Tri-Town Regional Digital Equity Plan

Marion | Mattapoisett | Rochester

SRPEDD
Southeastern Regional Planning & Economic Development District

MBI
MASSACHUSETTS BROADBAND INSTITUTE
at the MassTech Collaborative

Acknowledgments

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Image 28. Marion Harbor

Project Background

Why is the Tri-Town creating a digital equity plan?

The Tri-Town is working with Southeastern Regional Planning and Economic Development District (SRPEDD) and the Massachusetts Broadband Institute (MBI) to increase digital equity and internet access in town. SRPEDD began its partnership with the MBI in 2023. Staff began by conducting digital equity asset mapping in the Southeast region of Massachusetts. During this period, over 120 digital equity assets across the region, including digital equity programming, digital skills classes, and plans or documents related to digital equity were identified. Outreach was then conducted to all 27 SRPEDD communities, including Rochester, Marion, and Mattapoisett, notifying stakeholders of MBI's Municipal Digital Equity Planning Program, and introducing relevant town stakeholders to the application process. After SRPEDD's initial outreach, several communities in the SRPEDD region expressed interest in applying for the program and SRPEDD staff subsequently began to work with five of those communities to create digital equity plans tailored to their unique needs.

Alongside this, in the summer of 2023 SRPEDD worked to recruit and hire a Lead For America, American Connection Corps fellow to expand the agency's capacity to work on digital equity planning across the region and to help create the Tri-Town's own Regional Digital Equity Plan.

Why a regional plan?

During the initial outreach process informing towns of MBI's digital equity planning process, the town of Rochester indicated that they were interested in pursuing a regional approach in creating a digital equity plan. The Town of Rochester suggested a regional plan between Rochester, Marion, and Mattapoisett, mirroring their regional school district, the Old Rochester Regional School District. Because of the towns' already established regional relationship, they decided to go ahead and pursue a regional digital equity plan. These towns face many similar issues, including related to internet and digital equity, so it made sense to create one regional plan rather than three individual town plans. Creating a regional plan allowed the SRPEDD project team to look at the region as a whole and discover the towns' shared digital equity strengths and weaknesses.

Plan Timeline

The Tri-Town kicked off their regional digital equity plan in late summer of 2024 with a kickoff meeting with the plan's steering committee.

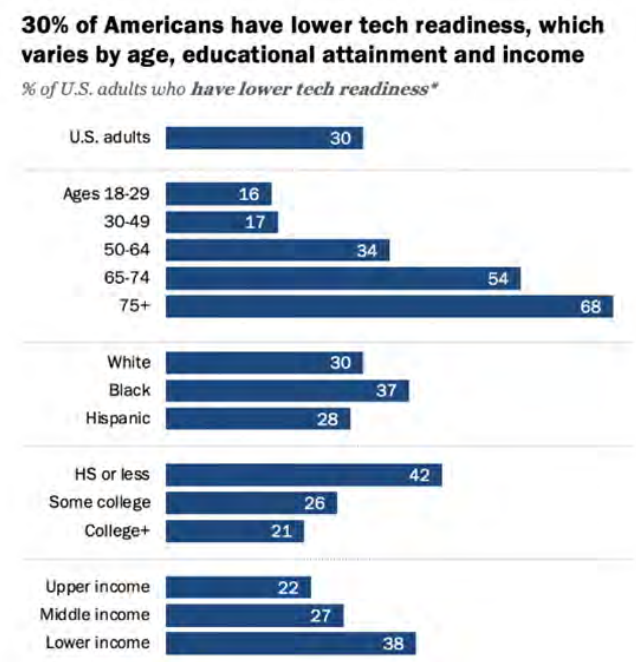
Image 1. Plan Timeline Graphic

Introduction to Digital Equity

The onset of the Covid-19 pandemic illuminated crucial gaps present in underserved communities across the United States – most notably when it came to accessing the internet to work from home, participating in online schooling, and generally participating in modern society online.

According to a 2021 article by the Pew Research Center, 30% of Americans possess lower tech readiness skills – meaning 30% of Americans lack the skills necessary to operate a computer, smartphone, tablet, or other device. The need for digital literacy and digital skills classes is increasingly important for this group of Americans. This percentage grows higher with age, with 54% of Americans ages 65-74, and 68% of Americans aged 75 or older having lower tech readiness.1 Rising costs of internet plans and devices or unreliable connections due to inadequate infrastructure in rural areas also continue to illuminate why the need for digital equity plans and programs is more important now than ever before.

Figure 1. Percent of U.S. adults who have lower tech readiness, Pew Research Center



1 Pew Research Center, "The Internet and the Pandemic", 2021, https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/

What is digital equity?

Digital equity is the condition in which all individuals and communities have the information technology capacity needed for full participation in society (for example, scheduling a dentist appointment online), democracy (for example, registering to vote online), and economy (for example, paying a bill online). In other words, it is ensuring that everyone has access to adequate devices like routers and computers, the ability to afford a fast and stable connection, and the skills necessary to navigate and troubleshoot their technology. Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.2 The digital divide is created when everyone does not have equal access to these things. This gap affects social connectivity, healthcare access, workforce preparedness, educational opportunities, civic participation, and financial resources and hinder vulnerable populations from participating in everyday life.

What is a digital equity plan?

