	9%

Source: American Community Survey 5-Year Estimates (2018-2022)

COMPUTERS

% Households with no computing device Desktop, laptop, tablet, or phone	13%
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BROADBAND

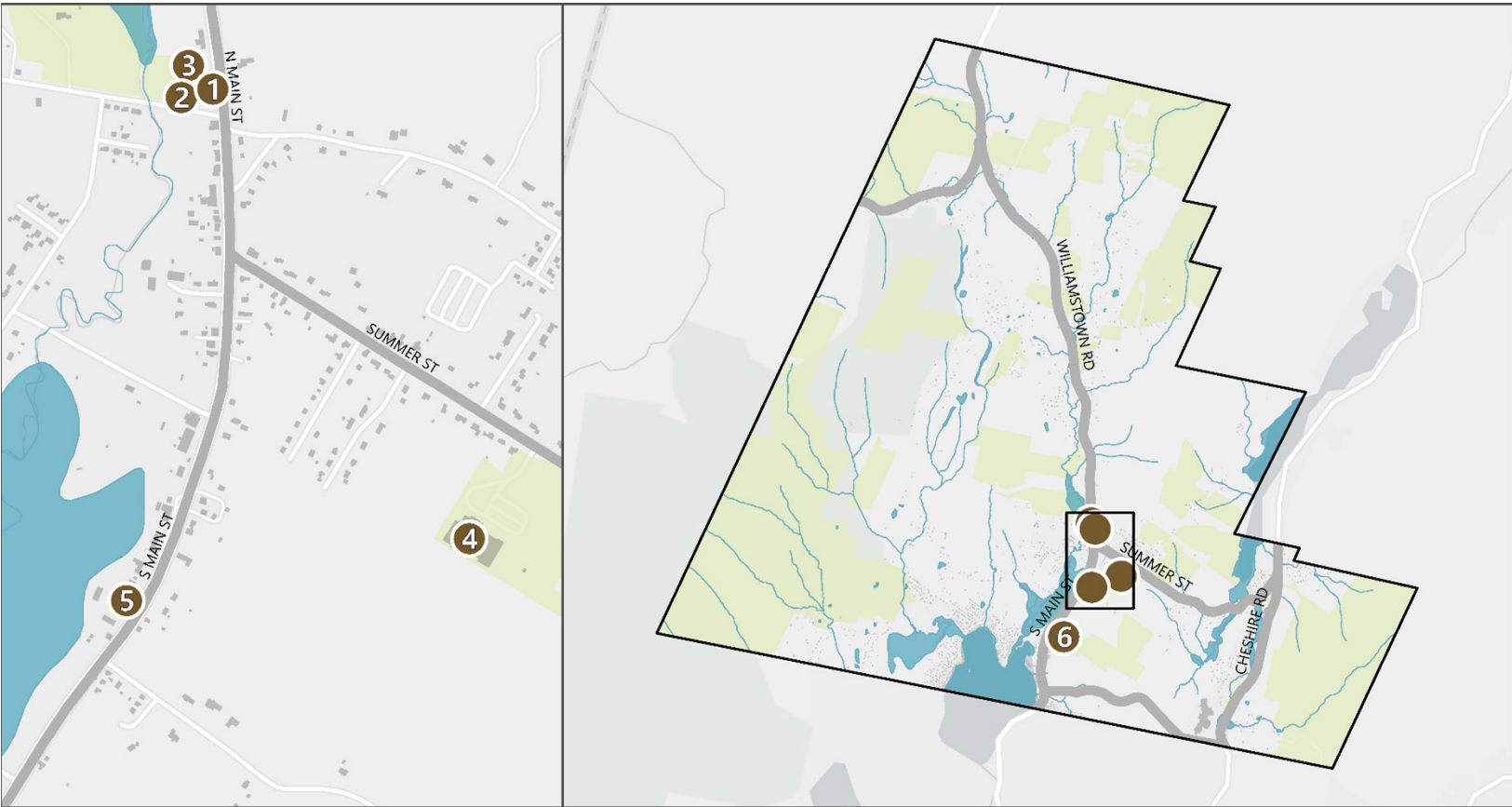
% Households without an internet subscription	15%
% Households using only cellular data plan	10%
Primary service type	Cable
Primary provider	Charter/ Spectrum

INCOME

Median household income	\$87,159
Household income less than \$25,000 Adjusted full-time salary for MA minimum wage	9%
Household income less than \$35,000	20%
Household income less than \$50,000 Less than the approximate living wage for household with two or more people	29%

HOUSING

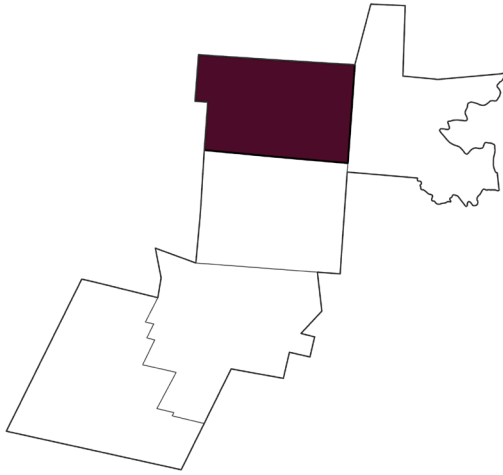
Total housing units	1,489
% Occupied housing	87%
% Owner-occupied	96%
% Renter-occupied	4%



Map Credits: MassGIS

Index	Institution	CAI Type	Address
1	Lanesborough Town Hall	Civic Center	83 North Main Street
2	Lanesborough Council on Aging	Civic Center	83 North Main Street
3	Lanesborough Public Library	Civic Center	83 North Main Street
4	Lanesborough Elementary School	School	188 Summer Street
5	Lanesborough Fire Department	Public Safety	180 South Main Street
6	Lanesborough Police Department	Public Safety	545 South Main Street

Community Profile: NORTH ADAMS



Esri, Tom Tom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

POPULATION

Population 2022 estimate	12,937
Population density Per square mile	628
% Children Age 18 and under	17%
% Older Adults Age 65 and over	21%
Median age	44
% Black, Indigenous, people of color	10%
% with disabilities Physical, mental, intellectual, and developmental	27%
% Limited English speaking households	8%

Source: American Community Survey 5-Year Estimates (2018-2022)

COMPUTERS

% Households with no computing device Desktop, laptop, tablet, or phone	9%
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BROADBAND

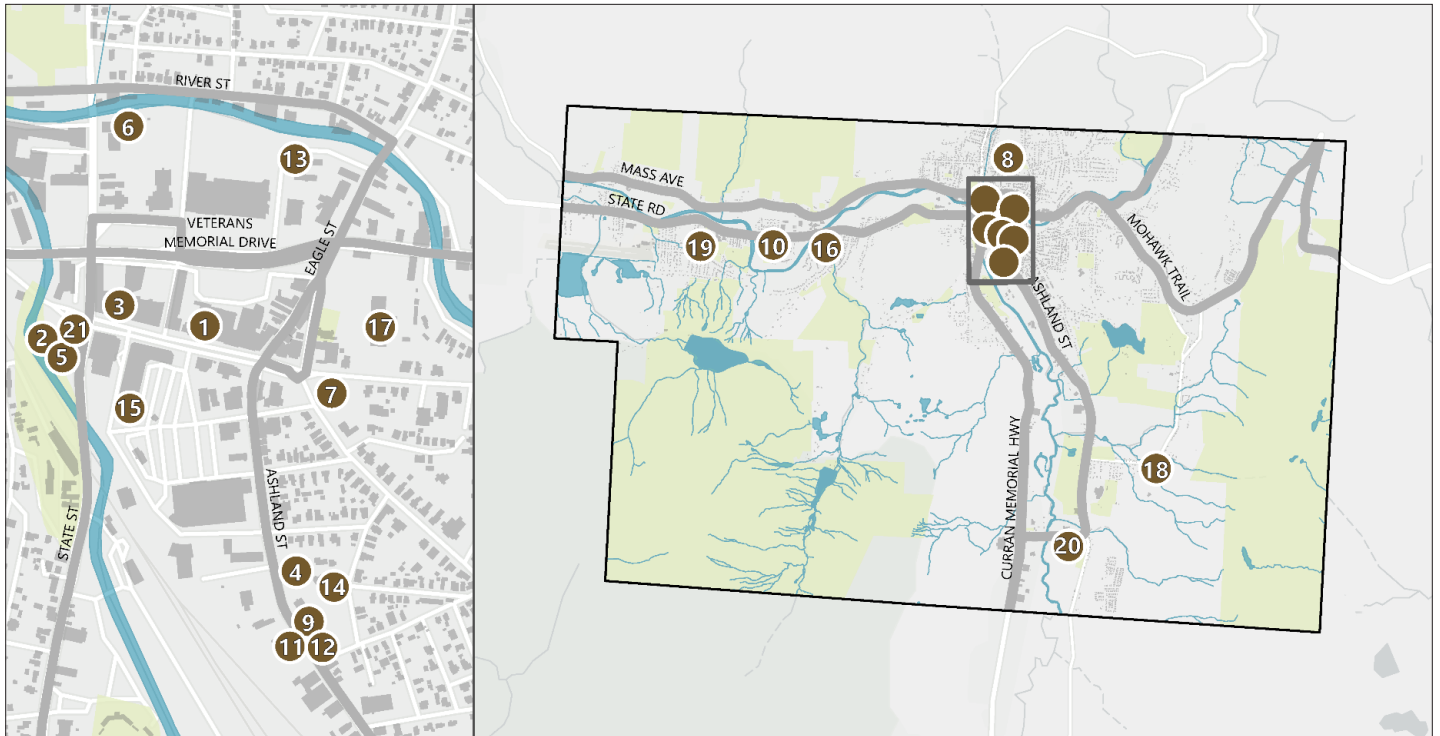
% Households without an internet subscription	15%
% Households using only cellular data plan	6%
Primary service type	Cable
Primary provider	Charter/ Spectrum

INCOME

Median household income	\$49,525
Household income less than \$25,000 Adjusted full-time salary for MA minimum wage	27%
Household income less than \$35,000	37%
Household income less than \$50,000 Less than the approximate living wage for household with two or more people	50%

HOUSING

Total housing units	6,871
% Occupied housing	85%
% Owner-occupied	56%
% Renter-occupied	44%



Map Credits: MassGIS

Index	Institution	CAI Type	Address
1	North Adams Chamber of Commerce	Chamber of Commerce	85 Main Street
2	City of North Adams IT Department	Civic Center	10 Main Street
3	Department of Transitional Assistance (DTA) North Adams	Civic Center	37 Main Street
4	Mary Spitzer Senior Center	Civic Center	116 Ashland Street
5	North Adams City Hall	Civic Center	10 Main Street
6	Northern Berkshire District Court	Civic Center	111 Holden Street
7	North Adams Public Library	Library	74 Church Street
8	Berkshire Health Systems	Public Health	71 Hospital Avenue
9	Ashland Park Apartments	Public Housing	150 Ashland Street
10	Greylock Valley Apartments	Public Housing	48 Angeli Street
11	North Adams Housing Authority	Public Housing	150 Ashland Street
12	Public Housing At 150 Ashland Street	Public Housing	150 Ashland Street
13	Riverview Apartments	Public Housing	90 Sperry Avenue
14	Spring Park Apartments	Public Housing	45 Spring Street
15	North Adams Police Department	Public Safety	11 Summer Street
16	Brayton Elementary	School	20 Brayton Hill Terrace
17	Colegrove Park Elementary School	School	24 Church Street
18	Drury High School	School	1130 South Church Street
19	Greylock School	School	100 Phelps Avenue
20	McCann Vocational Technical School	School	70 Hodges Cross Road
21	North Adams Public Schools	School	10 Main Street

06

Vulnerable Populations

Focusing on vulnerable populations while planning for digital equity is crucial because these groups often encounter the greatest barriers to accessing technology and digital resources, exacerbating existing inequalities and impeding their full participation in the digital economy and society. Promoting digital inclusion for vulnerable populations fosters social equity by ensuring that all members of society have equitable access to essential services, educational opportunities, and economic resources available online. Addressing the digital needs of vulnerable populations also enhances community resilience and cohesion by fostering social inclusion, supporting economic empowerment, and improving overall wellbeing. Prioritizing digital equity for vulnerable populations helps create a more inclusive and equitable society, offering all individuals the opportunity to thrive in the digital age.

Covered Populations

The Digital Equity Act of 2021 identified eight “covered populations” that are historically more likely to experience digital inequity because of certain demographic and economic characteristics. These eight categories are:

- » Individuals who live in covered households (household income no more than 150 percent of federal poverty threshold)
- » Aging individuals (60 years and older)
- » Incarcerated individuals, other than individuals who are incarcerated in a federal correction facility
- » Veterans

- » Individuals with disabilities
- » Individuals with a language barrier, including individuals who are English learners and have low levels of literacy
- » Individuals who are members of a racial or ethnic minority group
- » Individuals who primarily reside in a rural area

According to NTIA's Digital Equity Act Population Viewer—which allows users to visualize Census data pertinent to “covered populations” at the national, state, county, and tract level—100% of residents in Adams, North Adams, Cheshire, Lanesborough, and Florida are considered “covered populations” due to each community's rural designation.¹⁸ Additionally, the Committee and stakeholders helped to identify other populations most in need of support for digital device access, broadband access, and digital literacy.

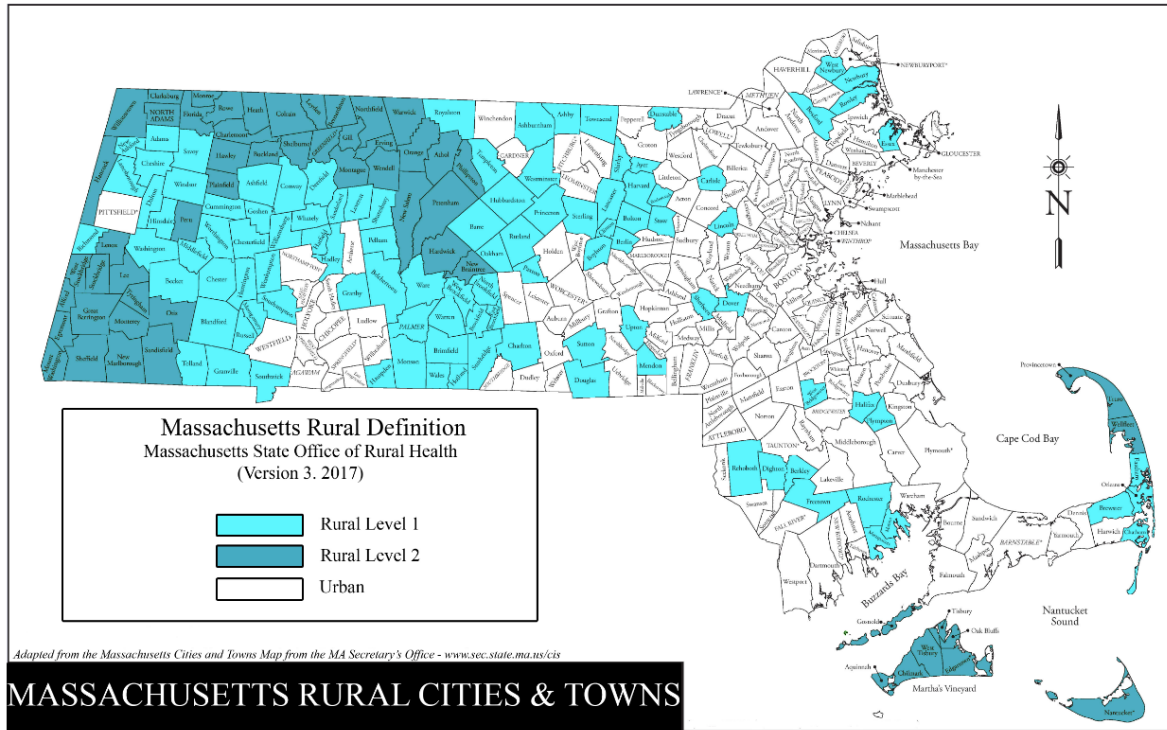
Individuals in Rural Areas

While most Massachusetts residents have access to high-speed internet at home, large gaps remain in the rural communities in Northern Berkshire County. Lack of high-speed internet options and combined with unreliable cellular service leaves many residents without affordable options to get online.

MBI used the Massachusetts State Office of Rural Health (SORH) definition, which considers a municipality to be rural if it meets one of the following criteria:

- » Meets at least one of three federal rural definitions at the sub-county level (Census Bureau, Office of Management and Budget, or Rural-Urban Commuting Area Codes), and/or
- » Has a population less than 10,000 people and a population density below 500 people per square mile, and/or
- » Has an acute care hospital in the town that meets the State hospital licensure definition of a small rural hospital or is a certified Critical Access Hospital¹⁹

Figure 8: Classification of Massachusetts Rural Cities and Towns.



Massachusetts Rural Cities and Towns: Massachusetts State Office of Rural Health

Rural towns are also classified into two categories of rurality. Towns classified as Rural Level 1 meet fewer rural criteria than towns considered Rural Level 2. Towns in Level 2 are less densely populated and more remote and isolated from urban core areas. To determine the level of rurality, the MA SORH rural definition uses a composite scoring system with points assigned for meeting particular definitions of rural. According to MA SORH, the five communities in the Northern Berkshire County area are classified as follows:

Rural Level 1:

- » North Adams
- » Florida

Rural Level 2:

- » Adams
- » Cheshire
- » Lanesborough

Impact of the Digital Divide on Individuals in Rural Areas

The digital divide significantly impacts individuals in rural areas, exacerbating existing inequalities and limiting opportunities for economic, educational, and social advancement. In rural areas, limited access to high-speed internet infrastructure and digital devices hinders residents' ability to engage in online education, access telehealth services, find job opportunities, and participate in e-commerce. This lack of connectivity also isolates rural communities from global networks, restricting access to information and resources critical for personal and professional growth. As a result, individuals in rural areas face barriers to accessing essential services, pursuing educational and career goals, and fully participating in the digital economy. Closing the digital divide in rural areas is essential to ensure equitable access to opportunities and improve the overall wellbeing and prosperity of rural residents.

At the tabling event in Cheshire, multiple residents expressed concern with the lack of internet provider options, poor internet service, and safety concerns with the Town's combination of unreliable internet and lack of cell phone service. Public safety concerns surrounded residents' inability to dial 911 due to poor cell service in certain locations. Concerns were raised specifically for residences located on Notch Road and Meadow View Road that rely on an internet connection to make calls from home. Additional concerns include loss of internet connection during power outages, leaving residents stranded without the ability to dial 911 from their homes due to poor cell service. Additionally, multiple residents on Brough Road in Cheshire have reported that they do not have internet services.

A Cheshire resident expressed concern that their Spectrum internet connection is connected to their home phone land line. "When the power is out, there is no ability to call out because there is no cell service."

Digital Equity Resources for Individuals in Rural Areas

Individuals living in rural areas of Berkshire County can work towards improving their digital equity, accessing essential services, and participating more fully in the digital world by leveraging the following resources.

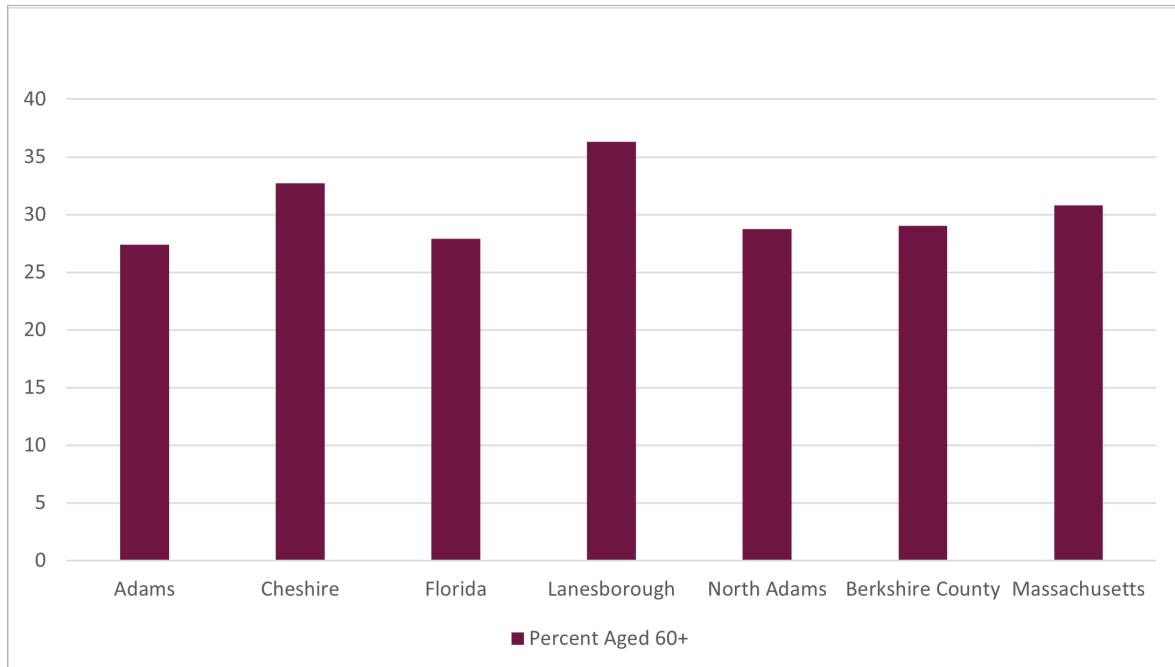
- » **Massachusetts Rural Council on Health (MARCH):** MARCH serves an advisory capacity to the State Office of Rural Health and provides leadership for rural health across the State. They periodically host larger educational and networking events to bring together a greater network of rural health stakeholders in our state. MARCH has 4 focus areas, including.²⁰
 - Behavioral Health
 - Community Engagement
 - Healthcare Workforce
 - Telehealth
- » **University of Massachusetts Amherst Cooperative Extension:** The Cooperative Extension System in partnership with the NIFA, may offer workshops and programs focused on digital literacy and technology skills for rural residents. They may also provide resources and assistance for accessing internet services in rural areas.²¹
- » **Rural Health Information Hub (RHIH):** Formerly the Rural Assistance Center, is a national clearinghouse on rural health issues funded by the Federal Office of Rural Health Policy. RHIH summaries of the latest and ongoing funding and opportunities for rural communities, including federal, state, and foundation opportunities.²²

Older Adults

The NTIA defines “aging individuals” as persons aged 60 years or older. According to the American Association of Retired Persons (AARP) 79% of Americans in their 60s rely on technology to stay connected with their families, friends, and communities.²³ The Internet is indispensable for engaging in contemporary society and attaining economic success. As technology rapidly evolves and integrates into our daily lives, aging individuals may require assistance with digital literacy and accessible technology to stay current. Involving older adults in initiatives promoting digital inclusion enhances their comprehension of the evolving online world. Leveraging technology can enrich the lives of older individuals as they age in their own homes, fostering social connections and preserving their autonomy.²⁴

The percentage of residents over 60 vary between each municipality. The proportion of aging individuals (60+) in Cheshire and Lanesborough (33% and 36%, respectively) is higher than the average of Berkshire County (29%) and the State (31%).

Figure 9: Percent of Population Aged Over 60



U.S. Census Bureau, 2022 5-Year American Community Survey (ACS) Estimates

Like any demographic, older adults exhibit a spectrum of digital literacy, with some being proficient in internet use and comfortable with digital devices while others may encounter challenges in understanding newer technologies and navigating the online space safely. Through discussions with the Committee, community stakeholders, and residents, as well as responses collected via MBI’s statewide survey, several barriers prevent older individuals from utilizing devices and the internet.

Feedback from stakeholder sessions with the local COAs and public libraries revealed older adults frequently require assistance with two essential aspects of digital literacy: **technical support**, referring to one’s ability to use devices, and **cybersecurity**, referring to one’s ability to detect and avoid online threats such as scams and fraud. Older adults often seek additional technological guidance to manage tasks like checking email, accessing bank accounts, maintaining login credentials, filing tax forms, and applying for social benefits like Medicare, Medicaid, and the Supplemental Nutritional Assistance Program (SNAP).

Residents in Cheshire expressed the need for internet safety trainings for aging individuals to educate against phishing and scams. Collaborating with organizations like the American Connection Corps, Northern Berkshire County can facilitate technical support services for older adults through group classes and personalized troubleshooting sessions.

Another obstacle to internet adoption among older adults is limited **device access**. The Council on Aging in Lanesborough suggested that older adults struggle to afford devices and if they do own a device, typically it is older technology. This can stem from the high cost of new devices or general disinterest in or distrust of technology among older adults. To bridge this gap, Northern Berkshire County's CAs provide an array of devices for public use, including hotspots, printers, and computers, available at various public libraries and COAs.

MBI statewide survey respondents in Northern Berkshire County indicated they are "Very concerned" (49%) or "Somewhat concerned" (42%) about internet safety, and indicated they are most concerned that their data could be stolen or used without their consent.

Impacts of the Digital Divide on Older Adults

The digital divide has a significant impact on older adults, presenting barriers to their participation in an increasingly digital society. Without access to technology and digital literacy skills, older adults may struggle to access essential services, information, and social connections available online. This lack of connectivity can lead to social isolation, limited access to healthcare resources, and reduced opportunities for learning and personal development. Furthermore, older adults may face challenges in navigating complex digital interfaces and may be at risk of falling victim to online scams and fraud. Bridging the digital divide for older adults is essential to ensure they can fully engage in modern society, access vital resources, and maintain social connections, thereby enhancing their quality of life and wellbeing.

Lack of device access and digital literacy also affects other aspects of older adults' lives, like the ability to apply for and receive public benefits, manage wealth, access telemedicine services, and more. Telemedicine, which involves accessing healthcare services remotely via computer or cellphone, is a convenient way for patients of all ages, especially older adults with mobility or transportation issues, to use healthcare services that might be difficult to reach otherwise.

Digital Equity Resources for Older Adults

Older adults in Northern Berkshire County can explore these local resources to find support, education, and opportunities for improving their digital literacy and technology proficiency, thereby enhancing their ability to participate fully in the digital world.

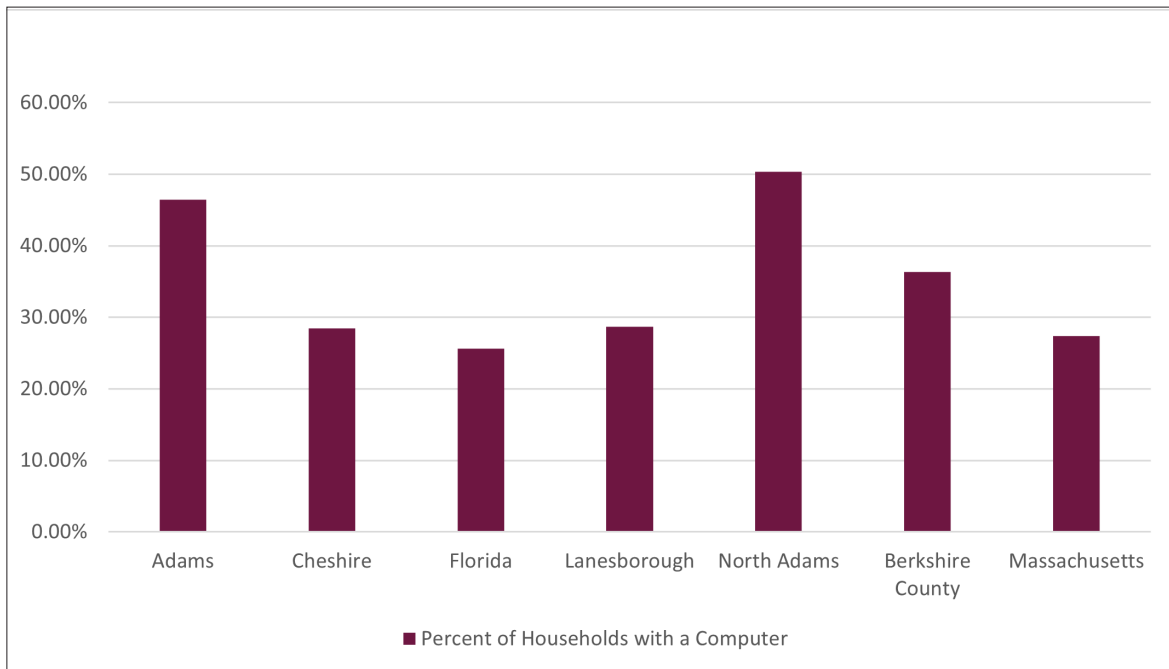
- » **Local councils on aging**
- » **Elder Services of Berkshire County, Inc (ESBCI):** A service agency which works to provide Berkshire elders, caregivers, and individuals with disabilities the opportunity to live with dignity, independence, and self-determination, and to achieve the highest possible quality of life²⁵
- » **Cyber-Seniors:** a nonprofit which provides one-on-one technology support appointments, drop-in tech support, and cybersecurity training for older adults. Young people are provided with lessons and learning activities to train them to act as digital mentors and older adults gain access to effective technology training and intergenerational communities that keep them socially connected and engaged²⁶
- » **AARP's Technology Education and Knowledge (TEK) Program:** an online classroom designed to help older adults aged 50+ get the most out of technology to connect with family and friends, explore employment opportunities, and access health information²⁷
- » **Senior Planet:** A nonprofit from AARP that offers free classes, articles, videos, and activities for older adults²⁸

Individuals Living in Low-Income Households

Historically, households with lower incomes have been more prone to challenges with internet access, affordability, and device accessibility compared to those with higher incomes.²⁹ According to NTIA “low-income households” refer to households whose income in the most recent year was equal to or less than 150% of the U.S. Census Bureau’s poverty threshold. Note that the poverty threshold depends on household size. For example, the Census Bureau’s poverty threshold for a family of four in 2022 was \$29,679. In this case, families of four would qualify as covered households if their incomes were equal to or less than \$44,517 (150% of \$29,679).³⁰

Figure 10 (next page) shows that half of households in North Adams (50%) and approximately half (48%) in Adams have a household income of less than \$50,000 per year.

Figure 10: Percent of Households with Income Less than \$50,000



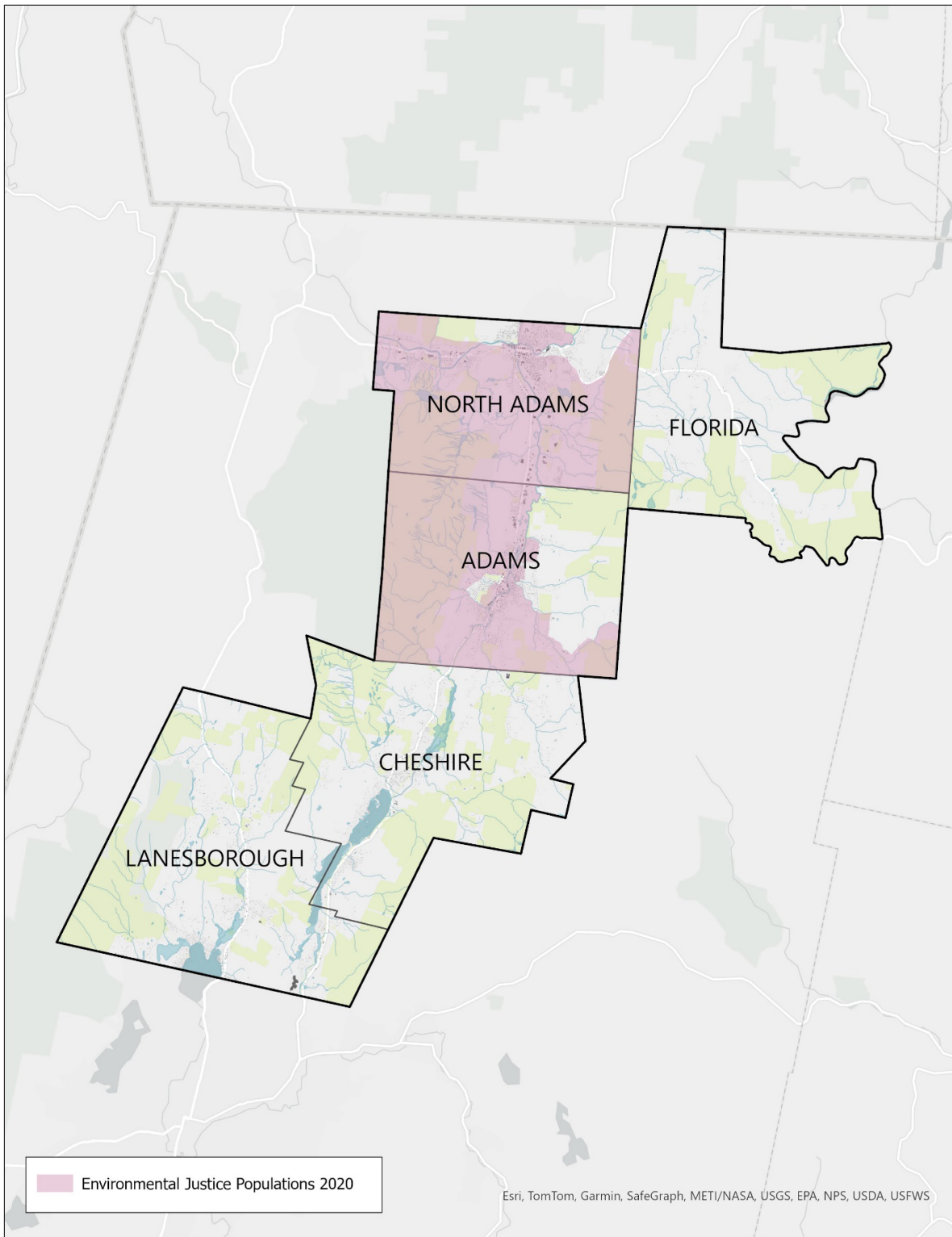
U.S. Census Bureau, 2022 5-Year American Community Survey (ACS) Estimates

The main barrier to online access for individuals in low-income households is affordability, in terms of both affording the internet and affording digital devices like laptops, tablets, and cell phones. Conversations with stakeholders stressed concern about **internet affordability**.

37% of survey respondents to the MBI statewide survey reported having a “somewhat hard” time paying for internet services and nearly 11% reported having a “very hard” time paying for internet services.

Figure 11 shows the neighborhoods in Northern Berkshire County that are classified as “Environmental Justice Populations” by the Massachusetts Office of Environmental Justice and Equity (OEJE). OEJE works to ensure that all people have a right to be protected from environmental hazards and to live in and enjoy a clean and healthful environment. This Environmental Justice (EJ) classification was received in the majority of Adams and North Adams because the annual median household income in the identified areas is 65% or less of the statewide annual median household income.³¹

Figure 11: Northern Berkshire County 2020 Income Environmental Justice Populations.

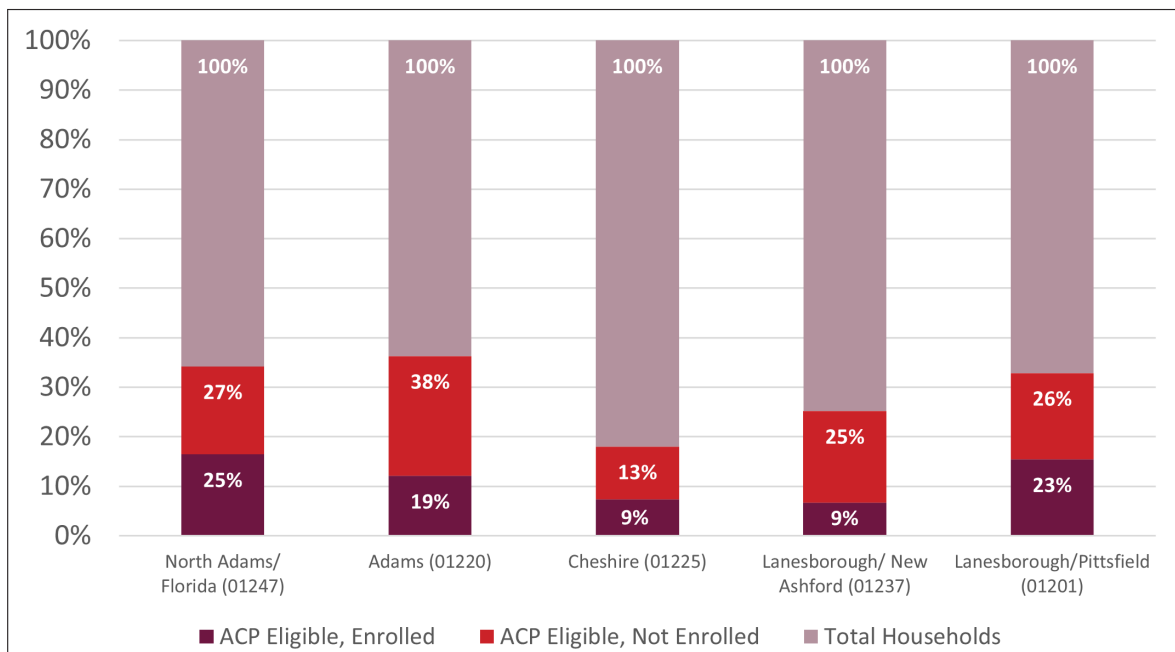


Data Source: MassGIS MassMapper: Census 2020 Environmental Justice Populations.

Enrollment in the FCC’s ACP is strong indicator of internet affordability. The ACP awarded qualifying households to receive a \$30 subsidy from the federal government to go towards their monthly internet bills. As the ACP approaches its conclusion in 2024, it is imperative for communities in Northern Berkshire County to assist ACP enrollees in transitioning to alternative affordable internet options, such as Spectrum Internet Assist and Comcast Internet Essentials.

Adams and North Adams are largely designated as EJ communities, which naturally makes more of the population eligible for special services like the FCC’s ACP meant to close the digital equity gap. However, even though these services are available there are obstacles that keep eligible households from enrolling in these programs. As **Figure 12** shows, even though 57% of the population in Adams is eligible for ACP, 38% are not enrolled.

Figure 12: ACP Enrollment and Eligibility by Zip Code, Spring 2023



Source: Benton Institute for Broadband and Society: ACP Enrollment in Northern Berkshire County, Spring 2023

Additionally, some residents may seek alternative means of internet connectivity beyond home Wi-Fi. Access to hotspots provided by local CAIs will be essential in helping former ACP enrollees bridge the gap during the program’s wind-down period.

Device affordability presents another hurdle to internet access in low-income households. With low-end laptops typically priced between \$200 and \$400, mid-range laptops between \$400 and \$800, and high-end laptops over \$1,000, purchasing even one laptop can strain budgets for households with limited income. Low-income families often prioritize purchasing digital devices essential for work or education, sometimes at the expense of other household needs, or resort to using smartphones for tasks typically performed on computers.

Impact of the Digital Divide on Low-Income Households

The Digital Divide significantly impacts low-income households, exacerbating socioeconomic inequalities and limiting access to essential resources and opportunities. Without reliable internet access and digital devices, individuals in low-income households' face barriers to accessing online education, job opportunities, healthcare services, and government resources. This lack of connectivity further isolates these households from critical information and support networks, hindering their ability to fully participate in the digital economy and society. As a result, low-income households experience reduced educational and economic prospects, limited access to healthcare and social services, and increased social isolation. Closing the digital divide for low-income households is crucial to promoting equity, fostering economic mobility, and improving overall wellbeing for these individuals and families.

Digital Equity Resources for Low Income Households

Individuals living in low-income households in Northern Berkshire County can utilize the following resources to access affordable internet service, acquire digital skills, and enhance their economic opportunities.

- » **Berkshire County Community Action Council (BCCAC):** A nonprofit human service organization, is the designated the anti-poverty Community Action Agency for Berkshire County, Massachusetts. BCCAC offers various programs and services aimed at supporting individuals and families with limited income. They provide resources or referrals for accessing affordable internet options, digital literacy training, and technology assistance.³²
- » **EveryoneOn:** EveryoneOn is a national nonprofit organization dedicated to closing the digital divide by providing affordable internet service options, low-cost computers, and digital literacy training. Residents of Berkshire County can use the EveryoneOn website to search for affordable internet offers available in their area.³³
- » **Low-Cost Internet Programs:** Many internet service providers offer discounted or free internet service options for eligible low-income households (e.g., Comcast Internet Essentials, Spectrum Internet Assist, AT&T Access). Residents can check with these providers directly or visit their websites for more information and eligibility criteria.

07

Local and Regional Partners and Stakeholders

Educational Institutions

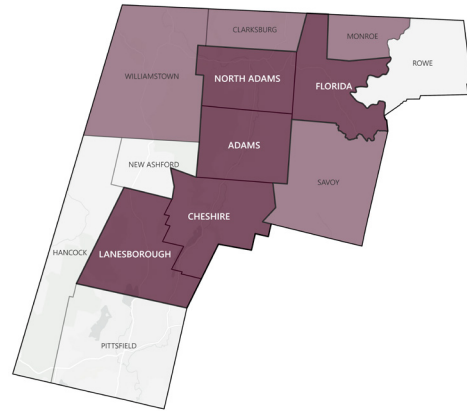
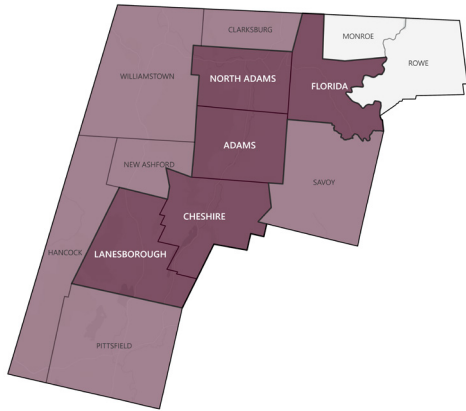
Educational institutions serve communities for digital equity in various ways, aiming to ensure that all individuals have access to digital resources, technology, and opportunities regardless of their socio-economic status. There are several ways educational institutions contribute to digital equity within their communities, including:

- » Community Education Programs
- » Digital Inclusion Efforts
- » Digital Literacy Education
- » One-to-One Device Programs
- » Online Learning Platforms
- » Partnerships with Community Organizations
- » Providing Access to Technology
- » STEM Initiatives

Elementary and Secondary Education

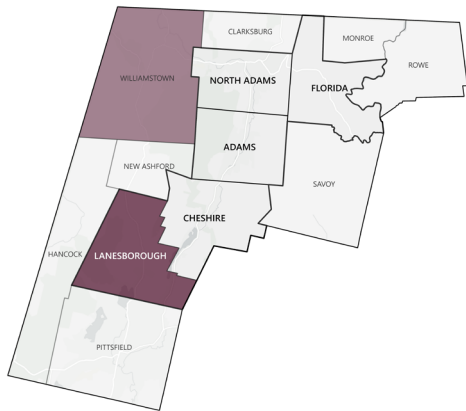
According to the Massachusetts department of Elementary and Secondary Education, there are 14 different schools and four separate school districts located within the five communities in the project area. This includes two private schools, one public college, one charter school, and a vocational technical school.³⁴

Figure 13: Northern Berkshire County School Districts



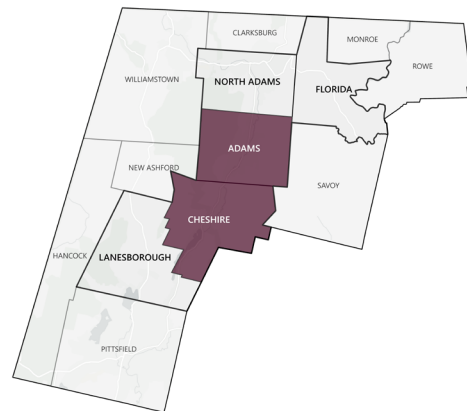
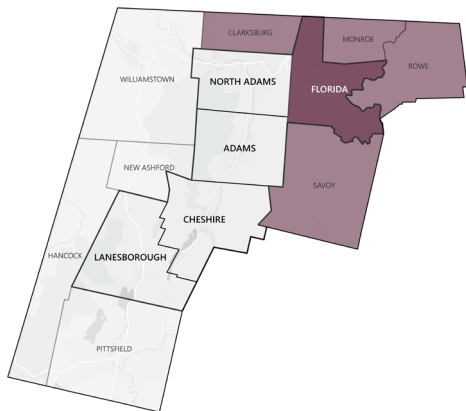
Berkshire Arts and Technical Charter (BART)

Charles McCann Vocational Technical



Mount Greylock Regional

North Adams Public Schools



Florida School Union

Hoosac Valley Regional

Table 6: Schools and School Districts per Municipality

School District	Towns Served	Schools
North Adams Public Schools	North Adams, Florida	Brayton Elementary School Colegrove Park Elementary Greylock School Drury High School
Hoosac Valley Regional School District	Adams, Cheshire	Hoosac Valley Elementary School Hoosac Valley Middle School Hoosac Valley High School
Mount Greylock Regional School District	Lanesborough, Williamstown	Lanesborough Elementary Mount Greylock Regional (in Williamstown)
Florida School Union	Florida, Clarksburg, Monroe, Rowe, Savoy	Abbott Memorial School
Berkshire Arts and Tech Charter	Adams, Cheshire, Florida, Lanesborough, North Adams	Berkshire Arts and Technology (BART)
Charles McCann Vocational Technical	Adams, Cheshire, Florida, Lanesborough, North Adams	Charles McCann Vocational Technical School

Data Source: Massachusetts Department of Elementary and Secondary Education.