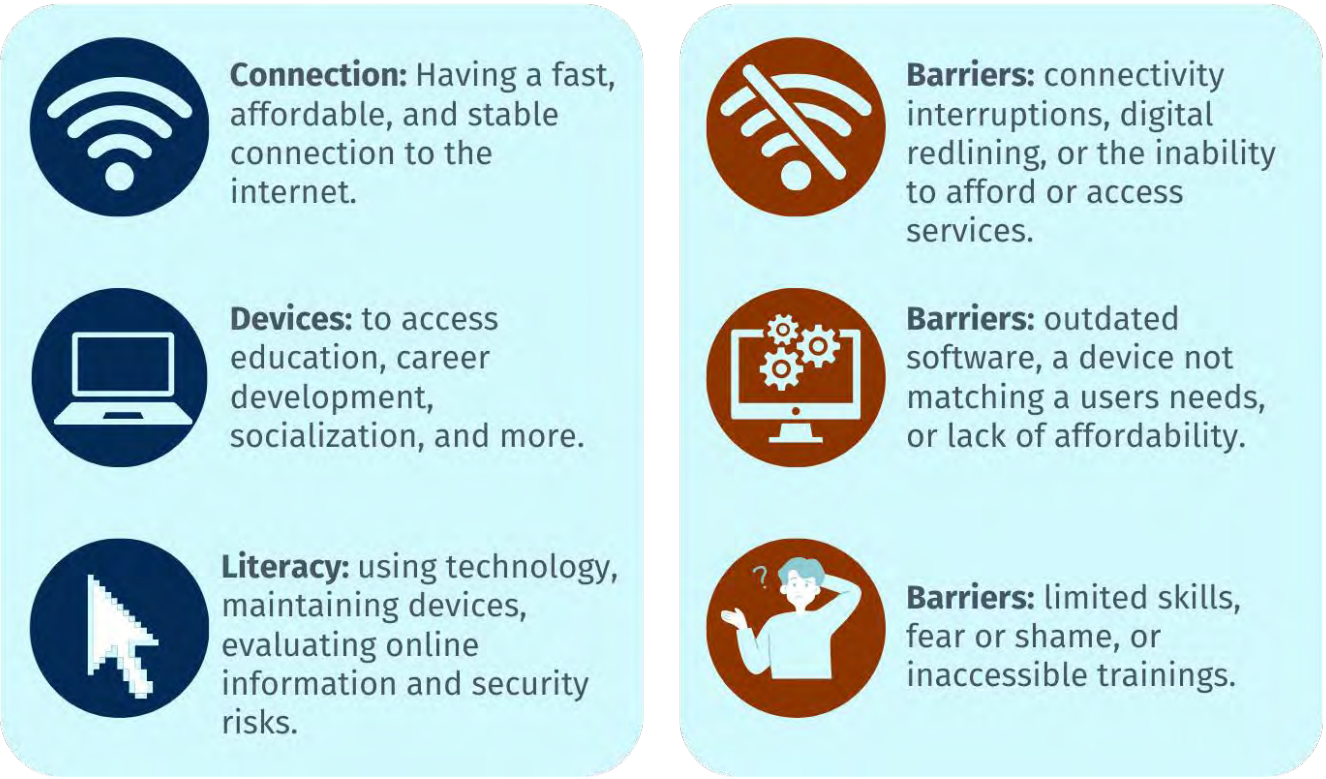
A digital equity plan aims to guide municipal decision-making related to services and infrastructure that aim to close digital gaps in underserved communities.[3] This plan analyzes the current state of internet access and digital equity in the Tri-Town community. The goals and recommendations provided in this plan are based on findings collected through data analysis, research, and outreach to the public and stakeholders.Throughout the digital equity planning process, residents are given the opportunity to think their own community and determine who is most affected by the lack of broadband access. The intent is to then utlize the plan to prepare grant proposals for existing or forthcoming state or federal programs that support digital equity activities; these include community partnerships and coordination support between Towns, providing residents with more internet options, and assisting covered populations with safely navigating the internet. These implementation recommendations, as well as funding guidance are discussed in the Recommendations section of this plan.

2 ‘Definitions’, National Digital Inclusion Alliance (NDIA)

3 MBI, CPTC Presentation, 2023

Three Pillars of Digital Equity

There are three main ways to understand digital equity and barriers to digital access:



Barriers to a given person or community not having access to meet these three pillars may include:

- Connectivity interruptions, digital redlining, and the inability to afford internet,
- Outdated software on a device, inability to afford an adequate device, or having a device that does not meet a user's needs; or
- Limited digital literacy skills, fear or shame, and inaccessible digital skills trainings are barriers to digital literacy.

Digital Equity Gap Impacts

Internet access is no longer a luxury but a necessity. Not having internet access, device access, or digital literacy affects many aspects of a person's life.

Social Connectivity:

Social connectivity refers to the ways in which people communicate and interact with their friends, family, and their community online. This includes online activities such as membership of online fourms or meetings, emailing or texting loved ones, and navigating video calls.

Educational Opportunities:

Since the onset of the Covid-19 pandemic, many educational opportunities happen online. From kindergarten to college, classes and homework assignments are now found online, along with textbooks and other class materials. Some schools also require students to enroll online now, rather than in person.

Healthcare Access:

In our modern society, healthcare services are becoming increasingly digital. People need to use the internet to access doctor's appointments, view their medical records, and even attend virtual healthcare appointments.

Workforce Preparedness:

Looking for and applying to jobs also happens largely online now. People can utilize online platforms to search for jobs and create resumes. Without proper digital literacy skills, people may not be able to find adequate employment for themselves.

Financial Resources:

Most banks today offer some sort of online banking option. This allows people to access their bank account from home to see their balance, deposit checks, and transfer money. People can also access information regarding finances online, including loan information.

Civic Participation:

Civic participation includes activities such as learning about elections and getting local voting information online. The internet is often necessary to stay informed about local and national political happenings. Local organizations also use the internet to advertise public meetings and engagement opportunities.

Vision Statement

The goal of this Municipal Digital Equity Plan (MDEP) is to expand internet access and digital equity throughout the Towns of Rochester, Marion, and Mattapoisett.

The outreach and engagement portions of this planning process were developed with covered populations in mind. Through stakeholder interviews, committee meetings, and public workshops, the project team learned from covered populations (most prominently Aging Individuals and Veterans) about barriers they face when acessing the internet.

The synthesis of this feedback provided focus for the plan's goals, strategies, recommendations the resulting plan provides an implementation pathway to improve the state of digital equity in Rochester, Marion, and Mattapoisett.

Image 2. Old Rochester Regional High School

Tri-Town Digital Equity Plan Goals

GOAL 1: Ensure successful plan implementation by leveraging and supporting community partnerships.

1. Identify an existing regional group or form a new committee to oversee the Tri-Town Digital Equity Plan implementation.
2. Prioritize annual or bi-annual implementation review at standing meetings or in annual reports.

GOAL 2: Increase availability and knowledge of affordable internet options.

1. Consider implementing a dig once policy.
2. Advertise and increase awareness of individual internet plans.
3. Increase Wi-Fi availability in rural areas.
4. Explore the possibility of creating a regional municipal fiber network.

GOAL 3: Provide residents with readily accessible devices.

1. Assess state of publicly available accessible devices (such as e-readers or steady mouses) and provide ways for disabled residents to access the internet.
2. Purchase additional hotspots to be available for checkout at the library or other community anchor institutions for longer periods of time.
3. Upgrade computers and other devices at libraries and other relevant community anchor institutions.

GOAL 4: Assist vulnerable and underserved populations in safely and effectively navigating the internet and provide resources for troubleshooting digital devices and the internet.

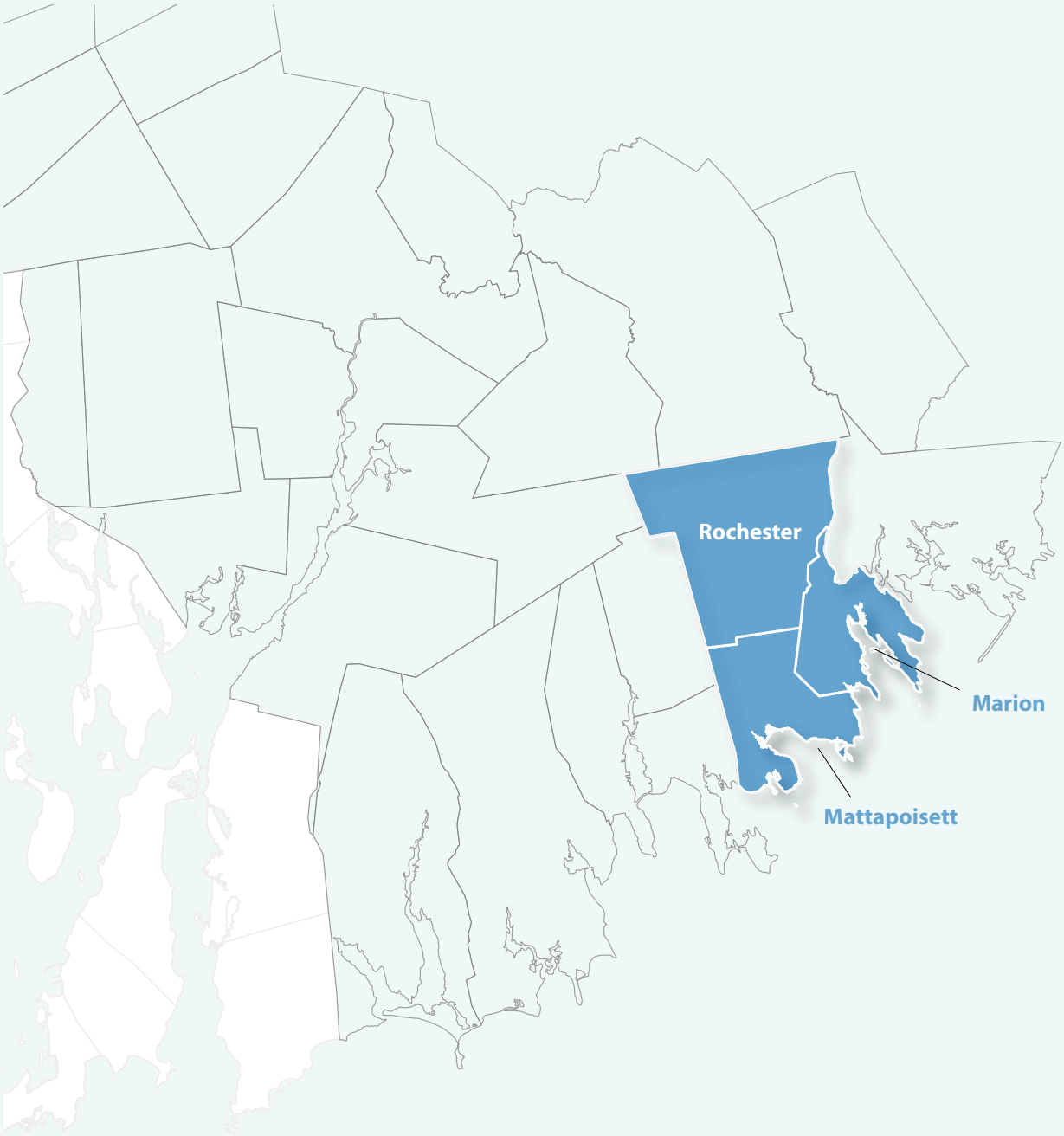
1. Offer more advanced digital literacy classes.
2. Consider hiring an additional technology teacher for the Rochester and Marion elementary schools.
3. Acquire help from Old Colony Regional Vocational Technical High School students to teach digital skills classes to seniors.
4. Hire a regional Digital Navigator in the Tri-Town area who can help with residents' digital equity and digital literacy needs.

Existing Conditions

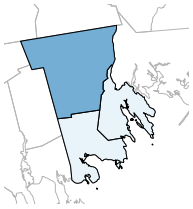
The study area of this regional digital equity plan consists of the Towns of Rochester, Marion, and Mattapoisett - three rural/coastal communities in Plymouth County, Massachusetts. The main regional connection between these three communities is the Old Rochester School District which serves as an offshoot for many other regional connections both formal and informal.