Continuing and Adult Education

Continuing and adult basic education programs are essential for promoting digital equity within the communities of Northern Berkshire County. These programs offer adults the opportunity to develop crucial digital literacy skills, bridging the gap for those who may not have had access to technology or internet resources. By empowering individuals with digital skills, these programs enable participation in today's digital society, enhancing employability, fostering inclusion, and promoting lifelong learning. Moreover, a digitally literate population contributes to community development by driving economic growth, improving health outcomes, and strengthening social connections. Therefore, investing in continuing and adult basic education programs is crucial for ensuring that all members of society can fully participate and thrive in the digital age.

Massachusetts College of Liberal Arts (MCLA): MCLA is a public liberal arts college located in North Adams, Massachusetts. The college has an estimated 1,050 students enrolled and offers more than 80 academic programs, including:³⁵

- » 25 undergraduate majors
- » Two graduate majors
- » Six accelerated joint degree programs
- » Five different teacher licensure programs
- » Leadership/CAGS certificate program
- » Numerous undergraduate minors and concentrations

MCLA Northern Berkshire Adult Basic Education Program: MCLA offers the following adult basic education programs:

- » Adult Basic Education (ABE) to improve basic reading, writing and math skills
- » Adult Secondary Education (ASE) Prepare for the new High School Equivalency Test/GED
- » Blended Learning Preparation for the High School Equivalency Test and college and career and Career Readiness in class and online
- » ESOL—English for Speakers of Other Languages Classes—are for non-fluent English speakers who want to improve their language skills. Curriculum is designed to help with personal, and social and business communications and prepare for U.S. citizenship
- » Digital Literacy class offered using the North Star Digital Literacy Program. Students participating in this program will be eligible to take a certification exam to demonstrate competency in digital literacy

Northern Berkshire Adult Education (NBAE): Free adult classes and tutoring offered through North Adams Public Schools including:³⁶

- » Basic and advanced literacy and math classes
- » Science/social studies
- » Financial literacy
 - Career exploration and workforce readiness classes
 - College preparatory/pre-employment and transition to college courses
 - Beginner, intermediate and advanced ESOL English language classes
 - Computer literacy classes—covering computers, smart phones, internet, email, and Google Suite

Berkshire Regional Planning Commission (BRPC) Resources:

Berkshire Educational Resources K12 (BERK12): Working with the Berkshire Regional Planning Commission (BRPC) to develop and recommend solutions to declining enrollments, rising operational costs, declining/flat municipal revenues, and reductions in the diversity and range of educational programs available to students across Berkshire County.³⁷

Berkshire Remote Learning Initiative: BRPC led project for school districts in Berkshire County procure an online learning platform and software program and to educate on using the system.³⁸

Education Needs

Stakeholder interviews noted the following challenges:

- » **Many students lack high speed internet access at home**
- » Trainings are needed to equip teachers with the digital skills they will need to assist their students
- » There is a lack of family engagement regarding technology
- » School districts have devices obtained through covid-era funding, but as these programs conclude, districts need to find alternative funding to replace aging devices
- » There is a need for staff level understanding of cyber security and to ensure that teachers and staff have adequate protective software



Image Source: VHB Open Asset

Libraries

Libraries play a crucial role in promoting digital equity by providing access to technology, information, and digital literacy resources to underserved communities. Libraries serve as community hubs where people can gather, collaborate, and learn together. Through community engagement activities, such as workshops, seminars, and events, libraries foster a sense of belonging and empower individuals to participate in the digital world. Each of the five communities in the Northern Berkshire County project area has its own unique library. All these libraries are a vital hub for the communities, providing resources, trainings, devices, and hotspots to the public.

All of the libraries within the subject area are a part of the **Central/Western Massachusetts Automated Resource Sharing (C/W MARS)** library network. This network is a library consortium made up of over 100 member libraries primarily located in Central and Western Massachusetts. C/W Mars provides technical support to member libraries and services various academic, public, and special libraries of all sizes.³⁹ The **Mass Board of Library Commissioners (MBLC)** has distributed over 3,000 hotspots to approximately 220 public libraries for loan to library users. Funded through the Institute of Museum and Library Services (IMLS) from the American Rescue Plan Act (ARPA), the hotspot lending program focuses on IMLS' primary goal for these funds: digital inclusion. The Lanesborough Public Library and North Adams Public Library have hotspot lending programs through a partnership with MBLC.⁴⁰

Table 7: Northern Berkshire County Libraries and Resources

Library	Existing Resources
Adams Free Library 92 Park Street Adams, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials » Eight public computers » Occasional career and training resources » Seven mobile hotspots for loan
Cheshire Public Library 23 Depot Street Cheshire, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials » One public computer » One room library
Florida Free Library 56 N County Road Florida, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials
Lanesborough Public Library 83 N Main Street Lanesborough, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials. » Two public computers » One public printer » Occasional tech support nights » Three mobile hotspots for loan
North Adams Public Library 74 Church Street North Adams, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials » Genealogy and local history resources » Nine public computers » Two public printers » Career and training resources » Technical assistance offered by appointment » 20 T-Mobile Hotspots for loan through the MBLC program

Data Source: Stakeholder Interviews

Library Needs

Stakeholder interviews noted the following challenges:

- » Many of the libraries are small and have limited hours, space, and computers for digital literacy trainings
- » Libraries have experienced historically low participation in group trainings offered
- » Due to limited public computers, there is a need for chrome books/laptops for libraries to lend and offer trainings
- » Existing hotspot lending programs help residents but are still limited to areas with cellular service



Councils on Aging

Councils on aging play a significant role in promoting digital equity within communities, particularly among older adults who may face barriers to accessing and using digital technology. In an increasingly digital world, older adults often lack digital skills to access virtual public assistance programs, health care, banking, and other needs.

There are several ways COAs can serve communities for digital equity:

- » Digital Literacy Classes
- » One-on-One Technology Assistance
- » Access to Devices and Internet
 - Technology Training Partnerships
 - Assistance with Online Services
 - Promotion of Online Socialization
 - Advocacy for Digital Inclusion
 - Regular Technology Updates and Resources

COAs can effectively serve their communities by promoting digital equity and ensuring that older adults have the necessary skills and resources to thrive in an increasingly digital society. During stakeholder interviews, COAs expressed a dire need for digital literacy

training and technical assistance for their older patrons.

In 2020, over a thousand individuals sought assistance from the North Adams COA in navigating the process of registering for COVID vaccinations. Providing support proved to be a highly time-consuming endeavor for volunteers and staff, as many community members lacked access to devices or the necessary skills to utilize them for obtaining vaccination information.

Northern Berkshire County's COAs have noted difficulty communicating with older adults when information and notices are shared in an online format as this is inaccessible to those without devices, an internet subscription, or the know-how to find this information. Local COAs noted that they primarily rely on printed and mailed monthly newsletters, flyers, events calendars, Facebook, and word of mouth to conduct outreach to older adults. Additionally, the Town of Adams' COA noted that they utilize the platform MySeniorCenter to broadcast robocalls as another form of outreach in addition to paper mailings.

The Adams Council on Aging noted that digital literacy classes tend to get monopolized by one or two individuals with specific issues. Instead, they work to set up one-on-one appointments with individuals. Past attempts to offer one-on-one trainings with high school volunteers ran into scheduling issues with the schools.

In terms of funding, each COA across the State receives a state formula grant from the Executive Office of Elder Affairs (EOEA), determined by the size of the aging population in their respective towns. The grant amount, currently set at \$14 per person based on census data for the fiscal year 2024, contributes to the funding of COA activities. Additionally, communities can allocate extra funding to support COA staff positions. Typically, a municipal gift account is maintained for memorial donations, providing a means for community members to contribute to honor loved ones.

Furthermore, fundraising efforts can support COA initiatives. The **Massachusetts Councils on Aging Agency (MCOA)** offers valuable resources to COAs, including a weekly brief/email and a grant-watch section on their website, highlighting grants applicable to aging populations.⁴¹

Older Adults’ Needs

Stakeholder interviews with local COAs noted the following challenges:

- » Older adults often lack skills to use devices and there is a need for comprehensive device training for different proficiency levels for older adults
- » Older adults notably lack devices, specifically of modern devices
- » There is a need for internet safety trainings to educate against phishing and scams
- » Older adults are more hesitant to use the internet due to limited digital literacy and privacy concerns
- » There is a cost burden for devices and internet on lower-income older adults

Table 8: Northern Berkshire County Councils on Aging Programs and Resources

Council on Aging	Existing Programs and Resources
Adams Council on Aging 3 Hoosac Street Adams, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » One public computer » The COA fills in as a digital equity hub when the library is closed/unavailable » A past COA volunteer taught computer literacy. When this volunteer left, there was no one to replace them » The COA still has computers available for a class but no instructors
Cheshire Senior Center 119 School Street Cheshire, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials. » One public computer » One room library
Florida Community and Senior Center 367 Mowhawk Trail Florida, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Free access to books, audio books, movies, and other materials
Lanesborough Council on Aging 83 N Main Street Lanesborough, MA	<ul style="list-style-type: none"> » The COA has a staff member with knowledge of devices (e.g., phones and iPads) for assistance on an as-needed basis and before a regularly scheduled yoga class » Aids with online applications on an as-needed basis » The COA plans to install a copier in the community room (COA has control of this space for most of the day for the four days they’re open)
North Adams Council on Aging: Mary Spitzer Center 116 Ashland Street North Adams, MA	<ul style="list-style-type: none"> » Open Wi-Fi network » Two public printers » Technical assistance is offered by staff

Data Source: Stakeholder Interviews



North Adams, MA

Public Housing

Digital equity for residents in affordable housing is essential for ensuring equal access to education, job opportunities, healthcare services, social connection, government resources, and financial management tools. Internet access plays a critical role in empowering individuals and communities to thrive in the digital age. Home internet is a primary means for civic and social engagement—including video conferencing with family members, loved ones, educators, local elected officials, etc.—and delivery of essential services including emergency services, healthcare, educational opportunities, and other supportive programs.

Public housing authorities can play a vital role in promoting digital equity within their communities by implementing various initiatives and programs aimed at increasing access to technology, digital resources, and digital literacy skills.

In Northern Berkshire County, there are individual housing authorities within the communities of Adams and North Adams as well as a regional organization that serves Berkshire County. Public Housing Authorities and regional nonprofit organizations can promote digital equity in their communities through:

- » Community Engagement and Outreach
- » Connecting Residents to Online Resources
- » Creating Digital Access Policies

- » Equipping Community Spaces with Technology
- » Offering Digital Literacy Training
- » Providing Access to Affordable Internet Services
- » Supporting One-to-One Device Programs

Adams Housing Authority (AHA): The Adams Housing Authority, supported by state aid, serves as a Public Housing Agency, offering housing options primarily to low-income, elderly, and disabled residents of Adams. The main property under AHA ownership is the Columbia Valley Apartments, comprising 64 single-bedroom units. Additionally, the AHA manages 24 single and multiple bedroom units located throughout the town.

North Adams Housing Authority (NAHA): The North Adams Housing Authority is a publicly funded organization that strives to offer and enhance accessible housing options for individuals and families, supported by state aid. Their mission extends to fostering self-reliance, empowerment, and the revitalization of neighborhoods.

NAHA sites include:

- » **Ashland Park Apartments:** 150 Ashland Street, North Adams (eight stories, 126 units)
- » **Spring Park Apartments:** 45 Spring Street, North Adams (five stories, 53 units, designed for elderly/disabled)
- » **Greylock Valley Apartments:** 48 Angeli Street, North Adams (96 townhouse apartments from 1-4 bedrooms)
- » **Riverview Apartments:** 90 Lincoln Street, North Adams (30 one-bedroom townhouse apartments, walkable to downtown)

NAHA stated multiple ways they are working to promote digital equity within their community during their stakeholder interview:

- » **They are working to bring Wi-Fi infrastructure to public housing tenants** by leveraging ARPA funds and are awaiting word from MAPC regarding disbursement of the funds. NAHA conducted a survey to support Wi-Fi systems planning and although the majority of the residents are subscribed to Spectrum for internet, the survey found that a handful of residents are relying on data plans/hotspots for Wi-Fi
- » **Purchased various devices for some residents during the pandemic** including laptops, Chrome books, and a hotspot

- » **They recently installed public computing space at three of four housing locations,** including its two high-rises and family-oriented housing development. These spaces utilize downcycled office computers and were designed specifically for NAHA residents (they are not available for public use)

During the stakeholder interview, NAHA also mentioned multiple challenges they hope to overcome to promote digital equity, including:

- » **Efforts to establish an ad hoc free Wi-Fi location at NAHA properties were unsuccessful** due to challenges with regulations regarding how many people could be in a room and whether Wi-Fi users might park outside in the cold to access the Wi-Fi network, etc
- » **Older residents lack digital skills.** Broadband disparities within NAHA communities vary, however, aging residents are especially in need of technical assistance and digital literacy training. There is interest in running educational classes for older residents with computers but has not yet been able to plan any programs currently

Berkshire Housing Development Corporation (BHDC): BHDC is a private nonprofit serving Berkshire County, Massachusetts, focuses on affordable housing, housing services, and community development projects. BHDC manages 565 affordable housing units and administers 570 Section 8 rental vouchers. Through partnerships, it helps over 170 households annually with housing stabilization programs. BHDC also operates as the Housing Consumer Education Center, offering counseling, information, and referrals to approximately 1,600 households yearly.

Berkshire Housing Services, Inc. (BHSI): is a subsidiary of BHDC and is a professional full-service property management company that manages affordable housing and commercial property.

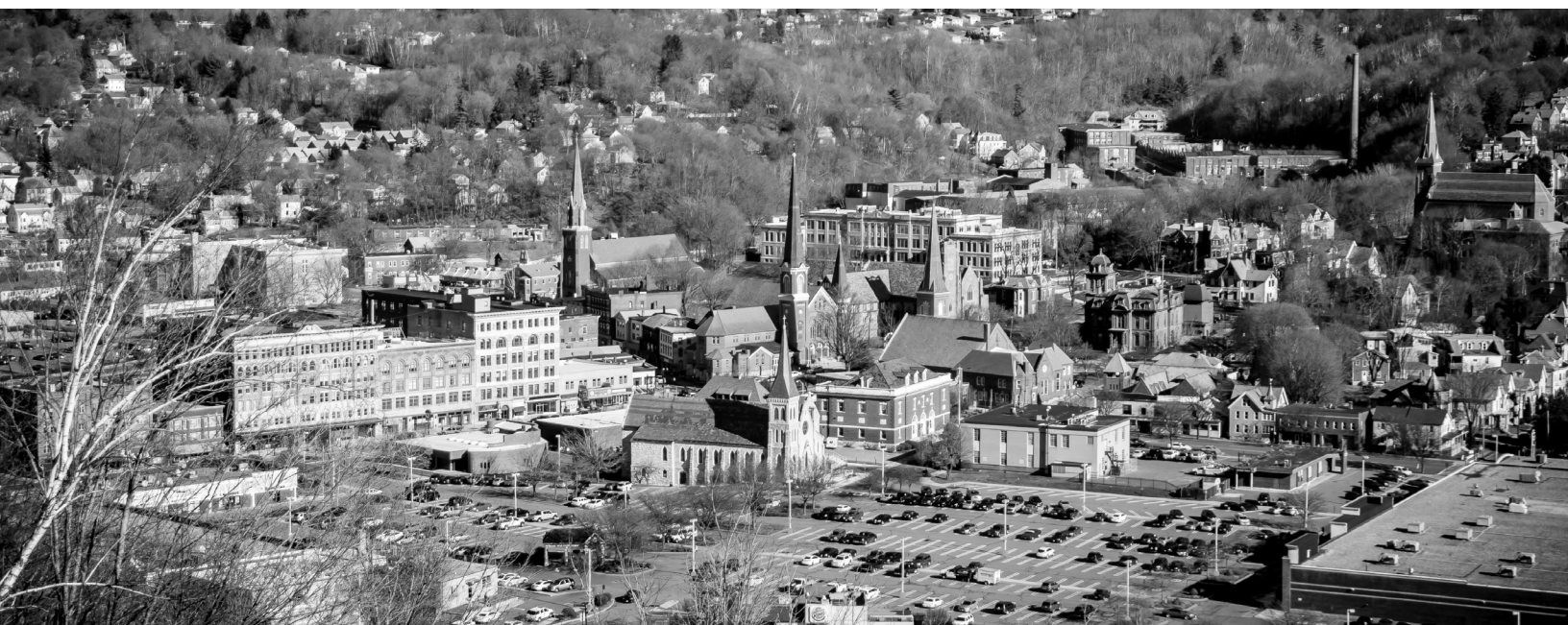
During their stakeholder interview, BHCD stated multiple ways they are working to promote digital equity within their community:

- » **All communication is provided in both English and Spanish**
 - Translation services aid with communication for the few Cambodian and Taiwanese residents.
- » **Berkshire Housing Resident Service Coordinators are available to assist residents with various online tasks** (e.g., signing up for Wi-Fi)

Public Housing Needs

Stakeholder interviews noted the following challenges:

- » Need additional internet providers to increase options and competition. Berkshire Housing residents have Spectrum as the only available ISP, limiting affordable options
- » The existing Berkshire Housing developments do not provide Wi-Fi, but all new builds going forward will
- » Resident Service Coordinators lack sufficient staff, time, and funding to fully assist older residents with all digital literacy needs



Downtown North Adams, MA

Business Community

In 2023, the five communities in Northern Berkshire County had an estimated total 992 businesses and 9,914 employees.⁴⁵ The business community in Northern Berkshire County, includes local chambers of commerce, economic development agencies, and local businesses, and other organizations. This community can play a crucial role in promoting the local economy. These agencies, organizations, and businesses can serve the area in several ways:

- » Technology access initiatives (collaborate with local government and nonprofits)
- » Digital skills trainings for local business owners and operators
- » Partnerships with educational institutions for equipment donations to small businesses
- » Adoption of digital tools and technologies to enhance small business operations

Digital skills training programs and workshops for small business owners and community members of all ages are vital for the promotion of digital equity. These programs can cover basic computer literacy, internet navigation, online safety, digital communication tools, and job skills training to enhance employability in a digital economy. Offering workshops on e-commerce, digital marketing, and online payment systems, as well as providing access to affordable software solutions and technical assistance is vital to help small businesses get online and improve their operations.

1 Berkshire: The Economic Development Organization and Regional Tourism Council for Berkshire County that works to leverage resources, improve efficiency, expand audience reach, and coordinate programs that benefit every area of the region. 1 Berkshire is “the voice of the Berkshire business community”⁴⁶ with a strong membership and a powerful network of resources.

North Adams Chamber of Commerce: Nonprofit economic development organization in the City of North Adams that aids in the growth and vitality of businesses in Northern Berkshire County.

Pro Adams: Organization in Adams that serves as a Chamber of Commerce.

Business Community Needs

Stakeholder interviews noted the following challenges:

- » Spectrum’s monopoly creates affordability challenges for local businesses
- » Lack of cell service affects card readers for outdoor events such as farmers markets
- » Technical assistance training is needed for local small business owners
- » Workshops offered to business owners by 1 Berkshire in the past are not always well attended
- » There is limited digital training and affordable access to technology to help adults facing employment challenges acquire essential skills needed in today’s job market
- » There is inadequate access to tech-enabled workforce systems such as virtual services (e.g., job searching, job fairs) and employment opportunities for populations lacking internet connection

Other Community Partners

Mass Literacy Hotline: Low- to no-cost classes across Massachusetts, the Mass Literacy Hotline offers third party translation available in over 200 different languages. In addition, their call center # is 1-800-447-8844, which is available 7 days a week from 6 am to midnight.

MassHire Berkshire Career Center: Located in Pittsfield, the MassHire Berkshire Career Center is a partnership between Berkshire Training and Employment Program and the Massachusetts Division of Career Services, chartered by the MassHire Berkshire Workforce Board. This program helps residents seeking employment, career advancement, or quality employees in all 32 cities and towns in Berkshire County.

Vinfen: Vinfen is one of MBI’s designated digital equity partners. They work in partnership with professionals and organizations from all areas of health and human services. Vinfen has two digital equity partner organizations in Western, MA:

Behavioral Health Network (BHN) and Clinical and Support Options (CSO). There are four Technology Navigators embedded within the two organizations to assist residents with digital equity needs. Vinfen is an alliance of human service providers, serving individuals with disabilities, including behavioral health conditions and referral systems are typically closed. Services include device distribution (hotspots, laptops, smartphones, and tablets), digital literacy support, and enrollment support for low-cost broadband and mobile service.