Image 29. Old Rochester Regional Vocational Technical School

Map 5. Zoom of Tri-Town in SRPEDD Region



Rochester
Community Snapshot



Rochester
Data Snapshot

Population

Population Total	**5,770**
% Children (18 and under)	**21.9%**
% Older Adults (65 and over)	**22.1%**
Median Age	**42.9**
% Black, Indigenous, people of color	**4.5%**
% Disabilities	**2.6%**
% Limited English speaking households	**1.6%**

Income

Median household income	**$114,604**
Household income less than $25,000	**7.0%**
Household income less than $50,000	**15.7%**

Housing

Total housing units	**2,161**
% Occupied Housing	**98.3%**
% Owner-Occupied	**87.9%**
% Renter-Occupied	**12.1%**

Computers

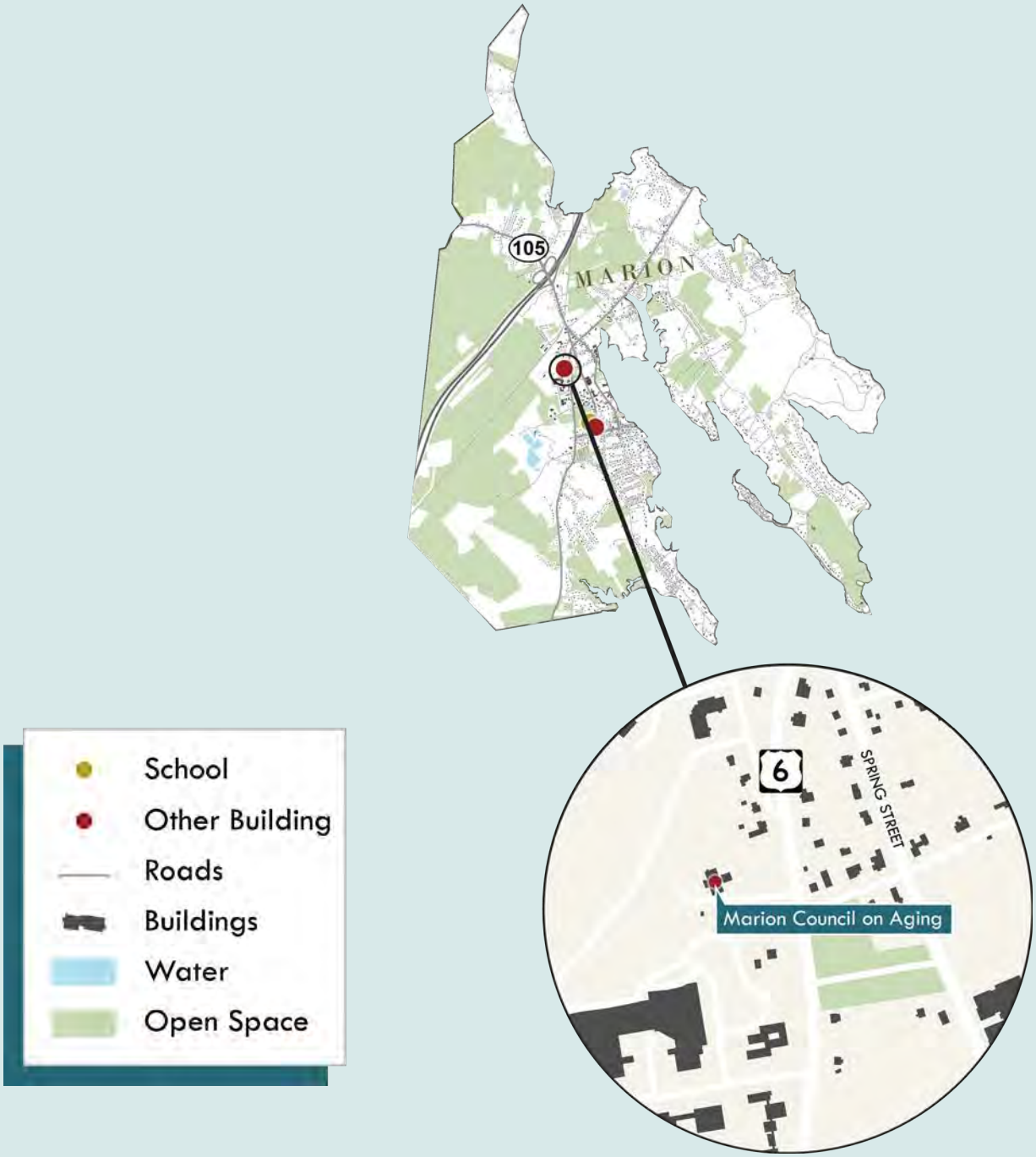
% Households with no computing device	**4.5%**

Broadband

% Households without an internet subscription	**6.9%**
% Households using only cellular data plan	**9.2%**

Marion

Community Snapshot



Marion
Data Snapshot

Population

Population Total	**5,312**
% Children (18 and under)	**19.4%**
% Older Adults (65 and over)	**19.2%**
Median Age	**46.8**
% Black, Indigenous, people of color	**13%**
% Disabilities	**7.6%**
% Limited English speaking households	**1.2%**

Income

Median household income	**$111,351**
Household income less than $25,000	**8.1%**
Household income less than $50,000	**14.4%**

Housing

Total housing units	**2,468**
% Occupied Housing	**79.8%**
% Owner-Occupied	**84.5%**
% Renter-Occupied	**15.5%**

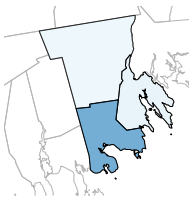
Computers

% Households with no computing device	**4.6%**

Broadband

% Households without an internet subscription	**7.6%**
% Households using only cellular data plan	**6.6%**

Mattapoisett
Community Snapshot



Mattapoisett
Data Snapshot

Population

Population Total	**6,563**
% Children (18 and under)	**16.5%**
% Older Adults (65 and over)	**15.3%**
Median Age	**56**
% Black, Indigenous, people of color	**1.9%**
% Disabilities	**6%**
% Limited English-speaking households	**0%**

Income

Median household income	**$110,179**
Household income less than $25,000	**6.4%**
Household income less than $50,000	**14.8%**

Housing

Total housing units	**3,614**
% Occupied Housing	**82.3%**
% Owner-Occupied	**78.9%**
% Renter-Occupied	**21.1%**

Computers

% Households with no computing device	**4.3%**

Broadband

% Households without an internet subscription	**6.3%**
% Households using only cellular data plan	**12.3%**

Connectivity and Affordability

What is broadband?