Baystate Medical Center/Alliance for Digital Equity: Identified by MBI as a potential digital equity partner, Baystate Medical Center and the Alliance for Digital Equity can help with services for connectivity for economic hardship, public spaces internet modernization, digital literacy, education, outreach, and adoption.

07

Goals



Guarantee cost-effective and dependable high-speed internet (100/20 Mbps) access for every member of the community.



Enhance the effectiveness, efficiency, and quality of local digital equity initiatives through a focus on regional collaboration and the exchange of knowledge and resources.



Broaden digital inclusion through community outreach efforts and strategic long-term planning.



Bridge the digital skills gap by encouraging digital literacy through community education programs, empowering individuals with the skills to effectively utilize digital technology.



Enable accessibility to digital devices both within households and in public spaces.



Develop sustainable funding models.

Implementing the Plan

The following Implementation Matrix provides a blueprint for the municipalities in Northern Berkshire County to work towards achieving the digital equity goals outlined above. These actionable strategies, shaped in conjunction with the communities, municipal staff, and Steering Committee members, are essential for accomplishing the region’s long-term vision.

The Implementation Matrix includes anticipated requirements for each strategy, addressing the following:

Champion	municipal representative, department, or board/committee that holds responsibility for implementation.
Cost	an approximation of the financial cost (capital or operational), defined as "\$" (\$0 to \$10,000), "\$\$" (\$10,000 to \$100,000), "\$\$\$" (more than \$100,000).
Funding Opportunities	potential funding agents or partners that could provide financial support, through grants or direct investment, to implement a certain strategy.
Timeframe	the anticipated length of time for completion of a given strategy, defined as "Short-term" (less than 2 years), "Medium-term" (2-5 years), "Long-term" (more than 5 years).

Goal 1: Guarantee cost-effective and dependable high-speed internet access (100/20 Mbps) for every member of the community.

Index	Action	Champion	Cost	Funding	Time Frame
1.1	<p>Review and validate FCC data utilized in identifying underserved residential and commercial areas.</p> <ul style="list-style-type: none"> Collaborate with ISPs to apply for funding opportunities for broadband infrastructure. Prepare for the BEAD Challenge Process. Allowing local government units, nonprofit organizations, or broadband service providers to contest determinations related to BEAD fund eligibility. 	Municipal Representative; Resident Engagement Coordinator; Digital Navigator	\$	Broadband Infrastructure Gap Networks Grant Program; BEAD Program	Short-Term
1.2	Form partnerships with innovative ISPs and broadband infrastructure experts to assess the potential expansion of last-mile fiber optic network connections.	Municipal Representative; Digital Navigator	\$	MBI Implementation Funding; USDA Community Connect Program	Long-Term
1.3	<p>Investigate the feasibility of municipally owned broadband networks through the Municipal Light Plant (MLP) model. Engage with communities like Westfield, South Hadley, and Shutesbury to exchange insights on challenges and opportunities associated with this model.</p> <p>Deploy hotspots or small cells in high-traffic public areas, collaborating with local entities, businesses, and ISPs to determine optimal approaches considering factors like pricing, internet speeds, and location.</p>	Municipal Representative; Digital Navigator	\$	-	Short-Term
1.4	<ul style="list-style-type: none"> Explore expansion of the existing Mass MOCA outdoor public mesh network to incorporate other public locations in North Adams. Investigate the implementation of smart poles to provide free Wi-Fi and 4G or 5G coverage at crucial public locations and areas with poor signal. 	Municipal Public Works Representative	\$\$	MBI Implementation Funding; BEAD Program; Community Compact Cabinet IT Grant Program	Medium-Term
1.5	Work with school districts to identify students lacking reliable internet access at home and work to provide assistance for internet cost or hotspots to foster digital equity among students.	Municipal Representative; School IT Department and/or School Board	\$	MBI Implementation Funding; BEAD Program	Short-Term
1.6	Assess public housing eligibility for the Apartment Wi-Fi program with guidance from MAPC and/or MBI. The Town of Adams Housing Authority should investigate eligibility of properties. The North Adams Housing Authority is currently enrolled in the Apartment Wi-Fi Program.	Municipal Housing Authorities	\$	MAPC: Apartment Wi-Fi Program; Residential Retrofit Program	Short-Term

Goal 2: Enhance the effectiveness, efficiency, and quality of local digital equity initiatives through a focus on regional collaboration and the exchange of knowledge and resources.

Index	Action	Champion	Cost	Funding	Time Frame
2.1	Form Digital Equity Partnerships with the Berkshire Regional Planning Commission (BRPC). BRPC provides program coordination, linkage, and affiliation to support MBI's Digital Equity Partnerships Program. Regional partners in Northern Berkshire County will be identified by BRPC to serve as Digital Navigators and offer guidance to communities as they seek to increase digital access, adoption, and affordability.	Municipal Representative; Resident Engagement Coordinator; Digital Navigator	\$	-	Short-Term
2.2	Encourage each Community Anchor Institution to formulate a long-term strategy, identifying strengths, weaknesses, opportunities, and challenges related to broadband connectivity, device access, and digital inclusion. Development of a public Asset Map will help residents identify digital resources and hubs.	COA Director; Library Director; School IT Department and/or School Board; Municipal Representatives; Digital Navigator	\$	-	Short-Term
2.3	Apply to become a Digital Inclusion Trailblazer through NDIA. Leverage their open-access catalog to enhance digital equity and inclusion goals, collaborating with other Trailblazer communities to share ideas and stay informed on current and future public digital projects.	Digital Navigator; Municipal Representative	\$	-	Short-Term
2.4	Collaborate with 1Berkshire, Pro Adams, and the North Adams Chamber of Commerce to identify local business digital access and literacy needs and encourage partnership in providing digital trainings, support, and resources to the community.	Digital Navigator; Municipal Representative	\$	-	Medium-Term

Goal 3: Broaden digital inclusion through community outreach efforts and strategic, long-term planning.

Index	Action	Champion	Cost	Funding	Time Frame
3.1	Conduct a public survey, available on Town/City websites and in print, to assess household connectivity, reliability, and affordability of broadband services and digital devices and identify and comprehend the primary digital literacy needs and interests, such as basic computer skills, cybersecurity, public benefit applications, telemedicine, etc.	Digital Navigator; Municipal Representative; Resident Engagement Coordinator	\$	MBI Implementation Funding; Digital Equity Partnership Program; BEAD Program	Short-Term
3.2	Explore the possibility of employing a regional Resident Engagement Coordinator or Community Navigator, to augment and support the work of the BRPC Digital Navigator, who is responsible for creating, coordinating, and disseminating outreach materials for all departments and committees across each municipality. This role may provide guidance to students or volunteers interested in becoming Digital Navigators and operate as a public liaison for these supportive services.	Municipal Representative	\$\$	MBI Implementation Funding; BEAD Program; Community Compact Cabinet E&R Grant Program	Short-Term
3.3	Assess communication materials released by local Community Anchor Institutions to ensure universal accessibility and usability on all Internet-enabled devices, including cell phones and tablets. Refer to the guidance provided by the U.S. Department of Justice Civil Rights Division on web accessibility and compliance with the Americans with Disabilities Act (ADA).	Municipal Representative; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
3.4	Work with school districts on family engagement regarding technology, access, and internet safety at home.	Digital Navigator; Municipal Representative; Resident Engagement Coordinator	\$	Digital Equity Partnerships Program; BEAD Program; Office of Elementary Education	Short-Term
3.5	Collaborate with local public access media channels to spread awareness of community resources.	Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
3.6	Advocate for policies that support broadband development in rural areas and engage with state and federal representatives to secure funding for internet infrastructure projects.	Digital Navigator; Municipal Representative; Resident Engagement Coordinator	\$	-	Short-Term

Goal 4: Bridge the digital skills gap by encouraging digital literacy through community education programs, empowering individuals with the skills to effectively utilize digital technology.

Index	Action	Champion	Cost	Funding	Time Frame
	Organize workshops and training programs at local Community Anchor Institutions to enhance digital literacy skills among residents and older adults, including basic computer skills, online safety, and proficiency in using digital tools. Programs such as NorthStar Digital Literacy Training can be conducted at CAI's such as Libraries, Councils on Aging, Community Centers, 1Berkshire, and the North Adams Chamber of Commerce.	Digital Navigator; Resident Engagement Coordinator	\$\$	MBI Implementation Funding; BEAD Program	Short-Term
4.1					
4.2	Collaborate with local organizations that offer consistent digital literacy training programs. Examples include Older Adults Technology Services (OATS) trainings from AARP, UCP of Western Massachusetts courses, Goodwill Community Foundation, Inc., Emergent Works, Can Code, Tech Goes Home, Tech Foundry, Community Media Centers, Cyber Seniors, and more.	Digital Navigator; Library Director; COA Director; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
4.3	Collaborate with educational institutions to integrate digital literacy education into school curricula and adult education programs. Existing programs include Northern Berkshire Adult Education (NBAE) (offered by North Adams Public Schools), MCLA Northern Berkshire Adult Education Program, and the Berkshire Remote Learning Initiative.	Digital Navigator; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
4.4	Emphasize digital education programs for educators, focusing on elevating students' proficiency in digital literacy skills.	School IT Department and/or School Board; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
4.5	Assist local IT Teams, including Municipal IT Departments and Public Service IT Departments, in developing a long-term plan for team expansion, optimizing cybersecurity measures, and advancing digital education initiatives.	Digital Navigator; Municipal Representative	\$	MBI Implementation Funding; BEAD Program	Short-Term
4.6	Develop a mentorship program where digitally skilled community members can serve as Digital Navigators to assist others. Potentially recruiting high school or college students and provide training for them to assist community members with basic technical troubleshooting. Refer to the National Digital Inclusion Alliance (NDIA) Digital Navigator Model as a guide for establishing this group, which may collaborate with the previously mentioned Resident Engagement Coordinator or Community Navigator.	Digital Navigator; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
4.7	Apply for grant funds from the Strengthening Institutions Program from the Office of Elementary Education. These funds are for improvement and instruction for English Learners, including those with a disability, through enhanced curricular and programs. Next competition round is 2025.	School IT Department;	\$	Office of Elementary Education	Short-Term

Goal 5: Enable accessibility to digital devices, both within households and in public spaces.

Index	Action	Champion	Cost	Funding	Time Frame
5.1	Assist local libraries in acquiring new hotspots and computers (desktops and/or laptops). Provide support with grant writing as necessary. Investigate the feasibility of repurposing old school Chromebooks for backup lending purposes at the library.	Digital Navigator; Resident Engagement Coordinator	\$	MBI Implementation Funding; Community Compact Cabinet E&R Grant Program; Community Compact Cabinet IT Grant Program; BEAD Program; Emergency Connectivity Fund	Medium-Term
5.2	Work with school districts to identify students lacking tablets or devices at home and create a targeted program to provide devices to foster digital equity among students.	Digital Navigator; School IT Department and/or School Board; Resident Engagement Coordinator	\$	Digital Equity Partnerships Program; BEAD Program; Office of Elementary Education	Medium-Term
5.3	Coordinate and lead collective device procurement and grant applications among public institutions (including local libraries, municipal departments, Council on Aging, etc.). Expand the community's infrastructure for device recycling, refurbishing, and technical support, with a specific focus on devices for public access.	Digital Navigator; Library Director; COA Director; Municipal Representative; Resident Engagement Coordinator	\$	MBI Implementation Funding; Community Compact Cabinet E&R Grant Program; Community Compact Cabinet IT Grant Program; BEAD Program; Emergency Connectivity Fund	Medium-Term
5.4	Encourage the distribution of school district hotspots by publicizing the availability and eligibility criteria for programs like T-Mobile's Project 10Million school hotspot initiative. Optimize outreach through the school website, newsletters, and social media channels for maximum effectiveness.	School IT Department and/or School Board	\$	MBI Implementation Funding; BEAD Program	Short-Term
5.5	Organize a regional device donation drive in the communities.	Digital Navigator; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program; MBI Implementation Funding	Medium-Term

Goal 5: Enable accessibility to digital devices, both within households and in public spaces.

Index	Action	Champion	Cost	Funding	Time Frame
5.6	Partner with organizations that provide refurbished devices at lower costs. For example, PCs for People, Computers with Causes, On It Foundation, local ISPs, and local schools or universities.	Digital Navigator; Municipal Representative; Resident Engagement Coordinator	\$	MBI Implementation Funding; Community Compact Cabinet E&R Grant Program; Community Compact Cabinet IT Grant Program; BEAD Program; Emergency Connectivity Fund	Short-Term
5.7	Create outreach materials in English, Spanish, and other languages to inform the community of partner organizations and education opportunities.	Digital Navigator; Resident Engagement Coordinator	\$	MBI Implementation Funding; BEAD Program	Short-Term
5.8	Enhance transportation to Community Anchor Institutions by working with local transit authorities and transportation providers, including Northern Berkshire County's Council on Aging and Berkshire Regional Transit Authority.	Municipal Representative; Berkshire Regional Transit Authority	\$\$	MBI Implementation Funding; BEAD Program	Medium-Term

Goal 6: Develop sustainable funding models.

Index	Action	Champion	Cost Funding	Time Frame
6.1	Identify and pursue grant opportunities to continue funding that was provided to schools during the Covid-19 Pandemic.	Digital Navigator; Municipal Representative	MBI Implementation Funding; \$	Short-Term
6.2	Regularly conduct research to identify and apply for grants that align with the ongoing needs and goals of the community. Explore a diverse range of grant sources, including government grants, private foundations, and corporate sponsorships. (Future Link to Grant Matrix Link Here.)	Digital Navigator; Municipal Representative	MBI Implementation Funding; \$	Long-Term
6.3	Establish systems for grant management to track the utilization of funds and ensure compliance with grant requirements. Implement regular reporting mechanisms to update grantors on the progress, outcomes, and impact of funded programs.	Municipal Representative	MBI Implementation Funding; \$	Long-Term
6.4	Explore partnerships with local businesses, community organizations, and potential donors to diversify funding sources. Create a sustainable financial model that combines grant funding with other revenue streams for long-term stability.	Municipal Representative	MBI Implementation Funding; \$	Short-Term
6.5	Engage in advocacy efforts to promote increased public funding for digital equity at local, state, and federal levels. Participate in discussions with policymakers to emphasize the importance of sustained funding for digital equity programs and communicate the impact of existing programs and the need for ongoing support to the broader community.	Municipal Representative	MBI Implementation Funding; \$	Long-Term

Available Funding

Northern Berkshire County can leverage numerous state and federal funding opportunities to support digital equity initiatives and bridging the Town’s digital divide. These funding programs target critical implementation areas of digital equity planning, including workforce development, digital literacy education, device distribution, broadband adoption, infrastructure, and outreach.

Statewide Digital Equity Plan

At the State level, MBI developed a [Statewide Digital Equity Plan](#) for Massachusetts, that integrated efforts conducted under the Municipal Digital Equity Planning Program (MDEPP).⁴⁷ Massachusetts received funding under the State Digital Equity Planning Grant Program, one of three grant programs established by the \$2.75 billion federal Digital Equity Act (DEA). The DEA aims to “promote the achievement of digital equity, support digital inclusion activities, and build capacity for efforts by States relating to the adoption of broadband by residents of those states.”⁴⁸ MBI will leverage the Statewide Plan as a framework for implementing DEA State Digital Equity Capacity Grant funds toward future planning efforts.

Massachusetts municipalities must understand their digital divide and identify opportunities for advancing digital inclusion to inform statewide planning efforts. This plan provides a roadmap for addressing Northern Berkshire County’s digital divide, identifying implementation areas to inform prioritization and allocation of funding.



Funding for broadband infrastructure

e.g. construction,
equipment, materials



Funding for planning

e.g. feasibility, data
collection, mapping



Funding for digital inclusion

e.g. broadband adoption,
devices, training,
tech support



Funding Sources: State

Adams, North Adams, Cheshire, Lanesborough, and Florida can leverage the following funding programs to support the implementation of this plan.



Municipal Digital Equity Implementation Program

In January 2024, MBI announced the new Municipal Digital Equity Implementation Program, through which municipalities who have created Digital Equity Plans through MDEPP are automatically eligible to receive up to \$100,000 in state funding to implement projects or programs that support the community's digital equity goals.



Northern Berkshire communities, alone or partnered with other CAI's, should apply for implementation funding to pursue one or more programs or projects outlined in this report's Goals and Recommendations section.



Community Compact Cabinet Municipal Fiber Grant Program

The Massachusetts Division of Local Services Municipal Fiber Grant Program assists municipalities with the construction and completion of municipal fiber networks.⁴⁹ A cohesive municipal network "allows for centralized management of IT infrastructure, including an enterprise approach to network monitoring, cyber security, records management, and backup and recovery." All municipalities that are not previous grantees of the program are eligible.

Northern Berkshire communities can leverage Municipal Fiber Grant Program funds toward developing a municipal wireless mesh network to provide free public internet outdoors. These funds can also support the promotion of job opportunities within the local broadband economy and workforce training opportunities.

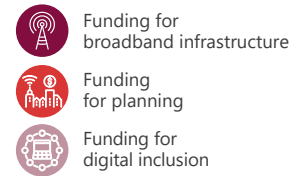


Community Compact Cabinet IT Grant Program

The Massachusetts Community Compact IT Grant Program, administered by the Division of Local Services, provides grants of up to \$200,000 to support the implementation of local innovative IT projects, including one-time capital needs related to planning, design, installation, implementation, and initial training.⁵⁰



Northern Berkshire communities can leverage the IT Grant Program funds toward developing a municipal wireless mesh network to provide free public internet outdoors.



Community Compact Cabinet Efficiency and Regionalization Grant Program



The Community Compact Efficiency and Regionalization (E&R) Grant Program, administered by the Division of Local Services, is a competitive grant program provides financial support for government bodies interested in regionalization and other efficiency strategies. Funds may be administered by government entities, regional school districts, regional planning agencies, and councils of governments. Example eligible expenses include equipment or software, technical assistance, or transition or project management costs for one year.

Northern Berkshire communities can use E&R funding to secure software packages needed by municipal offices, including but not limited to permitting software for the Public Health Department. Northern Berkshire Communities can also partner with adjacent communities to secure a shared resource, like a Resident Engagement Coordinator.



Determination of Need (DoN)

The Massachusetts Department of Public Health (DPH) Determination of Need (DoN) program was established to “encourage competition with a public health focus; to promote population health; to support the development of innovative health delivery methods and population health strategies within the healthcare delivery system; and to ensure that resources will be made reasonably and equitably available to every person within the Commonwealth at the lowest reasonable aggregate cost.”⁵¹

The Massachusetts Executive Office of Elder Affairs (EOEA) created the Massachusetts Community Health and Healthy Aging Funds initiative in partnership with the Massachusetts DPH in 2017 as a revision to the DoN program.⁵² This program aims “to enhance the capacity of multi-sector collaboratives to authentically engage residents and work together” to remove barriers to health.”

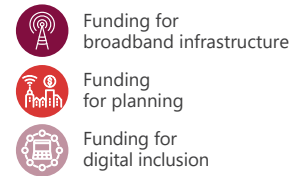
Northern Berkshire Communities can leverage funding through the DoN program to establish training opportunities for local consumers regarding tracking medical records.



Commonwealth Corporation (CommCorp) YouthWorks Funding

Commonwealth Corporation’s YouthWorks is a state-funded youth employment program that supports skills training for youth up to age 25 from households earning less than 200% of the federal poverty rate.⁵³

YouthWorks funding can support workforce training in Northern Berkshire County for roles in the local broadband economy. YouthWorks participants can also participate in a formalized local network of digital navigators in Northern Berkshire County.



Metropolitan Area Planning Council and MBI Residential Retrofit Program

The Metropolitan Area Planning Council's (MAPC) Apartment Wi-Fi Program works with municipalities, public housing authorities, and affordable housing developers to build Wi-Fi networks for residents. The Apartment Wi-Fi Program provides funding, project management, and procurement support to fund the construction of Wi-Fi networks, providing residents with equal or superior service to what is available from commercial ISPs at no cost to residents. Program funding covers all capital costs associated with network design, construction, equipment, and the first year of ongoing operating expenses.⁵⁴

MBI's [Residential Retrofit Program](#) (funded through the federal Capital Projects Fund) works in tandem with MAPC's apartment Wi-Fi Program, utilizing the same expression of interest form for housing operators.

The Adams Housing Authority should connect with representatives from MBI and/or MAPC to learn about the Residential Retrofit Program and Apartment Wi-Fi Program to find out if there are any opportunities to leverage this program in Adams's affordable housing buildings.

Funding Sources: Federal



Broadband Equity, Access, and Deployment (BEAD) Program



The BEAD Program, created by the Bipartisan Infrastructure Investment and Jobs Act (IIJA) and administered through the NTIA, is a \$42 billion dollar program with the goal of increasing access and affordability of broadband, creating jobs, increasing access to healthcare services, improving educational experiences of students, and improving quality of life for residents. Funds can be used for broadband deployment activities (e.g. construction and deployment of broadband infrastructure, personnel costs, leasing of infrastructure, etc.) and non-deployment activities (e.g. multi-lingual outreach to support adoption and digital literacy, direct subsidies for broadband subscriptions, costs associated with stakeholder engagement, etc.).



Lead for America American Connection Corps

The Lead for America American Connection Corp (ACC) is a service membership focused on advancing economic prosperity and bridging the digital divide.⁵⁵ The ACC supports broadband development, digital inclusion, and civic leadership in communities through a network of ACC Members who provide critical capacity-building services for the host organization or municipality. MBI has funding to cover host-site funding matches for up to 15 municipalities in Massachusetts.



Office of Secondary and Elementary Education

The U.S. Office of Elementary and Secondary Education (OESE) Title II, Part A grant program provides grants to state educational agencies and subgrants to local educational agencies to increase student achievement consistent with challenging state academic standards and improve the quality and effectiveness of teachers.⁵⁶ Eligible activities under Title II, Part A, include providing support and professional development for teachers.

The OESE's Title III, Part A grant program was established to improve the education of English Learner (EL) children and youth by helping them learn English and meet challenging state academic content and student academic achievement standards.⁵⁷

Northern Berkshire County School Districts should apply for OESE Title II, Part A funds for professional development to empower teachers to adopt BLENDED teaching methods, leveraging technology while protecting students against unproductive online behavior. Districts should also apply for funds from the Office of Elementary and Secondary Education: Title III, Part A Funds to improve instruction for English Learners, including those with a disability, through enhanced curricula and programs.



Community Development Block Grant (CDBG)



The Department of Housing and Urban Development's (HUD) CDBG program provides annual grants on a formula basis to states and local governments. Communities use CDBG funds to address local needs with eligible activities including public facilities, infrastructure, housing, economic development, and planning. The projects should also accomplish a National Objective of either: 1) benefitting low- and moderate-income persons; 2) eliminating slums or blight; or 3) addressing urgent needs for community health and safety.

Northern Berkshire communities can apply for federal CDBG funding to assess existing broadband infrastructure and make additions or improvements where necessary. Eligible activities include the acquisition, construction, reconstruction, rehabilitation, or installation of public facilities and improvements (which include infrastructure improvements), digital literacy classes, and internet subsidies for low-income households.



Appendices

GLOSSARY

Backhaul Infrastructure: Also known as the core or backbone network, this part of the network serves as a central hub from which other networks (like middle-mile infrastructure) branch out.

Broadband: A transmission system granting users access to the Internet. Broadband refers to a high-capacity transmission technique using phone lines, coaxial cable (“coax”), or fiber optic cable, enabling a large amount of information to be communicated simultaneously.

Broadband Adoption: Broadband adoption has traditionally been defined as residential subscribership to high-speed Internet access. But for those in the field working to increase the digital capacity of communities, broadband adoption is daily access to the Internet:

At speeds, quality and capacity necessary to accomplish common tasks,

With the digital skills necessary to participate online, and

On a personal device and secure, convenient network. (NDIA)

Broadband Equity: Broadband equity is achieved when all people and communities are able to access and use affordable, high-speed, reliable internet that meets their long-term needs. (NDIA)

BEAD: NTIA’s Broadband Equity, Access, and Deployment Program, which will provide \$42.45 billion nationally for broadband infrastructure planning and implementation.

Community Anchor Institution (CAI): Community Anchor Institution, defined by NTIA in the BEAD NOFO “an entity such as a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization, or community support organization that facilitates greater use of broadband service by vulnerable populations.”

Coaxial Cable: A type of electrical cable that is used as transmission line for radio frequency signals. Coax networks operate at faster speeds and higher reliability than DSL but is slower than fiber.

Digital Divide: The gap that exists between those who have access to information and communication technologies and those who do not.

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

Digital Inclusion: Digital Inclusion refers to the activities necessary to ensure all individuals have access to and use of Information and Communication Technologies (ICTs). The five elements of Digital Inclusion include:

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

Digital Literacy: Digital Literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills. (American Library Association)

Digital Navigators: Digital navigators are trusted guides who assist community members in internet adoption and the use of computing devices. Digital navigation services include ongoing assistance with affordable internet access, device acquisition, technical skills, and application support. (NDIA)

Digital Subscriber Line (DSL): DSL is a type of internet connection that transmits digital data over the wires of a local telephone network. DSL offers a faster connection than dial-up but is slower and less reliable than cable or fiber.

Fiber: Fiber optic cable is a type of high-speed cable that transmits data as pulses of light. Fiber is referred to as the “gold standard” for telecommunications networks because of its speed, reliability, and resiliency.

Homework Gap: The homework gap refers to the disparity between students who have reliable, high-speed internet access at home and those who do not. This gap can hinder students from completing homework assignments, conducting research, and accessing educational resources online and disproportionately affects low-income, rural, and minority students. The gap became increasingly evident during the COVID-19 pandemic as schools moved to remote learning platforms.

Internet: A communications network transmitted to users by broadband. The Internet refers to a global computer network providing information and communication facilities consisting of interconnected networks using standardized communication protocols.

Internet Service Providers (ISPs): Companies that provide subscribers with services for accessing and using digital tools, entertainment, and services.

“Last Mile” Infrastructure: Last-mile internet connections refer to the final leg of telecommunications networks that deliver broadband services to end-users or customers. These connections link the broader, high-capacity middle- and first-mile backbone networks with smaller, local networks that directly serve households or businesses.

Massachusetts Broadband Institute (MBI): MBI, at the MassTech Collaborative, was established in 2008 with a mission “to make affordable high-speed internet available to all homes, businesses, schools, libraries, medical facilities, government offices, and other public places across the Commonwealth.” MBI facilitated the funding of this plan.

“Middle Mile” Infrastructure: Middle-mile internet connections refers to the segment of a telecommunications network that connects first- and last-mile networks. Typically, this infrastructure includes high-capacity, long-haul fiber optic cables that transmit data over large distances.

National Digital Inclusion Alliance (NDIA): NDIA is a national nonprofit organization that brings together 600 nonprofit organizations, policy-makers, and academics with a mission to “advance digital equity by supporting community programs and equipping policymakers to act.”

National Telecommunications and Information Administration (NTIA): NTIA is the federal agency responsible for the State Digital Equity Planning Grant Program which funded the creation of this plan.

Network Redundancy: Network redundancy refers to the process of adding extra, duplicate hardware, software, or network devices to a network infrastructure to serve as a backup or fail-safe system in case the primary network components fail. Network redundancy between towns or ISP’s ensure there is no single point of failure and enhances overall reliability and performance of the network.

Satellite Internet: Internet which involves a dish installed at a user’s location to communicate with a satellite in space. Satellite internet is prevalent in rural areas where cable, DSL, or fiber may not be available. Satellite connections are generally slower than cable and fiber options and its reliability can be affected by weather conditions.

Unserved Location: An unserved location is defined as a broadband-serviceable location that the Broadband DATA Maps show as:

- (a) having no access to broadband service, or
- (b) lacking access to Reliable Broadband Service offered with:
 - (i) a speed of not less than 25 Mbps for downloads; and
 - (ii) a speed of not less than 3 Mbps for uploads; and
 - (iii) latency less than or equal to 100 milliseconds (NOFO Section I.C.dd).

Underserved Location: An underserved location is defined as a broadband-serviceable location that is:

- (a) not an unserved location, and;
- (b) that the Broadband DATA Maps show as lacking access to Reliable Broadband Service offered with:
 - (i) a speed of not less than 100 Mbps for downloads; and
 - (ii) a speed of not less than 20 Mbps for uploads; and
 - (iii) latency less than or equal to 100 milliseconds (NOFO Section I.C.bb).

Wi-Fi: Wi-Fi provides users with a wireless broadband connection. Wireless fidelity, or Wi-Fi, refers to a wireless network connection between devices and broadband network.

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APPENDIX I

STAKEHOLDER SESSIONS

Schools (Cheshire & Adams)	Wednesday, August 23, 2023	1 PM
Schools (N. Adams & Florida)	Thursday, August 24, 2023	1 PM
Libraries	Thursday, August 24, 2023	2 PM
Senior Needs	Monday, September 11, 2023	1 PM
Public Housing	Tuesday, September 12, 2023	1 PM
Business Community	Tuesday, September 19, 2023	2 PM

PUBLIC MEETING

Public Meeting	Tuesday, October 24, 2023	6 PM
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POP UP TABLING EVENTS

North Adams Farmers Market	Saturday, December 2, 2023	9 AM
Cheshire Festival of the Trees	Sunday, December 3, 2023	6 PM

INTERNET SERVICE PROVIDER INTERVIEWS

SLIC	Wednesday, December 6, 2023	10 AM
Westfield Gas and Electric (Whip City Fiber)	Wednesday, December 6, 2023	11 AM
Wired West (MLP Cooperative)	Friday, December 8, 2023	2 PM

MEETING NOTES

NORTHERN BERKSHIRE COUNTY STAKEHOLDER SESSION—SCHOOLS (CHESHIRE & ADAMS)

Date: August 23, 2023

Attendees: Leah Thompson, Director of Advancement, BART Charter Public School
Christopher Tawes, Director of Technology, BART Charter Public School
Nolan Pratt, Principal, Lanesborough Elementary

Leah Thompson, Director of Advancement, BART Charter Public School

- Many students who go to school there have trouble at home - lack of connectivity

Christopher Tawes, Director of Technology, BART Charter Public School

- Has served as Network Administrator for 17 years
- BART sending district includes all the communities involved in the Digital Equity Plan
- Since the pandemic, have found that 50% of BART students do not have reliable internet access
- Cell service is also an issue. Lots of students don't have tablets or computers- just cell phones

Nolan Pratt, Principal, Lanesborough Elementary School

- 1 to 1 with devices
 - Grades K -1 on iPads
 - Grades 2-6 on chrome books
- Gave out hotspots in the pandemic but gave homework on computers

1. What are the greatest challenges facing schools regarding technology?

BART:

- Interconnected challenges—infrastructure and network access—training—how we teach digital literacy—competing with state mandated demands—ESL
- 1 to 1 chrome book deployment—grades 6 to 12 (380 students) in school
- Moving into deploying additional devices—iPad—iMac labs—Mac books—Film—1 gig symmetrical access—just relayed wireless infrastructure—once students leave the building is the problem
- Highschool students can take devices home —North Adams—charter school specific issue—flexible population a lot of relocation of student population—providing for those changes is difficult
- BART's goal is to integrate the arts and technology as curriculum companions
- Teachers are encouraged to build online accessible courses—assistive technologies—don't dictate the administrative level
- Assessment tool—benchmarks on chrome book—MCAS—otherwise teachers have the ability to decide the appropriateness

2. Please discuss IT management and oversight systems.

- Compact IT department of 2 people—administrator & employee—google apps school—chrome management console—centrally manage policies and apps—use several online platforms—canvas—class link—PowerSchool—methods for feedback—being a small school—student council and teachers were feeling handcuffed by chrome books—received grant funding—data protection—student data privacy alliance

3. What demographic groups do schools provide IT support for (e.g., students, faculty, staff, families)? Please characterize the services provided for these groups.

Lanesborough:

- Older staff need longer training—more people/staff to own a cell

BART:

- One area where BART is lacking is in family engagement for IT. It is the missing link and barriers pop up such as translation, getting messages to people, family outreach and family connection. These barriers are exacerbated by large catchment area, with kids on buses for long periods of time

4. Are there additional partnerships or resources that could support school IT capabilities?

BART:

- BART funding is way different than typical school—reliant on grant funding
 - Received enormous grant for assisted listening devices from the Peabody Foundation for ADA compliance
 - BART is in the middle of writing a grant for support for integrating art and technology

Lanesborough:

- District-wide IT department.
- The Director of Educational Software is one person who manages the entire district
- Personnel wise—there are 235 kids enrolled in Lanesborough Elementary, ages 5, 6 & 7 years old
- Issues surround instructional hardware, specifically projectors in classrooms of varying technologies
- Parents are good at teaching digital literacy in elementary, however, some don't have or want internet

Meeting Notes

NORTHERN BERKSHIRE COUNTY STAKEHOLDER SESSION—SCHOOLS (ADAMS & FLORIDA)

Date: August 24, 2023

- Attendees:
- Stacy Parsons (SP) – North Berkshire School Housing Partnership Coordinator
 - Jim Brosnan (JB) – Superintendent Mcann Tech, northern Berkshire vocational
 - Moty Nevo (MN) – Director of IT at North Adams Public Schools
 - Emily Schiavoni (ES) – Family Community Outreach Coordinator, North Adams Public Schools
 - Barbara Malkas (BM) – Superintendent in North Adams Public Schools
- (JB) – Looking for enhancement for students without service at home. IT Major at the school.

(ES) – A lot of work was done in pandemic to hybrid learning. Provided loaners and hotspots to students without internet access. Switched back to shared learning environment – use computers and loaners. Higher grade levels do get 1 to 1 assignment with dedicated chrome books.

(SP) – Familiar with digital equity planning in Franklin County. Context is most important. Digital equity components for senior centers. Digital literacy – done some work with the department of justice for internet safety – how to use social media – age ranges – critical literacy – understanding what is fake.

(BM) – Dictating how often technology is used is a negotiation. How, when, and where we teach is important.

(JB) – No policy for how technology is used but it is complimentary to overall process. Don't need a process. Built robust system for school but needs to replace – access to broadband to communities.

1. What are the greatest challenges facing schools regarding technology?

(BM) – Influx of funds in the pandemic. Additional resources and have been effectively working at 1 to 1 but those funds end in September 2024. Funding is precarious in this region and struggling to have an embedded cycle of resource education. Practices learned in the pandemic may not be sustainable. Wi-Fi access and bandwidth to access educational programming at home is important. Hotspots are going away. How to continue to provide hardware and improve Wi-Fi infrastructure.

(MN) – Wi-Fi service is at home. At school service is 100%. In person instruction is covered but the issue is relevant to families at home. Continuing what was provided in the past – hold on to small portion.

2. Is there an internal policy in the school system for how often chrome books are used in school system?

3. Please discuss IT management and oversight systems.

(JB) - IT management and oversight systems – Modify and maintain same level of IT staff.

There is a need for staff level understanding of cyber security – ensure that they have the protective software. There is a need to ensure digital literacy continues to grow.

(SP) - Thoughtfulness of how people are connecting – for grandparents it is a mixed bag. Predatory issues around cell phones and cell phone plans – vetting process and digital coordination is needed.

4. Please discuss existing services or programming that school systems provide, concerning (1) broadband access, (2) computer/device access, and (3) digital literacy. What challenges and opportunities exist across these program areas?

(JB) When student takes device home and can't connect – connectivity – have devices but need funding to replace them.

Meeting

NORTHERN BERKSHIRE COUNTY STAKEHOLDER SESSION—LIBRARIES

Date: August 24, 2023

Attendees: Sheila Parks (SP) – Director of Lanesborough Public Library

Amy Emerson (AE)– Cheshire Public Library

Holli Jayko (HJ) – Town of Adams Public Library

1. Please discuss existing services or programming provided by the libraries concerning (1) broadband access, (2) computer/device access, and (3) digital literacy. What challenges and opportunities exist across these program areas?

(HJ) – Adams has done some programming – iPads, tablets, but there is not a large turnout.

(SP) – The Lanesborough Public Library has 2 public computers, public Wi-Fi through town hall, a hotspot lending program, has joined the MBLC program, and has a public printer. They have offered a couple of tech support nights, but not with a large turnout.

(AE) – Cheshire Public Library has limited hours open (less than 18 hours per week). They have not offered digital literacy training, but the Council on Aging has. They do not offer hotspot lending.

2. Have the libraries' IT policies or programming changed in response to the COVID-19 pandemic?

(SP) – Started working at Lanesborough in fall 2018 – without the MBLC program wouldn't have known about hotspots made aware of inequities – population of 3,000 – library was shut down for over a year. During the pandemic people were able to sit in the library parking lot for Wi-Fi even when the library was closed.

(AE) – Amy had resigned from the Cheshire Public Library right before covid hit and came back in summer of 2021. The library closed during covid, but people could come by and pick up books.

(HJ) – Adams had an existing hotspot lending program before covid and added more hotspots during the pandemic. The pandemic made the digital divide more apparent. The library has offered digital literacy classes in the past, without much attendance. They are currently considering loaning chrome books.

3. What demographic groups do the libraries provide IT support for (e.g., students, seniors)? Please characterize the services provided for these groups.

(AE) – In Cheshire most people looking for support are seniors 65+. Cheshire does not offer lending hotspots, but the people who ask the most tend to be parents and low-income families.

(SP) – In Lanesborough, people come in needing general tech support, including seniors. The largest number of users of the hotspot program is adults. Lanesborough's program currently has 3 hotspots. There used to be 5, obtained from funding through the state, however, all 5 were not going out regularly. Hotspot lending fluctuates with more usage in the summertime.

(HJ) – The Adams Public Library hotspot lending program has 7 hotspots and is currently circulating 6 (one was never returned). The program is popular, with over 170 circulations since January and is one of the biggest lending options for digital equity. The Adams Public Library only has 8 computers. The library has offered digital literacy classes; however, they are not well attended. The library offers limited space and computers for classroom type learning. When classes have been offered, the age of participants is mostly over 50.

4. Please discuss the libraries' translation and interpretation practices regarding IT resources and programming.

None of the libraries offer translation services, except for local deaf/hard of hearing community members.

5. Is there significant participation in the programming you offer, and how do you market these resources?

(HJ) – Historically, Adams has not had great participation. Often people would sign up but not attend. In Adams, the Council on Aging offers more successful classes.

(SP) - In Lanesborough, few people attended training programming, but they will continue offering tech support.

(AE) – Cheshire is a one room library with one public computer. To offer classes or programming they would need chrome books/laptops.

6. Are there additional partnerships or resources that could support the libraries' IT capabilities?

(HJ) – The Adams Public Library would love to start a program for lending chrome books.

Meeting

NORTHERN BERKSHIRE COUNTY STAKEHOLDER SESSION—SENIOR NEEDS

Date: September 11, 2023

Attendees: Lorna Gayle (LG), Lanesborough Council on Aging
Pat Lescarbeau (PL), North Adams Council on Aging
Sarah Fontaine (SF), Adams Council on Aging

1. What services or programming does your community provide seniors for broadband/computing device access or digital literacy?

LG:

- The COA has a staff member with knowledge of devices (e.g., phones and iPads) for assistance on an as-needed basis and to offer assistance before a regularly scheduled yoga class. This service was not well utilized. The COA has never had substantial funding to provide anything more elaborate than this.
- The Town's library has 10 hotspots and publicly accessible computers
- People often come to the COA for assistance with online applications. The COA does not officially offer this as a service but helps people by appointment/on an as-needed basis.
- The COA plans to install a copier in the community room (COA has control of this space for most of the day for the four days they're open)

SF:

- A past COA volunteer taught computer literacy. When this volunteer left, there was no one to replace them. The COA still has computers available for a class but no instructors.
- The COA, located in the Adams Visitor Center, offers public Wi-Fi and an office with a computer available for public use
- The COA fills in as a digital equity hub when the library is closed/unavailable
- The Executive Office of Elder Affairs (EOEA) offered an Enhancing Digital Literacy for Older Adults grant program
- Approximately 10 towns with similar digital equity needs applied together as a region, with Pittsfield as the lead applicant and the Berkshire Regional Planning Commission facilitating the effort.
- \$293,100 was awarded to the applicant towns to be used for purchasing devices/equipment and hiring instructors to lead digital literacy training

PL:

- The COA has a couple of computers available for public use
- The majority of people who come to the COA for assistance do not have computers and are not interested in computers, don't know much about IT, and if they have a phone, it is for phone calls
- Many essential services and resources in our society are now virtual, and there is a great need to increase awareness of how to access things
- Library staff came to offer a class with the COA in the past, the focus of the class was not always clear, so it was discontinued

2. What challenges do residents age 60+ report concerning broadband/computing device access or digital literacy?

LG:

- Expense/cost burden on lower-income residents
- Lack of devices and lack of access to devices
- Lack of modern devices – people think one device will be sufficient over time and won't need to be updated

SF:

- Lack of devices and knowledge of how to use devices
- People often come to the COA for education on how to use a device and how to access telehealth and online applications – COA staff try to assist with basic functions but are not experts (e.g., Apple vs. Android devices)
- There is a need for comprehensive device training for different proficiency levels

PL:

- 1,000+ people came to the COA for assistance with signing up for a COVID vaccination
- This was a very time-consuming process for the COA
- People didn't have devices or didn't know how to use devices to access vaccination information.

3. Please discuss opportunities for improving broadband/computing device access and digital literacy for seniors. What resources could support these improvements?

SF:

- Lunch, chair yoga

PL:

- Lunch, bingo, chair yoga, line dancing

LG:

- Lunch, bingo, bridge, cribbage, craft day, balance class, chair yoga

4. What outreach methods can be utilized for informing the senior population of programming opportunities?

LG:

- The COA currently relies on a monthly newsletter, events calendar, Facebook page, word-of-mouth, and the Town website to conduct outreach (all digital methods)
- The COA mails a printed newsletter to 1,000 person address list

PL:

- The COA currently relies on a monthly newsletter with an events calendar, flyers, and a Facebook page to conduct outreach
- The COA mails 100+ flyers every month

SF:

- The COA currently publishes a monthly newsletter via a PDF on the Town website and Facebook page and distributes printed copies (approx. 500) throughout the Town (e.g., COA, Town Hall, businesses, library, etc.)

- The COA utilized the MySeniorCenter platform to broadcast robocalls as another form of outreach
- Digital literacy classes tend to get monopolized by one or two individuals with specific issues. The goal is to set up one-on-one appointments with individuals. The COA tried to offer this in the past with high school volunteers but ran into scheduling issues with the schools

5. What resources or funds do you need in order to expand or improve existing services, if any?

SF:

- Every COA in the State receives their state formula grant from the EOEA based on the size of the town's senior population (the FY24 rate is \$14 per person based on census data)
- Town funding for staff
- Gift account for people who make memorial donations
- The sister non-profit (Friends of Adams COA) does fundraising
- The Massachusetts Councils On Aging agency provides a weekly brief/email and a grant-watch section on their website for grants that apply to seniors

6. Additional thoughts:

SF:

- Spectrum has a monopoly in Adams – if their service isn't working or is too expensive, there are no other options
- There are public assistance programs for health insurance, food security, etc. This is now a digital world, but there is a lack of digital assistance programs for what is now a need (e.g., telehealth). There is a need for public assistance programs for internet access
- Language barriers are not a major issue

PL:

- Very expensive – if you try to eliminate TV channels with Spectrum, the fee for internet goes up
- Rural areas don't receive broadband

LG:

- Previous mayor tried to work with Spectrum to reduce prices, but it never happened

Meeting

NORTHERN BERKSHIRE COUNTY STAKEHOLDER SESSION—PUBLIC HOUSING

Date: September 12, 2023

Attendees: Jason Morin, IT Consultant, North Adams Housing Authority

Jennifer Meehan, Director of Community Engagement, Berkshire Housing

1. What is the current state of digital infrastructure and internet access within housing communities? Are there any disparities in internet access and technology availability among residents?