Broadband is colloquially referred to as “high-speed internet” but is technically defined by the Federal Communications Commission (FCC) as internet with speeds of at least 100/20 Mbps – meaning internet with a 100 megabits per second (Mbps) download speed and 20 Mbps upload speed. This figure was recently updated in 2024 from 25/3 Mbps to 100/20 Mbps to ensure all residents have internet that is fast enough to effectively participate in modern online activities.

Measuring Broadband: Speed

Having internet that is slower than broadband speeds can greatly limit the activities that a person can engage in online. For example, streaming content can take up to 25 Mbps and playing online video games can take up to 100 Mbps. General web browsing and email sending takes between 1 and 5 Mbps. Broadband internet speeds of 100/20 Mbps generally supports the needs of up to four internet users.[4] A **broadband serviceable location** or **BSL** is defined as any residential or business address that can have a broadband internet subscription.

Running speed tests can help a community measure the upload and download speeds at a specific location.

4 Broadband now, “How Much Internet Speed Do You Need?”, 2024

Table 1 shows the data for 808 speed tests in Rochester, 1,421 speed tests in Marion, and 1,549 speed tests in Mattapoisett. MBI collected this data from Ookla speed tests that were conducted between December 2021 and November 2022. MBI then took this data and aggregated it into relevant data sets by municipality. According to this data, 10% (81) of tests run in Rochester, 11.8% (168) of tests run in Marion, and 16.8% (260) of tests run in Mattapoisett experience speeds that are less than 100x20 Mbps, or less than broadband internet speeds.

Table 1. Speed Test Data

	Rochester	Marion	Mattapoisett
Total Tests	**808**	**1,421**	**1,549**
Unique ID Tests	175	216	299
Jitter > 50	43	60	73
Latency > 100 ms	2	4	1
Speeds > 500 ms	0	0	0
Speeds < 25 x 3 Mbps	18	15	23
Speeds < 50 x 10 Mbps	35	52	87
Speeds < 100 x 20 Mbps	81	168	260
Speeds at least 25 x 3 Mbps	746	1,301	1,412
Speeds at least 50 x 10 Mbps	657	1,133	1,184
Speeds at least 100 x 20 Mbps	456	806	761
Speeds at least 100 x 100 Mbps	307	279	410

Table 2 shows the maximum speeds available at broadband serviceable locations throughout the Tri-Town.

Table 2. Maximum Speeds

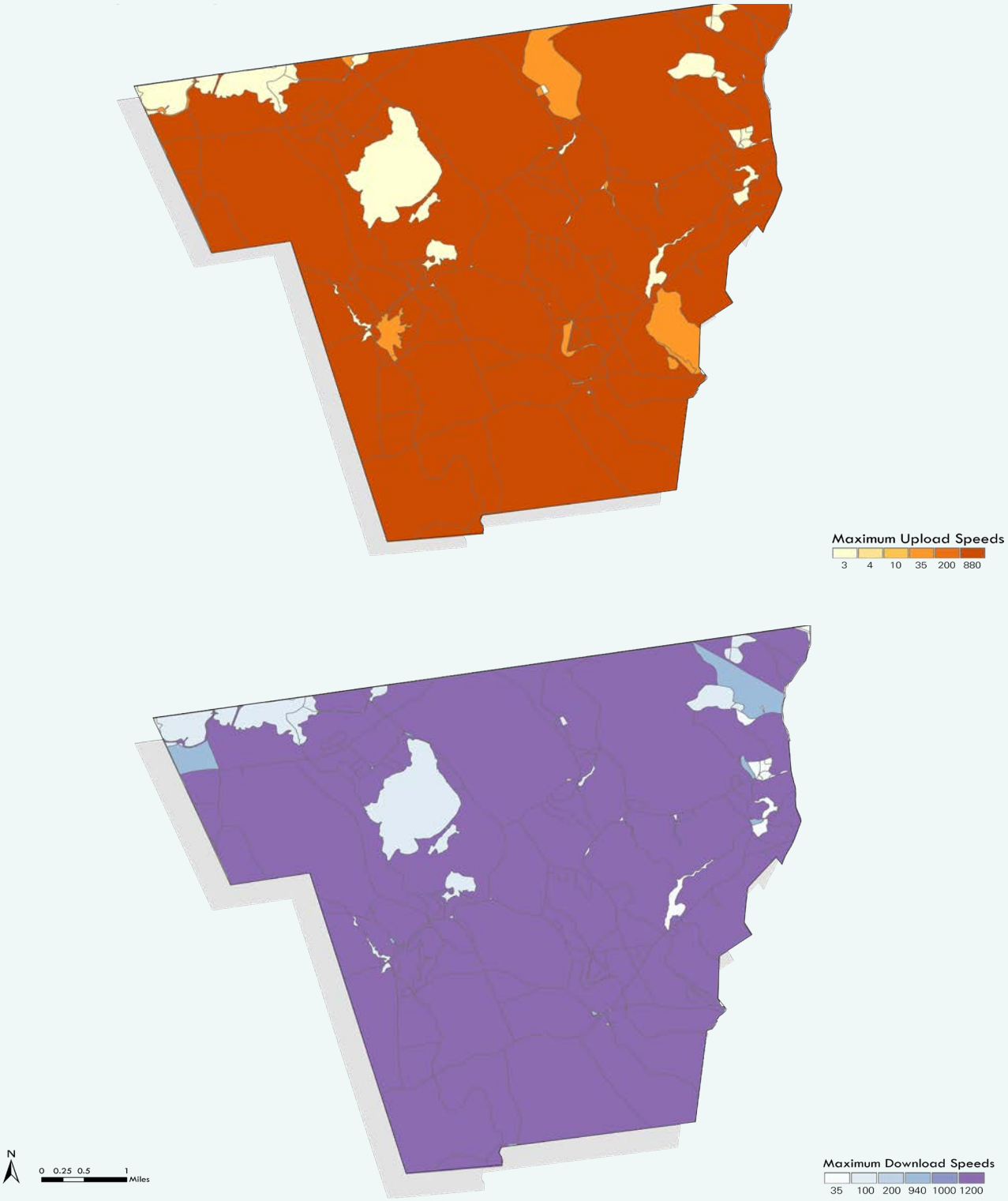
	Max Speed 25/3 Mbps	Max Speed 100/20 Mbps	Max Speed 100/100 Mbps	Max Speed 1000/1000 Mbps
Rochester	0%	11.36%	88.59%	0%
Marion	0%	12.7%	87.23%	0%
Mattapoisett	0%	9.15%	90.85%	0%