Jason Morin:

- The North Adams Housing Authority is working on bringing Wi-Fi infrastructure to public housing tenants
- NAHA is leveraging ARPA funds for this project and are awaiting word from MAPC regarding disbursement of the funds

- NAHA conducted a survey to support Wi-Fi systems planning and found that a handful of residents are relying on data plans/hotspots for Wi-Fi
- Federal regulations allowing Wi-Fi to be included in operating expenses will be a factor
- Benefits of NAHA owning and controlling this infrastructure in its own buildings
- The majority of NAHA residents are subscribed to Spectrum
- COVID highlighted negative impacts of broadband disparities, particularly in heavily populated family areas – Spectrum had stipulation during the pandemic that they would not provide Wi-Fi if the subscriber had an outstanding balance
- When COVID hit NAHA purchased laptops and Chromebooks for residents and bought a hotspot for one family (this did not provide cell service however)
- NAHA made past efforts to establish an ad hoc free Wi-Fi location but faced challenges with regulations regarding how many people could be in a room, whether Wi-Fi users might park outside in the cold to access the Wi-Fi network, etc. – were unable to implement this
- NAHA has considered the possibility of running educational classes for senior residents with computers but has not yet planned this
- NAHA recently installed public computing space at three of four housing locations, including its two high-rises and family oriented housing development (senior development presents challenges), utilizing downcycled office computers. These spaces were designed for NAHA residents and are not available for public use (this is under consideration but would require different management due to liabilities)
- NAHA has multilingual residents, but no language barrier challenges
- Broadband disparities vary across age groups due to differences in digital literacy – seniors lack digital skills
- Affordability of broadband/devices broadens access gap

Jennifer Meehan:

- Berkshire Housing residents are only using Spectrum for internet service
- The existing Berkshire Housing developments do not provide Wi-Fi, but all new builds going forward will
- Note about Williamstown – She sees why it might be discounted from digital equity considerations due to the high income factor, but noted that a small portion of high earners skews the income spectrum in this area, and that there are still plenty of people without internet access
- Berkshire Housing resident service coordinators assist residents with various online tasks (e.g., signing up for Wi-Fi), but lack sufficient time, funding, and staff capacity to fully assist senior residents with all needs
- The organization tries to provide all communications in both English and Spanish
- Berkshire Housing has a few Cambodian and Taiwanese residents, but with translation services communication ends up okay
- Digital equity planning needs to cater to different languages but also different levels of understanding – you can understand the English language, but it doesn't necessarily mean you understand the content

2. Please discuss opportunities for improving broadband/computing device access and digital literacy. What resources could support these improvements?

Jennifer Meehan:

- Wants to avoid redundant programming if there are other organizations conducting digital literacy trainings
- There is a need to ensure specific resident needs are met with specialized training catering to specific life circumstances (e.g., soft skills)

3. What outreach methods can be utilized for informing the population of programming opportunities?

Jason Morin:

- Memos
- Hand-delivering communications going door-to-door
- NAHA invested in a self-service kiosk, placed in a welcoming, public location (typically is utilized for two to three 2-minute sessions per week)
- NAHA is considering a private robocall system to send automated calls and texts
- Typically housing authorities don't hire a dedicated IT staff member. However, IT systems management and cybersecurity are critically important

Jennifer Meehan:

- Berkshire Housing utilized several different modalities
- The housing business is paper heavy, including on-the-door reminders, postings throughout properties that might contain a QR code so folks can scan and access a survey
- Online dashboard for maintenance, rent, and other items that can send messaging through email
- Word-of-mouth/personal conversations with people
- Door-to-door outreach conducted by the property manager of service coordinator
- Importance of understanding which demographic groups are available at what times and catering to those circumstances (e.g., students, families, seniors)

4. What resources or funds do you need in order to expand or improve upon existing services, if any?

Jason Morin:

- An instructor to conduct digital literacy classes, including in-person and virtual options
- The Town already provides substance abuse outreach tabling and a mobile vaccine unit, but needs comparable services for technology
- Funding and execution of NAHA's planned infrastructure project NAHA's (project will cost close to three quarter of a million)

5. Additional Comments:

Jason Morin:

- Grant writing services – providing resources for this specialty skill as part of digital equity program could be very helpful

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Meeting

NORTHERN BERKSHIRE COUNTY STAKEHOLDER SESSION—BUSINESS COMMUNITY

Date: September 19, 2023

Attendees: Jonathan Butler (JB), 1Berkshire
Nico Dery (ND), North Adams Chamber
Ben Lamb (BL), 1Berkshire

1. What digital tools and technologies are currently essential for business operations?

JB:

- Being able to recreate digital office tools in the home setting – remote work is not going anywhere and if anything will grow
- Fringes in communities with minimal/no high speed internet will lack a competitive edge for workforce development and economic development
- Spectrum monopoly results in lack of competitive pricing, lack of channels (for the past two weeks all residents were unable to watch Disney+ and NFL on cable) and lack of services puts residents as a disadvantage

ND:

- Laptops are a top wish list item for a lot of small businesses, but other business expenses typically take priority over this
- A lot of businesses are not very technically inclined and struggle with basic things like putting up a website
- Ability to tie in a website with a POS system is a huge challenge in the County for a lot of businesses

BL:

- Internet is critical regardless of industry set, particularly for processing credit card transactions – in the agriculture sector with farmers markets, lots of people trying to do sales on mobile devices (lack of public Wi-Fi is a deterrent in this scenario)
- Having high-speed internet is critical for employees' ability to participate in the workforce
- Many major institutions (e.g., MASS MoCa has antiquated access, fiber runs through the campus but there is no tie-in) and employers do not have high speed internet
- Security aspect of Wi-Fi
- Businesses cannot run security/fully streaming camera systems without internet, adding layers of liability
- Cybersecurity
- Every community in Berkshire County has a single fiber line, but not all businesses can afford to tie in because of last mile expenses
- Many businesses are reliant on foot traffic and do not have an online sales platform
- Businesses haven't been educated on how to operate in a digital space and have a website presence and/or haven't had too historically
- Demand for buying gift cards and other purchases online/ability to purchase things that are immediately available to students or whoever the captive population is in the area

2. What is the current state of digital infrastructure and internet access within the business community? Are there any disparities in internet access and technology availability among businesses?

JB:

- Lack of digital skills
- Socioeconomic challenges – regional school districts are underperforming due to lack of resources, lack of population growth
- Students leave high school and are not work-ready for a number of career paths
- Lack of digital training/high school curriculum opportunities that might give kids who are not on a traditional college path the skills they need to succeed out of high school

3. What are the main barriers or challenges businesses face related to digital equity?

JB:

- Prioritization of rural digital equity needs at the State level
- Last mile efforts and initiative are slow-moving or not moving without adequate top-down influence and leadership to put pressure on large ISPs

ND:

- Price is a barrier to a lot of businesses
- Home internet is expensive, business internet is even more expensive
- Monopoly is a huge barrier

BL:

- Great that is being put into communities, but there will need to be follow-up and follow-through with rural communities being put into the digital equity planning pipeline
- Importance of state investment in breaking apart monopolies, particularly in rural regions (population density is not high enough to incentivize ISPs to invest)
- Get rid of barriers for smaller third-party ISPs

4. Are there any specific resources or support that businesses might need to improve digital access and skills among employees or customers?

ND:

- One-on-one technical assistance
- The North Adams Chamber has a dedicated staff member that works with businesses on digital marketing (high demand for this type of training)
- The Chamber has run workshops in the past (e.g., building a website, bookkeeping) which were not super well attended
- Businesses go through technical assistance programming but don't necessarily follow through on what they've learned – many businesses feel overwhelmed with the leap of building digital literacy skills and implementing this skillset

BL:

- There need to be incentives for participation in training opportunities
- 1Berkshire gets lots of interest in technical assistance offerings but 80% attrition when it comes to peo-

ple showing up on the day-of

- 1Berkshire utilizes a technical assistance cohort model with an array of offerings:
- Crowd funding (for both for- and non-profit)
- Business best practices
- How to grow your market
- Social media marketing
- Website launch
- Digital bootcamp during pandemic – 45 businesses participated to boost their website
- Cohorts are capped groups of 7 – all participants goes through a four-hour workshop with the same overview – contingent upon completing of this workshop, participants move on to a two-hour targeted one-on-one workshop specific to their needs
- 1Berkshire will run a cohort for crowd funding and social media marketing this fall (these two topics keep coming up and get high attendance)
- Courses have been offered in Spanish in the past and are well-attended
- Exclusivity, incentives, and targeted training focus help boost interest and attendance
- Digital literacy training should leverage existing communities where businesses can partner with and support each other (this can take a while but will gain traction)
- Trainings should be offered at times the most logical times (timing and season) for the target-audience (e.g., they would not run trainings for farmers in august, and would not run trainings for businesses in December)
- Low-hanging-fruit participants will jump on-board with training opportunities, who can preach to peers that aren't inherently interested in these programs that they should participate

5. What outreach methods can be utilized for informing the population of programming opportunities?

JB:

- Anything 1Berkshire promotes themselves or with partner organizations includes a variety of outreach channels (social media, personal outreach, email blasts)
- Businesses don't prioritize this topic – digital equity planning outreach cannot be just one email, or communication through one platform, it needs to be multifaceted if you want businesses to catch wind of this

BL:

- There may be some sense in changing the branding from digital equity during promotion – have to educate everyone on what this means – if you have to educate people on what the topic is for an event they won't go if they don't immediately understand, regardless of variety of outreach methods
- How do we make this topic feel super direct to the business community – make very clear what the topic is vs what it is not

Date: Tuesday, October 24, 2023

Notes Taken By: Jennifer Nelson

Place: Adams Visitor Center
3 Hoosac Street, Adams MA

Re: Northern Berkshire County Digital Equity Plan Public Meeting

EVENT DETAILS

- › VHB and the Town of Adams hosted a public meeting and discussion on digital equity from 6pm to 8pm on Tuesday, October 24th, 2023. Approximately 20 people attended the public meeting including members of the steering committee, local elected officials, school district superintendents, regional planning agency staff, state representatives, and former state representatives and former local elected officials. The meeting consisted of a presentation from VHB, a group discussion, and breakout discussions soliciting community feedback regarding digital equity the needs of the community about internet access, digital literacy, and devices.

Public Comments: How is Your Internet Access and Cost? Feedback? Questions?

- › We should define "Western Ma" and "rural".
- › Berkshire County is a specific place within Western MA, probably shouldn't just refer to this project as affected all western MA.
- › Impossible to get local news from Boston without Spectrum.
- › Access > Devices and Literacy
- › None of the other things (access to devices and digital literacy) matter without broadband access.
- › According to State Rep: Berkshire County given "lip service" for the past 10 years.
- › MBI installed fiber down the main road, but it is cheaper to use the competitors (Charter/Spectrum) over connecting to MBI's network.
- › Feeling that local municipal/regional collaboration should take over this project on their own, over engaging with private companies.
- › "We should take this on our own."
- › We need to make access affordable without government subsidies.
- › The importance of digital literacy and "digital citizenship".

North Berkshire Digital Equity Plan
Adams Visitor Center
3 Hoosac St. Adams, Ma

October 24, 2023

Thank you for the opportunity to testify on the issue of digital equity tonight. For the record, my name is name is Dan Bosley and my address is 3 Elmwood Ave, North Adams, Ma

I appreciate this hearing and the work that is planned on digital equity. While Massachusetts is one of the tech capital in the US, there are many areas where connectivity is very poor or nonexistent. We need to address that. I want to give credit to the Biden administration for their efforts in universalizing broadband. I have been working on this issue off and on for 30 years. Other nations that are not saddled with an old telephonic system of poles and twisted copper wires have leapfrogged the US in technology. Lately we seem to be taking this effort more seriously. Since around 2013, the US has been working hard to build out a faster and better broadband network. In 2013 we ranked 25th in the world and we now rank 12th. That is not where we want to be as a nation. And it is an uneven build out. Many places in the US, like Berkshire County, have fallen behind and aren't able to compete for jobs or link into the latest telehealth and other services. In a competitive economy where milliseconds can make a difference in competition, we need to fill in the blanks, so to speak. It is essential we address this. And this is covered in the Federal legislation where it lists rural areas as well as various population such as the elderly (I prefer the word senior as I get older).

I ran for State Representative in 1986 and represented this district for 24 years. I originally ran on a platform to improve our quality of life, our economic position and to bring the latest technologies to the Northern Berkshire Community.

I am listing the various issues I have been involved in over my 24 years as a State Representative. I don't do this for any other reason but to demonstrate the struggle we have had to address connectivity over the past 30 years. We are still playing catch up and it has hampered our economy, our pathways to health care and our social interactions.

July 9, 1990, North Berkshire gets digital switches for telecom. Area gets touch-tone service. (Yes, we had to fight in the 90's just to get touch tone and scrap our rotary dials).

October 13, 1990, I blasted DPU rate case settlement on local calling areas and called for one Berkshire calling area. The DPU decision didn't take into account our paths of commerce and was taken out of expediency and not for the interests of the ratepayers in our area.

September 12, 1992- I filed suit against DPU in the Supreme Judicial Court over their local calling area decision.

1997

-Established Berkshire Connect, a project to allow high speed and improved telecommunications throughout Berkshire County. Bosley played a key role in initiating this project in the spring of 1997 when he held an open meeting in North Adams on the needs and status of telecommunications. At the time, Bosley requested Berkshire Regional Planning Commission take the lead in researching the specific needs and solutions to the situation.

-Berkshire Connect, the public-private partnership to improve telecommunications in the County, received \$1 million to help fund its initiative to bring high speed Internet access to the Berkshires.

I secured \$250,000 in 1997 and \$300,000 in 1998 for Berkshire Connect

1998- Government Regulations Committee continued to oversee the progress toward a more competitive telecommunications market in which consumers will have a choice of local as well as long distance phone companies as well as Internet and other communications providers.

1998 Participated in a Competitive Policy Institute national panel of telecommunication experts on state issues in Phoenix Arizona

June 1999- Speech to the Boston business community on Telecommunications and their role in our business community. "Telecom and the Changing Society."

2003 Wireless Laptop initiative- along with Rep. Larkin, established a laptop initiative for Pittsfield and North Adams schools.

2000 MassMoCA broadband initiative

2004 Massachusetts Telecommunications Council Award as Most Effective Policy Maker

February 2008 -Representative Bosley testified before the Federal Communications Commission (FCC) concerning Broadband Network Management Practices. This was a hearing on net neutrality.

2009 Broadband Act

Bosley was instrumental in creating legislation to fund \$40 million in funding for unserved and underserved communities. The legislation has helped to leverage over \$45 million in federal money. It has also led to a plan to wire Berkshire communities in the next 30 months under the Mass 123 plan to provide 1400 anchor institutions in unserved areas.

Equity

Having spent a life in politics, I think about government a lot. The most important section of the US Constitution, in my opinion, is the 14th amendment. This is known as the equal protection amendment. It states that government cannot discriminate in the administration of our laws. Sadly, many of our laws are not equally administered. I think that digital equity gives us an opportunity to treat everyone equally.

When we say equity, the default thought we all have is minority and poor urban populations where services are unavailable or unaffordable. That is important. However, rural areas are one of the most neglected areas in providing services. While it is not in Massachusetts, my family's farm in Southern Vermont did not get electricity until the mid-1950's. That was from the 1936 Rural Electrification Act. Much the same as that act, which led to an increase in employment and health of local farms, roll out of broadband to rural areas will be of great advantage to area farms and other rural small businesses as well as others who want to live here and work remotely. In 2001, I was in South Africa where I met with local officials in Kwa Zulu Natal. I was told that they had leapfrogged our land lines with cell towers and the use of new technologies to give them crop reports advising them on daily pricing and the location of their markets. Here, our farm community consists of small businesses that are essential in the preservation of our open space, our water recharge areas, and bringing local food to market. But it's not just farms. Broadband is essential to help all our rural businesses find their markets, keep up on economic reports, attract tourism and visitors to our cultural facilities, etc. One of the transformative objectives of the Bipartisan Infrastructure Law is to ensure members of Underrepresented Communities, especially those members of Underrepresented Communities who were most impacted by the pandemic, have access to the good jobs that will be created in connection with this unprecedented internet investment. That is essential. Our present technology, even in the best areas in the North Berkshire Community, isn't good enough to promote jobs in such technologies as software, biotech and clean energy. In order to advance employment in today's tech driven economy, we need better connectivity.

This year, the Healey administration has rolled out new transportation initiatives to spur development along transportation routes. This makes sense. Creating faster and more diverse transportation means we can travel outside the greater Boston area faster, meaning that we can develop housing along the routes. That in turn creates more housing stock and hopefully lowers costs along the route. This initiative is called Transit Oriented Development, TOD. In much the same way, creating new internet pathways for new technologies can open up housing in areas that desperately need to upgrade housing stock as well as give people who want a rural lifestyle and yet work in today's technologies an opportunity to do so. I am of the opinion that Cambridge, with the vast expansion of life sciences, will someday sink into the ground if we don't find ways to spread the new tech businesses out to other areas, giving them an opportunity to participate in today's economy. Even one such business in the North Berkshire Community would make a tremendous difference.

It would help our health care and lower those associated costs. As an example, Soldier On, which builds supportive housing units for homeless veterans has used telehealth in all their buildings for years. In order to

connect health services to in-need populations, we need connectivity. There are many factors that come into play in siting housing for this dispossessed population. Connectivity should not be one of these considerations.

In order for government to run we need connectivity to facilitate government interaction between the state agencies and local government. That includes anchor institutions such as Libraries, schools, local EMS and public housing. We need to be better.

Competition- Give areas the ability to form internet hubs, much the same as we allowed the regions to form electric compacts, e.g., Cape Cod Light Compact. Many areas in Western Mass have very poor connectivity, but even in the areas that have internet service, we are limited to a few choices. And by few, I mean one in many rural communities. In others, we are stuck with Verizon or Spectrum. I have had both and have had disconnection issues with both. Our area is not a priority for either company. Verizon strung fiber optics along route 2 through the town of Florida and yet refused to connect the town. I understand that this was a business decision in that they couldn't make their price points in a small town with small populations, but that means that government must step in to facilitate equity for these rural communities. As for Spectrum, the speed is better when you have service. Over the past few months, I have had intermittent service drops. I have had three technicians and a maintenance crew on my street and hopefully they have now fixed my problem. But it took weeks. And even though I have told them that I use my home internet for my business and the interruptions cost money, I have been given appointments that, in some cases, are weeks off. We deserve better and perhaps a local consortium of communities providing local service would have a vested interest in quality connectivity.

Why. It has become the way we socialize and find our community needs, events etc. It gives tourists and visitors the needed communication and aids in our efforts to build our tourism of rural areas. We need it for security and there are just some people who want a more sedentary life but need to stay in touch. More and more, our emergency communication comes through the wires and not airways.

I know that there are several directions that could facilitate service. It could be fixed wireless, satellite, 4G, 5G, fiber optics or whatever is next. That said, I prefer Fiber. That is the only way to ensure we can continue to improve our services and connect everyone with high-speed service. 20 years ago, I was advocating for the state to establish a policy that required the placement of so-called fat pipes for fiber every time we opened a roadway. Fiber can be blown in the pipelines if pipes are in place, but we need that infrastructure, that roadway if you will. It should be as ubiquitous as the electric wires on every street that we see. We need universal coverage. Is this a problem? Yes. As an example, Spectrum has committed to bringing the internet to the town of Florida. However, their service will only cover 60% of the community. So, we may have seniors who can get a connection at the senior center but can't use it at home. Or a student at the local public school who can't get a connection at home. Where is the equity in that?

So, what are we asking for:

I believe assistance to towns in our area could assist us in creating a **regional municipally owned broadband system**. It is essential that we have an entity in place that will cover all of our citizens and not just the profit centers. Municipal run services are often more responsive to their constituency.

Whatever the system is, here are the criteria I believe are essential to digital equity for the North Berkshire Community.

1. **Access.** Not every community has adequate access and in communities that do, it is not universal. And there is not any choice of carriers. That is not a healthy situation.
2. **Affordability.** Again, with no competition, people are forced into the choice of paying the only supplier and that inevitably leads to higher costs. The only alternative that some people have is Star Link which costs \$600 upfront plus installation and that is unaffordable to seniors and others on a fixed income.
3. **Equipment-** As in the example of Star Link, equipment that is not state-of-the-art and affordable is no equipment at all. People need assistance in equipping a system that is universal.
4. **Ubiquity.** For everyone in rural areas to have essential connectivity, we need a system designed to serve everyone. We can't let companies pick where they will install broadband based solely on price and not on sound public policy.
5. **Expertise-** Many small towns have no administrator or a part time administrator with volunteer help.

Over the past few years, we have experienced a lot of positions going unfilled in small communities. They do not have the expertise to make these complex decisions. Without some help from the state, they will not be able to make informed decisions or bring an appropriate system online.

6. **Adequate Data Caps-** A system needs to ensure it is large enough to serve the population with its territory. As population grows, it needs to have the capability to expand.
7. **Sustainability.** Any system that is placed in our region needs to be sustainable. That means a strong system that can deliver consistent service. Again, in my opinion, that means fiber as much as possible.
8. **Adaptability.** Any system has to be adaptable:
 - a. to the different needs and conditions in each community.
 - b. adaptable to new technologies. We should take a lesson from the past where we are stuck with old poles and wires and ensure that a system is dynamic and adaptable as technology evolves.

That is a lot. But it is necessary as broadband runs pretty much everything today. Much the same as telephone landlines were installed in all houses or how we wired each home for electricity, we need broadband in every house in every community.

Finally, much of what I learned about life and about politics came from my grandfather. He came from England when he was 6 years old and because he had to apply and study to become a citizen, he had to learn the things we take for granted. He loved his adopted country and would regale me with stories of the US. He would often say that the promise of America was that each person, if they worked hard enough, could do anything they wanted. They had that opportunity regardless of where they came from, their social status or what they looked like. I believe that. But in order for that to become a reality, people need to have the same tools that others have. Each of us needs this technology and the opportunities promised.

Thank you again for the opportunity to comment. I am available if there are any questions.

Thanks,

Dan Bosley
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North Adams, Ma. 01247
413-884-4100
dan.bosley@danbosley.com



AGENDA

1. PROJECT INTRODUCTION
2. DEFINING "DIGITAL EQUITY"
3. BASELINE CONDITIONS
4. KEY PUBLIC RESOURCES
5. INFORMATION STATIONS
6. BREAKOUT DISCUSSION
7. NEXT STEPS



STATEWIDE APPROACH TO DIGITAL EQUITY

The COVID-19 pandemic (and resulting transition to remote work and school) highlighted disparities in access to and knowledge of tools like video calling, healthcare portals, online shopping, public benefits, and other important online resources.

Massachusetts Broadband Institute (MBI) and the Commonwealth of Massachusetts implemented a couple programs to help communities identify digital gaps and prepare plans to move toward digital equity with future state funding.

Recent updates from MBI:

- Public comment period for SDEP and BEAD (statewide Internet for All plans) will launch on November 13 and close on December 15.
- MBI and the NDIA will hold another workshop in January for municipal planning consultants and lead staff from enrolled towns, focused on implementation.
- MBI is working on a next iteration of the MDEP program, specifically working towards a direct funding path to implement strategies/ recommendations in plans.
- MBI is launching 2 new programs in the near term
 - Gap Networks (to connect unserved locations)
 - Residential Upgrade (to retrofit wiring in public and affordable housing)



OTHER LEGISLATIVE NEWS

ED MARKEY
UNITED STATES SENATOR FOR MASSACHUSETTS

NEWS | PRESS

OCTOBER 19, 2023

MARKEY, WYDEN STATEMENT ON FCC VOTE TO ADVANCE REINSTATEMENT OF NET NEUTRALITY

Washington (October 19, 2023) – Senators Edward J. Markey (D-Mass.) and Ron Wyden (D-Ore.) released the following statement today after the Federal Communications Commission (FCC) voted to issue its proposed rule to reinstate net neutrality rules and reclassify broadband as a telecommunications service under Title II of the Communications Act.

"The COVID-19 pandemic clearly demonstrated that broadband – like electricity and water – isn't a luxury. It's essential infrastructure. Today, the Federal Communications Commission recognized that by advancing strong net neutrality protections and rightfully reclassifying broadband as a Title II service. These rules will protect the free and open internet, create a level playing field for all businesses, and help ensure a just broadband future. We commend Chairman Rosenwood for his historic action and will not stop fighting until strong net neutrality protections are fully restored."

27 Massachusetts Senators appeal to the Federal Communications Commission (FCC) to reinstate net neutrality rules and reclassify broadband as a telecommunications service under Title II of the *Communication Act*, which would enact stronger protections for consumers and promote internet affordability.

JACKY ROSEN
U.S. SENATOR FOR NEVADA

FOR NEVADANS | ABOUT JACKY | NEWS | CONTACT

ROSEN LEADS PUSH TO FUND PROGRAM TO LOWER COST OF HIGH-SPEED INTERNET

OCTOBER 19, 2023

The Affordable Connectivity Program Rosen Helped Create Through the Bipartisan Infrastructure Law Provides Financial Assistance For High-Speed Internet Access To More Than 240,000 Nevada Families And Is Set To Run Out Of Funds Soon

WASHINGTON, DC - Today, U.S. Senator Jacky Rosen (D-NV), a member of the Senate Committee on Commerce, Science, and Transportation, led a group of 31 colleagues in urging Congressional leaders to extend funding for the Affordable Connectivity Program, which provides financial assistance to access high-speed internet for 247,231 households in Nevada and more than 21 million working families across the nation. Senator Rosen helped create this program through the Bipartisan Infrastructure Law to lower high-speed

31 Senators push for continuation of Affordable Connectivity Program (ACP) funding initially made available through the Bipartisan Infrastructure Law in 2021, which currently "provides over 21 million working families with financial assistance for broadband access."

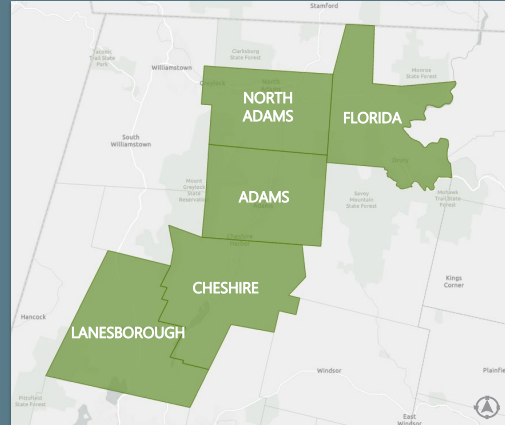


PROJECT INTRODUCTION

With funding from Mass Broadband Institute (MBI) contracted VHB to prepare a **Digital Equity Plan** for the Towns of Adams, Cheshire, Florida, Lanesborough, and the City of North Adams.

The intent of the project is to achieve the following:

- 1. Guide the City in decision-making and investments** related to services and infrastructure that will increase access, adoption, and usage of the internet throughout the community.
- 2. Prepare the City to apply for funding** from existing or forthcoming state and federal programs to support investment in digital equity.



CONSULTING PARTNERS



Luke Mitchell, VHB
Project Manager



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Jennifer Nelson, VHB
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Technical Advisor



Steven Anderson, VHB
Technical Advisor



STUDY COMPONENTS



Technology support. Credit: VHB

This study includes:

- **Property research** regarding baseline conditions.
- **Meetings** with the public and key stakeholders to disseminate information and gather input on key issues and opportunities facing the area.
- **A vision, goals, and implementation strategies** identifying required specific actions and projects.



PROJECT TIMELINE



DEFINING “DIGITAL EQUITY”



Digital Divide:

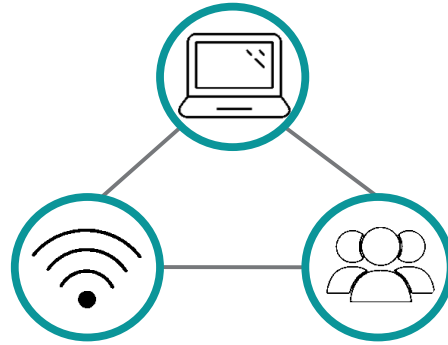
The gap between those who have affordable access, skills and support to effectively engage online and those who do not.

The digital divide disproportionately affects marginalized groups including people of color, households with low incomes, people with disabilities, people in rural areas and older adults.



Digital Inclusion:

The activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs).

















Digital Equity:

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

Digital divide is the issue.
Digital inclusion is the work.
Digital equity is the goal.



		
BROADBAND	DEVICES	DIGITAL SKILLS
<ul style="list-style-type: none">✗ Unaffordable✗ Unreliable Services✗ Digital Redlining	<ul style="list-style-type: none">✗ Unaffordable✗ Outdated software✗ No access to device✗ Device is not matching the needs of the user	<ul style="list-style-type: none">✗ Limited digital skills✗ Trainings are not accessible✗ Fear & shame✗ Privacy concerns
		 

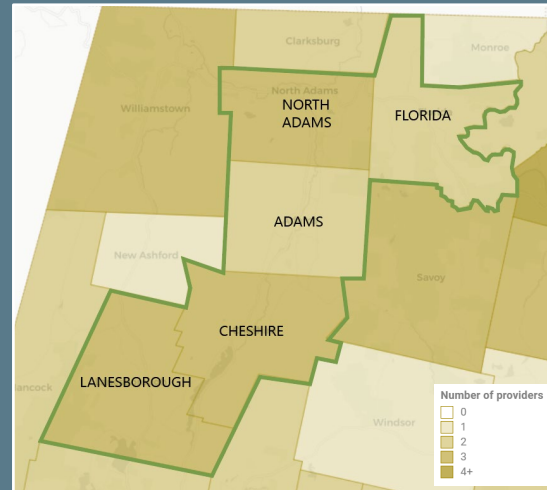
		
<ul style="list-style-type: none">✓ Most Portable device✓ Multiple connection options✓ Long battery✗ Does not replace a laptop	<ul style="list-style-type: none">✓ Great for accessibility✓ Long battery✗ Cannot make calls without a cellular data plan	<ul style="list-style-type: none">✓ Mandatory for many jobs and applications✓ Large storage✗ Shorter battery life✗ Least affordable option
		 

BASELINE CONDITIONS



AVAILABLE PROVIDERS

- The project area is one of the least served areas in MA.
- Charter Communications, Inc. (Spectrum) is the only option for high-speed cable internet in Lanesborough, Cheshire, Adams and North Adams
- T-Mobile is the only provider spanning all 5 communities with fixed wireless

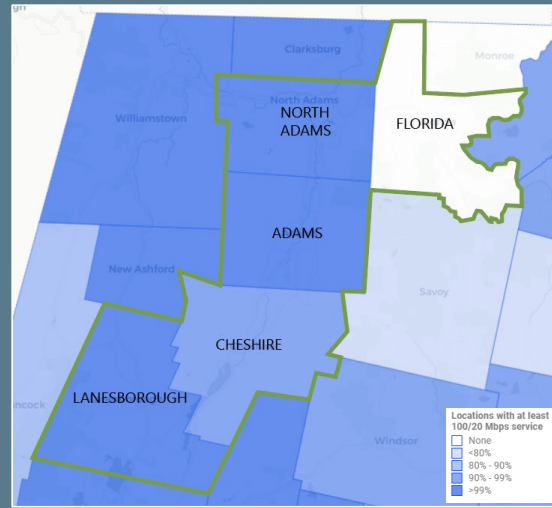


Source: MBI Massachusetts Broadband Map



AVAILABLE SPEED

- Spectrum provides high speed cable to the communities of Lanesborough, Cheshire, Adams and North Adams.
- The Town of Florida does not have any available cable/high-speed internet access.
- Florida only has fixed wireless coverage available at a speed range from 25/3 to 100/20.

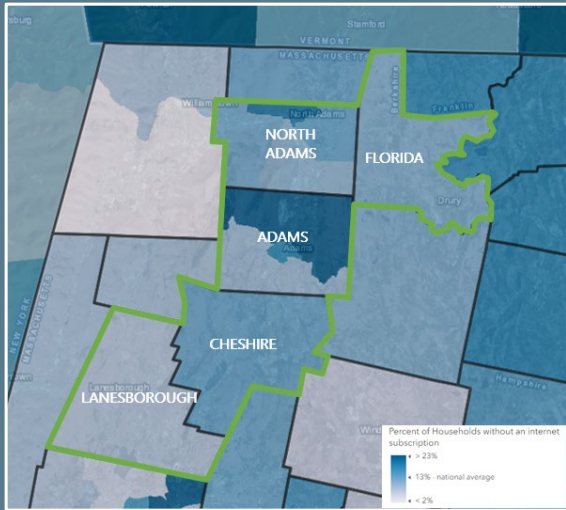


Source: MBI Massachusetts Broadband Map



HOUSEHOLDS WITHOUT INTERNET SUBSCRIPTIONS

- The highest number of households without an internet subscription are in Adam’s northernmost tract, Adam’s downtown area, and north central North Adams.



Source: U.S. ACS Census Data





MBI LAST MILE PROGRAM

- Florida and Lanesborough are Last Mile Towns in the MBI Last Mile Program
- Florida is currently categorized as a “partially Lit Town” with WiValley project installations shown as being “in progress”
- Lanesborough has completed the last mile program and is categorized as a “Lit and Complete Town” after project completion with Charter (Spectrum).



AFFORDABILITY

Affordable Connectivity Program (ACP)

What is it?

A federal program, resulting from COVID-19, that aims to provide wireless internet for low-income households. Companies like Verizon, Spectrum, T-Mobile, and Comcast participate in the program to provide a \$30 discount to eligible households.

The benefit allows for a one-time discount of up to \$100 for a laptop, desktop computer, or tablet purchased through a participating provider.



Affordable Connectivity Program
 Helping Households Get Access to Broadband

How to Enroll

1 Apply

Go to AffordableConnectivity.gov to submit an application or print out a mail-in application.

2 Contact Provider

Contact your preferred participating provider to select an eligible plan and have the discount applied to your bill.

Some providers may have an alternative application that they will ask you to complete.

Eligible households must both apply for the program and contact a participating provider to select a service plan.

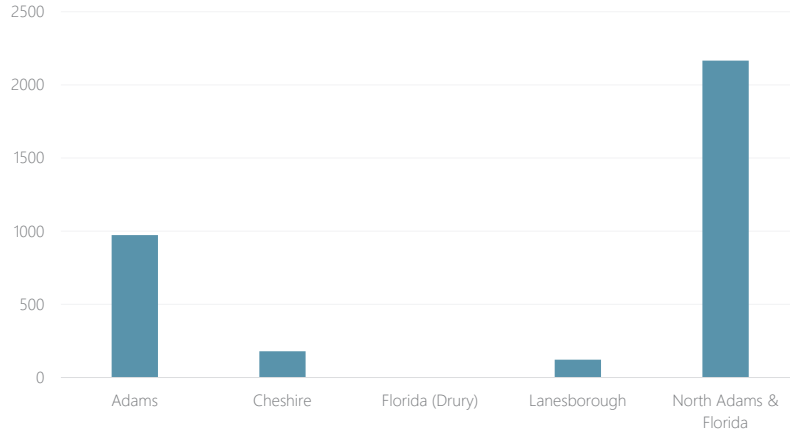
Source: Federal Communications Commission (FCC)



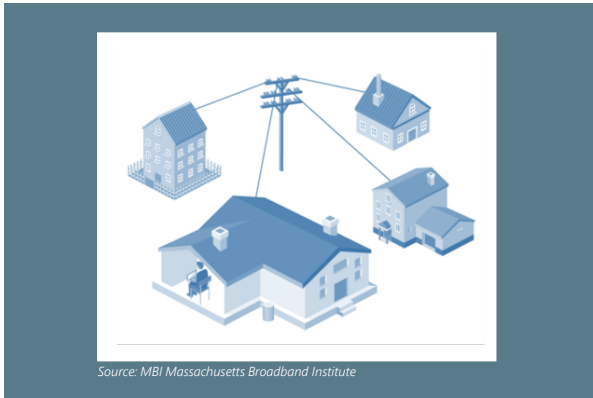
ACP ENROLLMENT

With 3,442 total subscribers, 12% of the total population are ACP subscribers

Total ACP Subscribers



Data Source: Universal Service Administrative Co.: ACP Enrollment and Claims Tracker.




Source: MBI Massachusetts Broadband Institute

MUNICIPAL BROADBAND SERVICES

Municipal broadband networks are considered by communities for the following reasons:

- Enhanced competition
- Affordability
- Control over local infrastructure
- Privacy & security








Source: MBI Massachusetts Broadband Institute

MUNICIPAL BROADBAND SERVICES

MBI's MassBroadband 123

- "Middle-mile" fiberoptic network designed, built, and owned by MBI
- Operated by Local Linx who provides wholesale services on the network to local Internet Service Providers (ISP) that may offer consumer services in the region.
- ISPs use the network to offer broadband services to public safety entities, schools, libraries, medical facilities, town halls, and other Community Anchor Institutions (CAI) already connected to the network.








MUNICIPAL BROADBAND SERVICES

Examples of municipal broadband networks and service companies include:

- Whip City Fiber, Westfield, MA & others
- GCET – Greenfield, MA
- Crossroads Fiber – Chicopee, MA
- Fiber Connect – Monterey, Egremont, New Marlborough, MA
- Leverettnet – Leverett MA (Powered by South Hadley Electric Light Department)
- Fiber Spring - South Hadley, MA
- ShutesburyNET – Shutesbury, MA

REGIONAL PARTNERSHIPS

Western MA Alliance for digital equity

- Coalition of community-focused organizations working toward digital equity for all people.
- Work at a grass-roots level to raise awareness and to highlight community-focused efforts that help eliminate the digital divide.

- Baystate Health
- Behavioral Health Network
- Community Action of Pioneer Valley
- Community Foundation of Western Mass
- Cooley Dickinson Hospital
- Dress for Success Western Mass
- Educare
- Federally Qualified Health Center Telehealth Consortium
- Forbes Library
- Franklin Regional Council of Governments
- Greenfield Community College
- Hilltown CDC
- Holyoke Community College
- Human Service Forum
- Jones Library
- Literacy Project
- Massachusetts Healthy Aging Collaborative
- Pioneer Valley Planning Commission
- Public Health Institute of Western Mass
- Springfield City Library
- Springfield Public Schools
- Springfield Works
- Stavros
- Tech Foundry
- United Way of Franklin and Hampshire Counties
- United Way of Pioneer Valley
- Wayfinders
- Western New England Univ. - Center for Social Justice



KEY PUBLIC RESOURCES



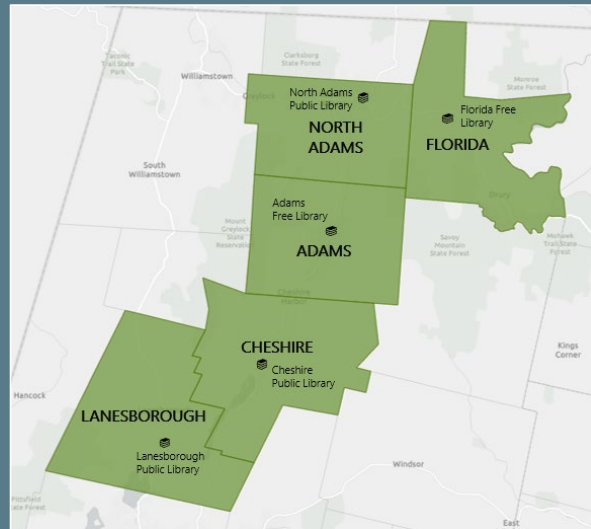
LIBRARIES

Resources offered:

- Open wi-fi networks
- Public computers, study area, reference help and searchable databases
- Varying career and training resources
- North Adams, Adams, Lanesborough and Florida offer hotspot lending

Support needed:

- Staff/hardware to complete long-term projects
- Equipment, space, and staff needed to offer trainings
- Grant funding is needed for ongoing support & maintenance
- Home support (offer support at library only)

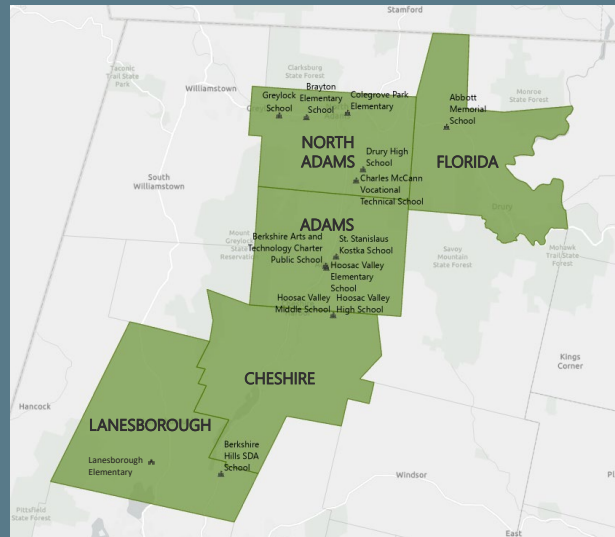


SCHOOLS

- There are 6 separate school districts:
 1. North Adams School District (Florida residents for high school)
 2. Hoosac Valley Regional School District (Adams & Cheshire)
 3. Mount Greylock Regional School District (Lanesborough & Williamstown)
 4. Florida School Union (PK – 08 only)
 5. Northern Berkshire Vocational Regional School District
 6. Berkshire Arts & Technology Charter Public School (BART)
- The Voc. Tech. and Charter School Districts Cover all 5 Communities
- Available technology, devices, and support varies between different schools and districts

Support needed:

- Students can't connect at home
- Family engagement needed for IT
- Funding needed for technology replacement and software upgrades



DIGITAL LITERACY EDUCATION

Councils on Aging

- One-on-one device assistance and classes offered as needed

Northern Berkshire Adult Education (NBAE)

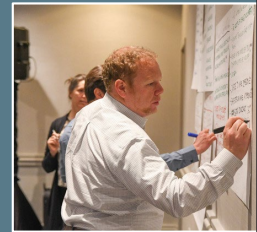
- Free adult classes and tutoring offered through North Adams Public Schools
- Computer literacy classes – covering computers, smart phones, internet, email, & Google Suite.

MCLA Northern Berkshire Adult Basic Education Program

- Digital Literacy Classes offered.
- Students participating in this program will be eligible to take a certification exam to demonstrate competency in Digital Literacy.



Drury High School, North Adams



INFORMATION STATIONS

Please make your way to one of the three stations we have laid out.

Use the stickers to mark which statements you agree with.





OPEN DISCUSSION

What are the greatest barriers to digital equity in Northern Berkshire County?

What steps should be taken to address these barriers?



COMPLETE THE STATE-WIDE DIGITAL EQUITY SURVEY:



bit.ly/mbisurvey-vhb



October 24 2023



NORTHERN BERKSHIRE COUNTY Digital Equity Plan

In Northern Berkshire County, five communities are collaborating on a **DIGITAL EQUITY PLAN**: the Towns of Adams, Cheshire, Florida, and Lanesborough, and the City of North Adams.

DIGITAL EQUITY refers to the concept of ensuring that all individuals and communities have fair and equal access to digital technologies—including the internet, computers, and mobile phones—as well as the skills and knowledge to effectively use them.

Informed by state and local data collection and public feedback, the final plan will outline a path for closing the digital divide.

JOIN US FOR THE FIRST PUBLIC MEETING

Tuesday, October 24 @ 6PM
Adams Visitors Center
3 Hoosac Street, Adams



THE 3 PILLARS OF DIGITAL EQUITY

DEVICES AND
TECHNICAL SUPPORT

ACCESS AND
CONNECTIVITY

SKILLS AND
TRAINING

If you ever have any questions or comments, contact **Luke Mitchell** at lamitchell@vhb.com.



This project was funded by the Massachusetts Broadband Institute at the MassTech Collaborative under the Municipal Digital Equity Planning Program. Funding was provided by Massachusetts ARPA State Fiscal Recovery Funds.