Download and Upload Speeds

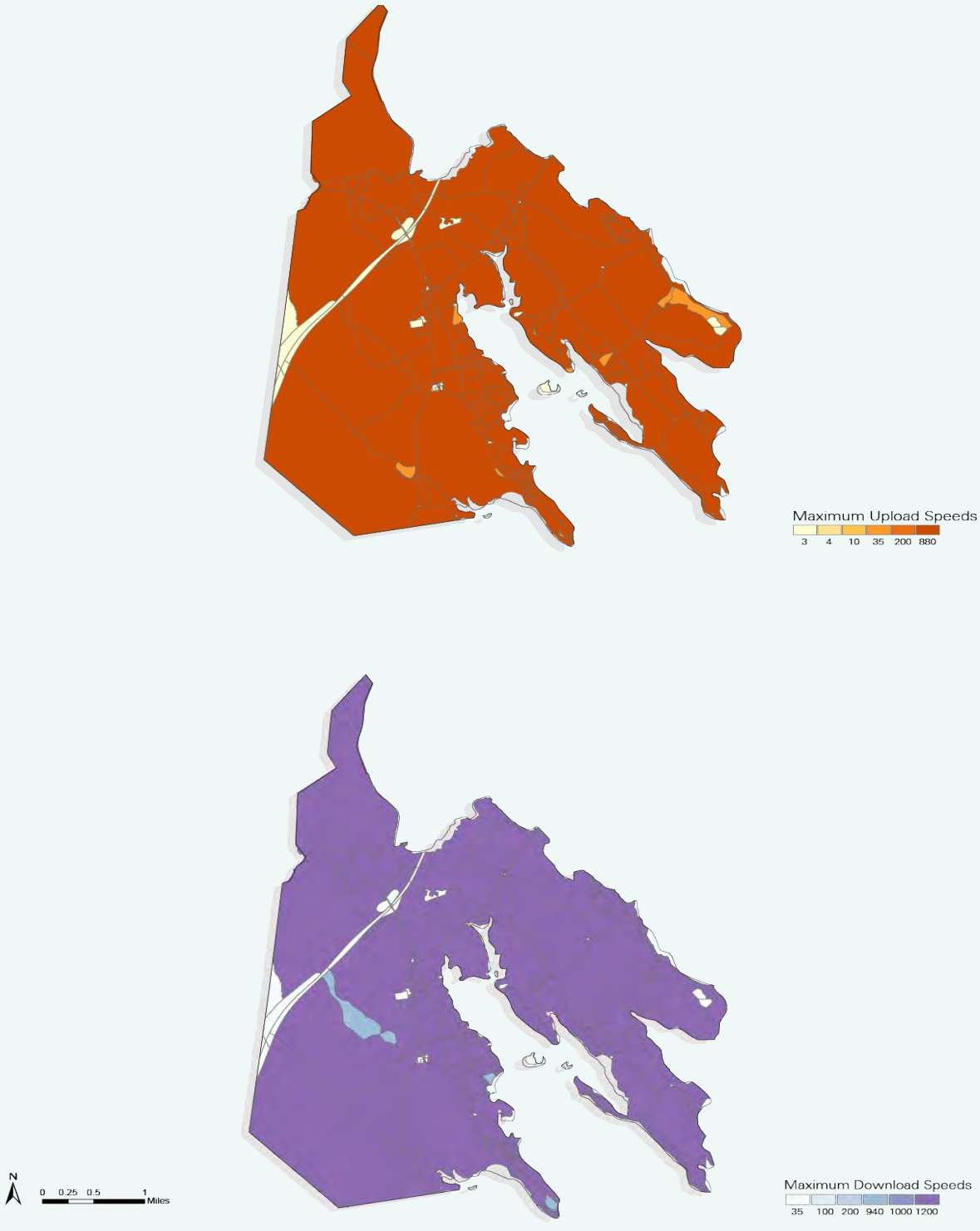
Maps 1 to 3 show the maximum upload and download speeds of internet through Rochester, Marion, and Mattapoisett.

- Download speed *identifies how fast information travels to you, for example, how fast it takes to download large files or show webpages with multiple pictures.*
- Upload speed *is how fast information can travel from you. This effects things like your ability to participate in a virtual doctor's appointment, which can take 5-10 Mbps.*

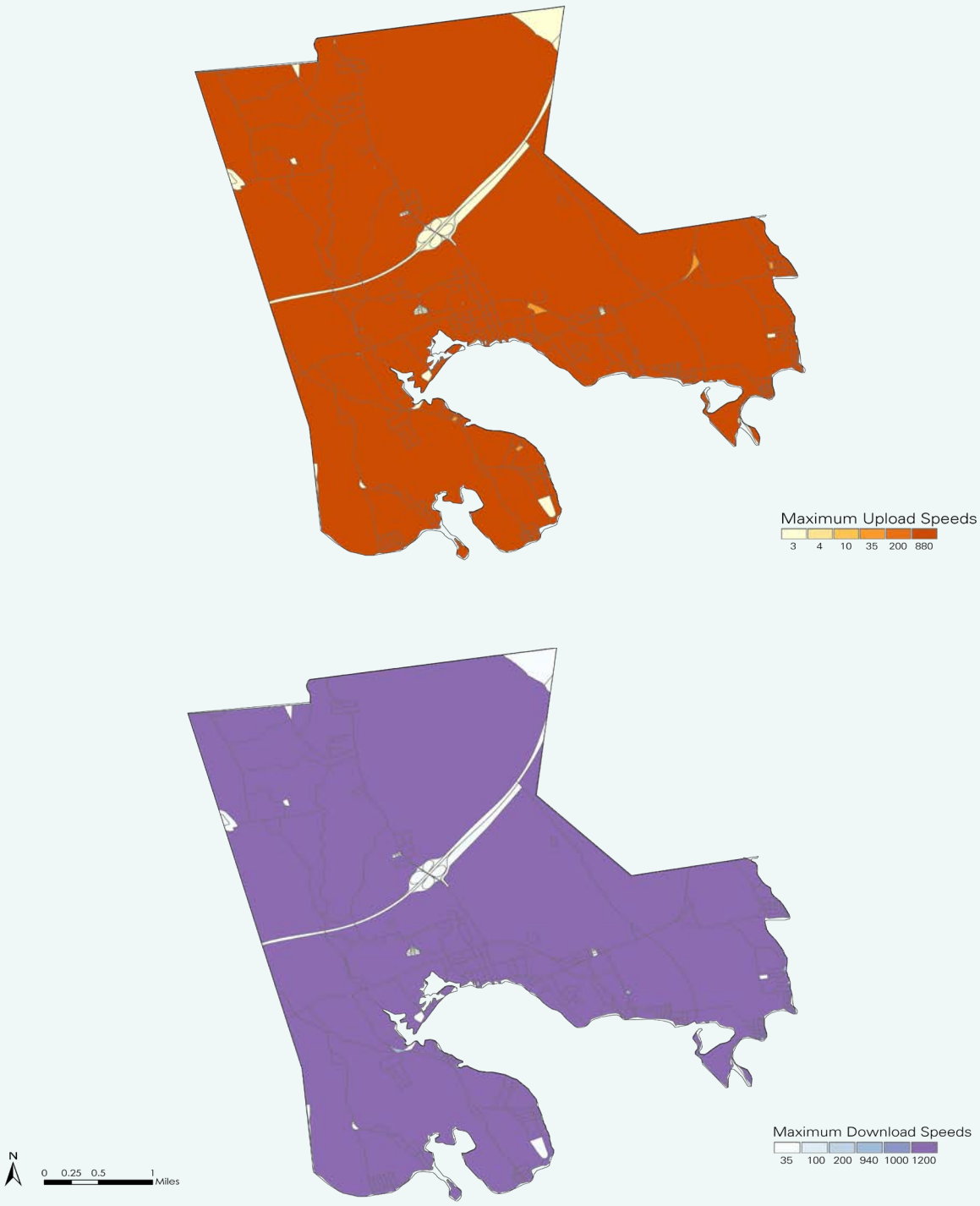
Map 1. Maximum Upload and Download Speeds in Rochester



Map 2. Maximum Upload and Download Speeds in Marion



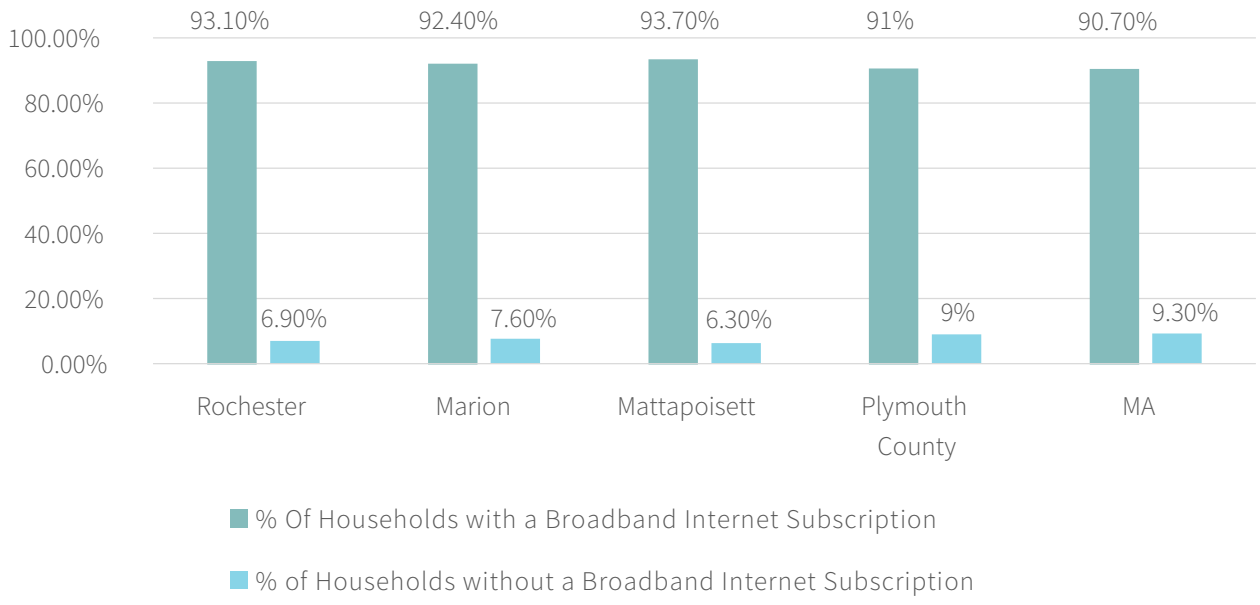
Map 3. : Maximum Upload and Download Speeds in Mattapoisett



Connectivity

In Rochester, 6.9% of households do not have a broadband internet subscription, which is similar to 7.6% of households in Marion and 6.3% of households in Mattapoisett who also do not have a broadband internet subscription. In comparison, 9% of households in Plymouth County and 9.3% of households in Massachusetts do not have a broadband internet subscription. While these percentages are slightly lower for the Tri-Town area, this is not the only metric by which digital equity is measured.