Date: Saturday, December 2, 2023
Notes Taken By: Christa McGaha
Place: 85 Main Street
North Adams, MA Re: North Adams Indoor Farmers Market

Attendees:

Christa McGaha, VHB

Event Details

- › Christa McGaha tabled at the North Adams Indoor Farmers Market from 9am to 1pm, soliciting community feedback regarding digital equity the needs of the community about internet access, digital literacy, and devices.

Public Comments: How is Your Internet Access and Cost? Feedback? Questions?

- › Yes, I have Wi-Fi but, they raise the price then I can't afford it. No other options.
- › Service guys are helpful.
- › No options. Spectrum just charges more every year.
- › Need better coverage for far off-road homes.
- › One option! Seems expensive. Always seems slow.
- › Spectrum over advertises too many junk mails.
- › Would like to see municipal broadband (has fixed wireless Verizon in Adams)
- › Spectrum bill jumped from \$53 to \$80 after year promotion ended.
- › Internet is affordable because of ACP program but not really reliable in Adams and keep battling with the company about fees.
- › Would love cable but 10 years ago was quoted \$19,000 to run cable to home and install poles.
- › Has Verizon fixed wireless in house near the Appalachian Trail. No complaints other than phone line.
- › Both good and reliable internet in North Adams with Spectrum. They haven't raised their rates.
- › I like the idea of providing classes on digital realms to the community.
- › Spectrum has a monopoly. Prices rise and we don't have other options.

Date: Sunday, December 3, 2023
Notes Taken By: Christa McGaha
Place: Cheshire Community House
191 Church Street Re: Cheshire Festival of the Trees

Attendees:

Christa McGaha, VHB

Event Details

- › Christa McGaha tabled at the Cheshire Festival of the Trees from 4:30pm to 9pm, soliciting community feedback regarding digital equity the needs of the community about internet access, digital literacy, and devices.

Public Comments: How is Your Internet Access and Cost? Feedback? Questions?

- › Get another company other than Spectrum. No competition.
- › Need high speed internet to attract employers.
- › For aging population there is a need for internet safety trainings to educate against phishing and scams.
- › Spectrum is the only choice on Route 8.
- › Can't even Call 911. Verizon service doesn't work on Notch Road.
- › Preparation is needed for if and when systems go down. Need security training and mindset along with awareness of our information and who can access it.
- › Need ongoing education by professionals on safety.
- › Cheshire needs independence (town owned internet), autonomy, economic development, and long-term vision.
- › Need more reliable internet service, cybersecurity, and partner with the senior center for training.
- › Need internet that works without constantly buffering!
- › More services need to be offered for setting up smart devices – there are currently no options.
- › Spectrum is terrible - can't get cell phone calls at home.
- › Verizon internet is extremely slow. It takes one hour to read a news article to wait for it to load.
- › With Spectrum the electricity and land lines are connected. When power goes out there is no cell service or ability to call 911.
- › Verizon has no cell service on Meadow View Road.
- › Savoy has Go Net Speed fixed wireless internet and is preparing for Verizon and other providers to come in.

Date: Friday, December 8, 2023
Notes Taken By: Jennifer Nelson
Place: Teams Meeting
ISP Interview with SLIC

Attendees:

Christa McGaha, VHB
Jennifer Nelson, VHB
Stephen Anderson, VHB
Kevin Lynch, SLIC
Ryan Moore, SLIC

1. Tell us about your business - where you operate and any plans you might have for expansion.

- › Ryan: SLIC got their start building out in the north county. We have built an entirely different business model based on people not necessarily being densely packed but to serve the entire community and provide good customer service.
- › We've been in Berkshire County and as far as the Springfield area. We expect to be a bit more east along Route 2. We are very interested in being in the area (Pittsfield, North Adams, Williamstown, Great Barrington, Adams)
- › Kevin: We started in 1902 as Nickelville Telephone Company, small family owned, copper-based telephone company. Diversified in the 70s.
- › In the 90s, we started SLIC (St. Lawrence Internet Connect) and started with dial up service and then connected 4 counties in the area with fiber ring (medial and education) -- colleges, high schools, regional health network.
- › We really saw a shift in our business models in 2007: from colleges standpoint we saw a need for rural broadband. Our students didn't have the access they needed to get to programs and resources. At university level we worked with SLIC and small paper mill in Newton Falls. So we worked with our Industrial Dev Agency, SLIC, university, and paper mill, and we put up a fiber line up to the fiber mill. We built out from there to 200 residents providing fiber. Probably one of the first communities in the nation to have the fiber.
- › 2011: we applied for recovery act funds and one 37M in funding. Began to serve 13,000 homes (at 10 units per mile or less).
- › Got 87M more in funding through fed and state programs (e.g. ConnectAll) -- installed more fiber 3300 miles of fiber and passed about 44,000 homes today.
- › With this growth we've attracted private equity in the company. We are now looking at opportunities that we can provide to rural communities.
- › We drove along Route 2 through Florida recently and Greenfield and Springfield. We are trying to orient ourselves with this area and feel it's a natural fit for the types of projects were looking to get into and services we want to provide.

2. Can you tell us about your free public Wi-Fi Hotspots program and how those are subsidized?

- › Kevin: Hotspots go where our fiber also exists.

- › 7-8 years ago, we decided (marketing based) where we had retail customers and if they got services from us that exceeded \$100/mo. we would throw in a hotspot. It is a standalone thing separate from the businesses. 100/Mbps.
- › We expanded it when COVID hit. In cases where we could expand fiber, we would. In cases where we couldn't, we contacted town supervisors and asked where we could put in a hotspot to better serve the community. We probably hooked up 20 student homes with broadband for no cost. We put up some extenders on silos. It was an organic, community-led process.
- › We also like to partner with the community (meet with local officials). Ballston Spa example. Also partners with farmers markets, sports venues, etc.
- › We partner with fixed-wireless providers to provide wholesale bandwidth to communities.

3. How do you build out your infrastructure? What is maintenance like?

- › Kevin: Early on we went after grants ourselves. We've had situations we partner with municipal electric (make ready) and we provide labor and materials.
- › Tupper Lake: Northern Border Regional Grant. Town applied, local agency (DANC, like MBI) got grant money with the town, built out infrastructure, hired us as the operator.
- › New York Power Authority: somebody built the infrastructure, and we came along to operate it.
- › St. Lawrence County: Grant program using ARPA funds. Town of Canton with lots of unserved pops. It wasn't economically viable for use to build out the whole thing, but we made a deal with the town, if they do part, we'll do part. We find creative ways to get it done.

4. Any target metrics to determine performance or build out feasibility?

- › Kevin: We work with National Grid in NY. The biggest cost we have is make-ready. It's hard to put together these metrics without fully understanding the make-ready process in MA.
- › There has been drastic increase in cost (fiber taxing, installing on pole, survey tax) - 12-14 homes/mile top break even in NY state.
- › One of the challenges we have is even if we were to get 100% funding for installation, we would still not break even with the operating costs. This is one of the reasons we're getting creative with partnerships. For example, municipally owned fiber can be tax exempt (in NY).

5. Are there any examples where you work off existing fiber lines?

- › Kevin: We've partnered with middle mile providers to provide last mile service.
- › We've also bought three local cable companies, so we get pole rights. That really cuts down make-ready costs.
- › Re: BEAD funding - we won't be pursuing this because it requires us to promise service to all locations, and we don't have enough information to do that. It's hard to go after funding without knowing the project details (how many homes, density, natural features, etc.).

6. Do you build underground or above ground?

- › Kevin: 90% aerial, 10% buried.
- › Really depends on the area and the situation. We've looked at some new technologies (micro trenching). Because of the climate, we're not sure this could work and still be 100% reliable. But other technology could become available.

- › Sometimes SLIC will say, if you can dig the trench (@town or @homeowner), we can install the fiber. That's not where we make our money. The "self-help" model.
- › Working in a community that has an older fiber optic ring. They've allowed us to use this ring to install our fiber faster.
- › We have (in rare conditions) set our own poles.
- › One of the grants we're working on right now -- Northern Border gave us grant money and we're just installing the fiber using that, as far as it gets us.

7. Are there any other value propositions you see for the utility companies that we can push forward on?

- › Kevin: Running fiber between substations - if you help with the make ready, we'll run the fiber.
- › Workforce development:
- › We will also need to build up a workforce based in MA - working with local schools in NY right now to make a certificate program for splicers, etc. We will also need an operational team, customer service, etc.
- › We are also not geographically limited (North Dakota, Illinois, etc.).
- › Our commitment is that we will be hiring local workforce (for construction, operations, etc.).

Date: Wednesday, December 6, 2023

Notes Taken By: Christa McGaha

Place: Teams Meeting

Re: ISP Interview with Westfield Gas and Electric (Whip City Fiber)

Attendees:

Christa McGaha, VHB
Luke Mitchell, VHB
Steven Anderson, VHB
Caitrin Ferriter, Westfield Gas & Electric
Michael Lee, Westfield Gas & Electric
Brian Sullivan, Westfield Gas & Electric
Thomas Flaherty, Westfield Gas & Electric

Westfield Gas and Electric (Whip City Fiber) ISP Interview Meeting Notes

- › Whip City Fiber assists municipalities in central and western Massachusetts in designing, building, and managing fiber networks that are 100% owned by the town.
- › Whip City Fiber has a 60% take rate. In the "hill communities" take rates are around 80% or 90%.
- › Florida and Monroe have gone with WiValley because it was the lowest cost option for them.
- › Westfield Gas and Electric was a contractor for MBI when they rolled out the middle-mile fiber (Mass-Broadband123).
- › Whip City Fiber has credibility from their ongoing success in Westfield, and has since ventured into design, construction, and management of fiber networks in 19 other communities in Massachusetts.

- › Whip City Fiber Model:
 - The municipality first needs to establish a Municipal Light Plant (MLP), secure funding (bonds or grants), then establish a partnership (intergovernmental agreement) with Whip City Fiber to build out and manage the fiber network. There is a 10-year exclusivity clause for Whip City Fiber to control the network.
 - Whip City Fiber provides everything to their municipalities turnkey. This includes network design, managing the make-ready process (going out to look out all the poles), testing poles, and negotiating on behalf of the towns. Then Whip City Fiber completes a full design of infrastructure leveraging existing fiber networks such as MassBroadband 123 and Crown Castle.
 - The only things Whip City Fiber technically actually owns are the routers, the rest is owned by the municipality.
 - Whip City Fiber charges a set fee of \$28 for subscriber per month and the municipality decides how much to charge on top of this fee.
 - Whip City Fiber also manages the fiber network construction. They take a 10% fee as a markup, but the municipality ultimately owns the infrastructure.
 - Whip City Fiber provides financial reports to the MLP.
- › From start to finish the overall process takes approximately 3 years to complete. The make ready process is the greatest challenge can be extremely slow due to acquiring permits for poles.

Date: Friday, December 8, 2023
Notes Taken By Jennifer Nelson
Place: Teams Meeting
Re: Interview with Wired West

Attendees:

Christa McGaha, VHB
Jennifer Nelson, VHB
Curtis Ostradka, VHB
Jim Drawe, Wired West

Wired West Interview Meeting Notes

- › Wired West is a Municipal Light Plant (MLP) Cooperative that provides services to member communities including:
 - Issuing RFPs for Internet Service Providers (ISPs)
 - Negotiating contracts
 - Accounting
 - Legal and auditing services
- › Chapter 164 Sections 34, 35, 57, 58 of MA State Law covers Municipal Light Plants.
- › Municipal Light Board 3-5 people elected - lots of MA legal case law that separates the MLP management from the town or city management. Yes, they are a town department, but they are independent to a large extent - independently managed and financed and are loyal to customers versus taxpayers.
- › [MLP Startup and Operational Considerations – WiredWest](#)

History

- › Wired West started in 2007 and spent 10 years trying to get financing to build high-speed fiber. Ultimately 32 towns became members and got \$50M from the state to do the project.
- › Many towns decided to go off on their own after getting their fiber because they wanted to make decisions independently. Wired West now has 6 towns that are currently still members.
- › Overall, Wired West has gotten high speed internet to 42 towns (all have MLPs). Notably, Lanesborough has already established an MLP.
- › The greatest barrier to getting internet to a municipality is money.

Creation of Municipal Light Plant

- › Process to create a Municipal Light Plant (MA Chapter 164: Section 34):
 1. Review Laws
 2. Get an engineering study if you don't already have an MLP (\$50-75k)
 3. Make Ready
 - Verizon and utility company often have joint ownership of the poles.
 - None of the Towns (Westhampton and South Hadley both own their own poles) own their own poles, you just pay licensing fees.
 4. Figure out how to finance it:
 - Make ready is usually 2/3 of the costs (make ready can take up to 2-3 years).
 - There are three possible ISP providers in western MA:
 - o Westfield Gas and Electric
 - o South Hadley Electric Light Department
 - o Crocker Communications (independent family-owned business)
 - The benefit of working with government entity for ISPs is that Intergovernmental Agreements don't require bid.
 5. Reliability, Resiliency, Redundancy (RRR) - Make sure there is no single point of failure. If a network ties into MassBroadband123, they have robust network, but do not have good RRR (only tie in for major institutions for hospitals).
 - There have been instances where town have lost connection for 2 days because they have many of failure points.
 - A solution is for towns to run 24 strands of fiber to connect with neighboring towns (mesh networks). Wired West has done this with 5 towns in the North, 6 towns in central MA, and 4 towns in the South)

Estimated Costs and Take Rates

- › Municipalities should expect \$17-25k per mile for overhead and \$60-80k per mile for underground.
- › Towns in central and western MA are rural so they do not come close to meeting the requirement of 20 units per sq. mile most commercial companies have for networks, resulting in the current ISP monopolies.
- › Expect a 30% take rate from incumbents because TV can make things complicated. Towns can provide TV services but often lose money because the cost of providing programming is so high. Many MLP's

market streaming services over cable TV.

- › A 45% take rate is needed to make ROI. Currently Wired West communities have a 75-80% take rate, covering operating rates.
- › More backhaul costs less the more you get (\$1200 for 1 gig, less than \$600 for 10 gig). This requires that towns agree upon using the same ISP.

Reasons Why an MLP is Worth It

- › Current providers offer TV services which become super expensive.
- › Jim's done analysis on a 20-year scale (Verizon versus Town). Over this period, it was shown to be less expensive for a town to build its own fiber and it will be better quality and have better customer service (Comcast and Charter have some of the worst customer service).
- › The important thing for getting fiber built in a town is to have a local champion or group of champions who are enthusiastic about getting it done and who have connections within the town. Build first where people are going to be able to afford to pay for internet service, and will have a high take rate, and a low transient rate.

MBI STATEWIDE DIGITAL EQUITY SURVEY: NBC RESULTS



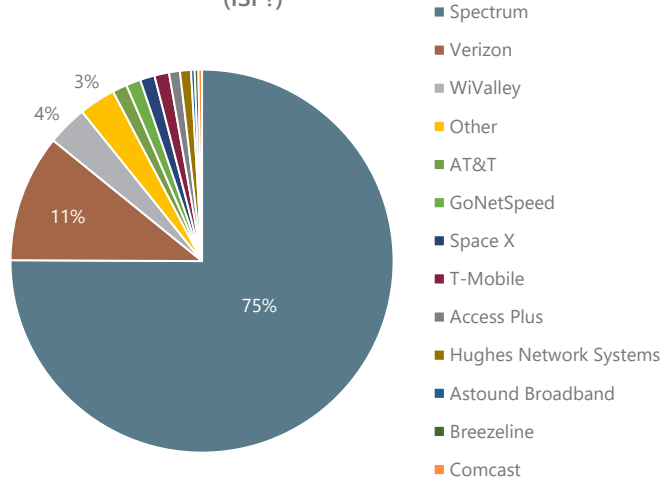
STATEWIDE SURVEY RESULTS

The following slides represent preliminary data collected through MBI's statewide digital equity survey.

The data represents submissions through January 9 2023, at which point **344 Northern Berkshire County residents submitted the survey.**

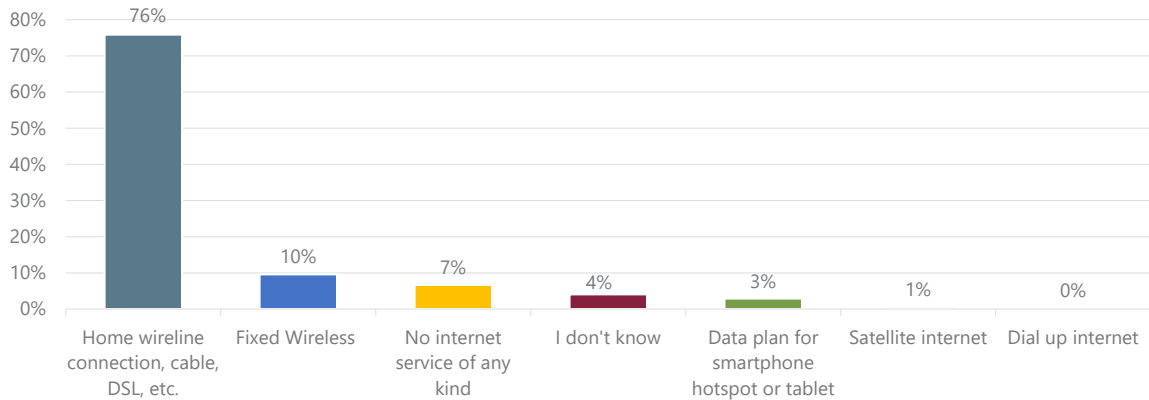
Over 12 different ISPs were recorded for residents in the project area.

What is your household internet service provider (ISP?)

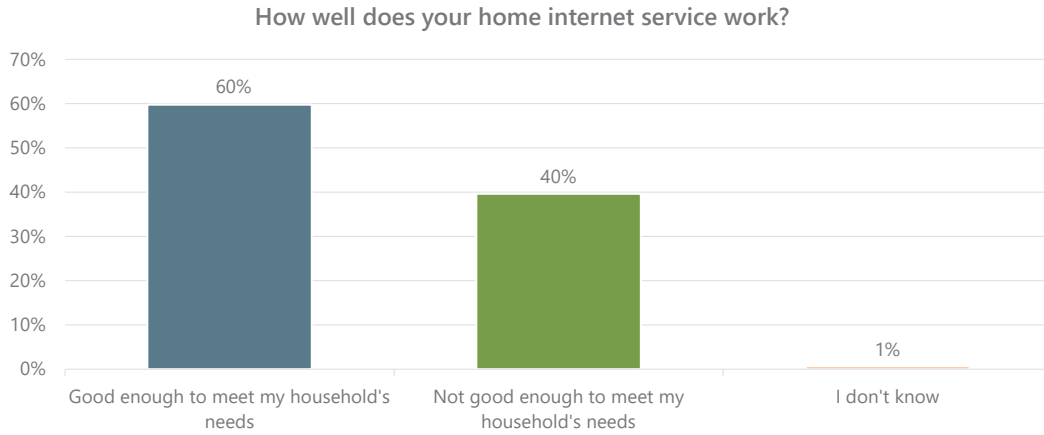


STATEWIDE SURVEY RESULTS

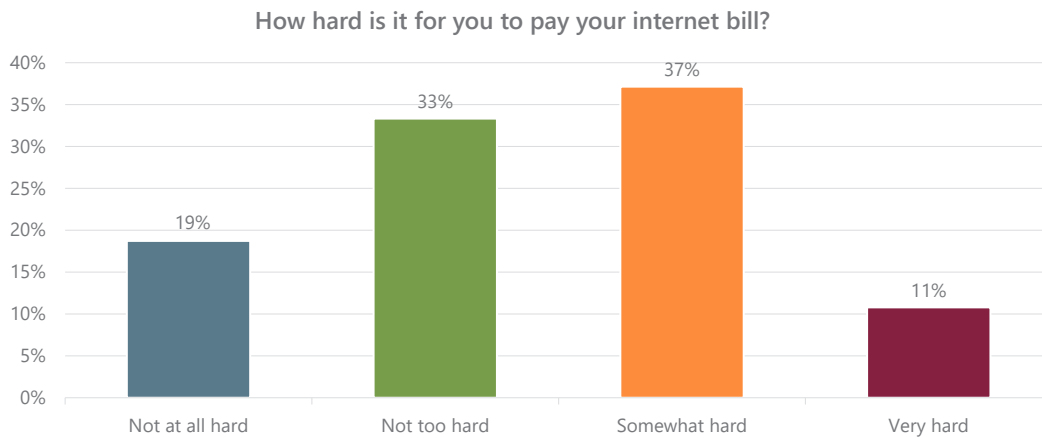
What kind of internet service do you have at home?



STATEWIDE SURVEY RESULTS

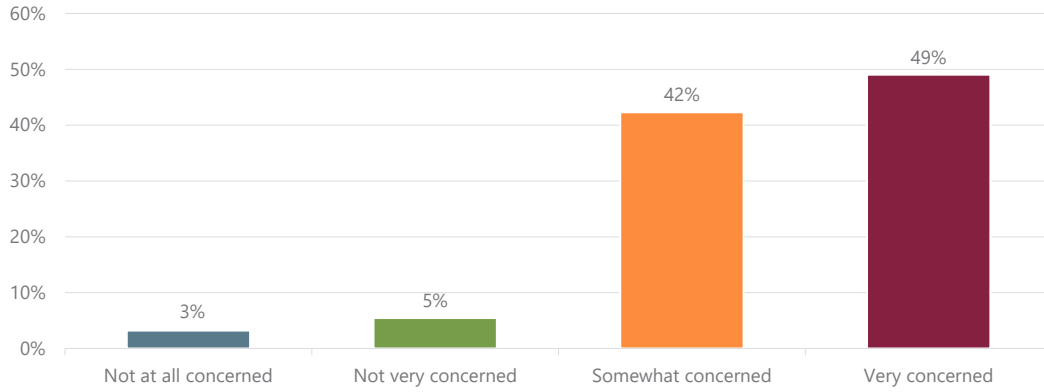


STATEWIDE SURVEY RESULTS



STATEWIDE SURVEY RESULTS

How concerned are you about internet safety?



STATEWIDE SURVEY RESULTS