Figure 2. Households with and without a Broadband Internet Subscription



Tables 3 to 5 below show the internet service providers that are active in Rochester, Marion, and Mattapoisett. The Massachusetts Broadband Institute acknowledges service covered from Comcast and T-Mobile in Rochester, Comcast, T-Mobile, and Verizon in Marion, and Comcast, T-Mobile, and Verizon in Mattapoisett. From feedback gathered during the outreach for this plan, staff heard from the majority of residents spoken to that they have Comcast as their internet service provider.

Table 3. Internet Service Providers in Rochester

Provider Name	Technology	Max Advertised Download Speed (Mbps)	Max Advertised Upload Speed (Mbps)	# of BSLs with Service Available	% of BSLs with Service Available
Comcast	Cable	1200	35	2,260	99.91%
T-Mobile	Fixed Wireless	100	20	193	8.53%
T-Mobile	Fixed Wireless	25	3	193	8.53%

Table 4. Internet Service Providers in Marion

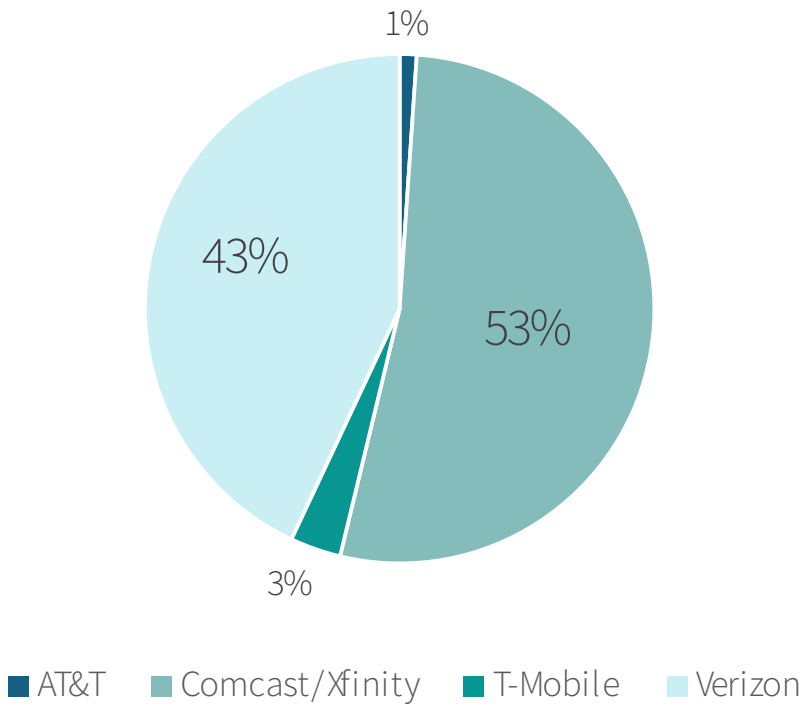
Provider Name	Technology	Max Advertised Download Speed (Mbps)	Max Advertised Upload Speed (Mbps)	# of BSLs with Service Available	% of BSLs with Service Available
Comcast	Cable	1200	35	2,644	99.92%
T-Mobile	Fixed Wireless	100	20	3	0.11%
T-Mobile	Fixed Wireless	25	3	206	7.79%
Verizon	Fiber	940	880	2,308	87.23%

Table 5. Table X: Internet Service Providers in Mattapoisett

Provider Name	Technology	Max Advertised Download Speed (Mbps)	Max Advertised Upload Speed (Mbps)	# of BSLs with Service Available	% of BSLs with Service Available
Comcast	Cable	1200	35	3,464	99.63%
T-Mobile	Fixed Wireless	25	3	696	20.02%
T-Mobile	Fixed Wireless	100	20	2	0.06%
Verizon	Fiber	940	880	3,159	90.80%

Figure 3 shows responses to the survey question “Who is your internet service provider?” for the entire Tri-Town region. The most common answer was Comcast or Xfinity, followed by Verizon. Additional ISPs not identified by MBI are mentioned here as well, such as AT&T and Cox.

Figure 3. Survey Q7: Who is your internet service provider?



Figures 4 - 6 show the answers to the survey question “Who is your internet service provider?”, broken down by town. In Rochester, the most common response was Comcast (14), followed by Verizon (11), and one respondent each for T-Mobile and AT&T. In Marion, Comcast was likewise the most common answer (25 respondents), with Verizon following (17 respondents), and one respondent answering Cox. For Mattapoisett, the most common response was also Comcast (49), followed by Verizon (40), then T-Mobile (3), and AT&T (1).

Figure 4. Survey Q7: Rochester Respondents

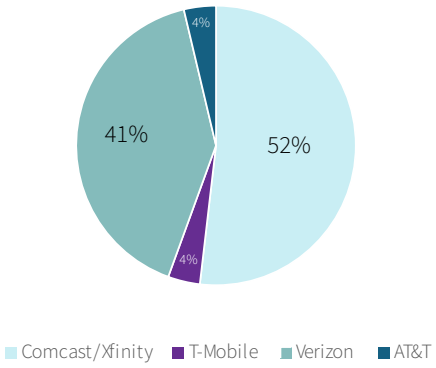


Figure 5. Survey Q7: Marion Respondents

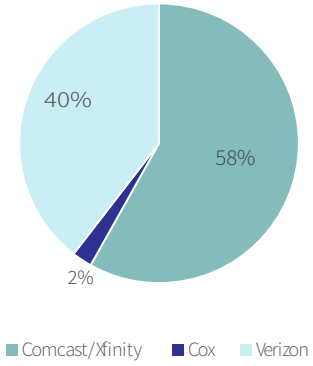
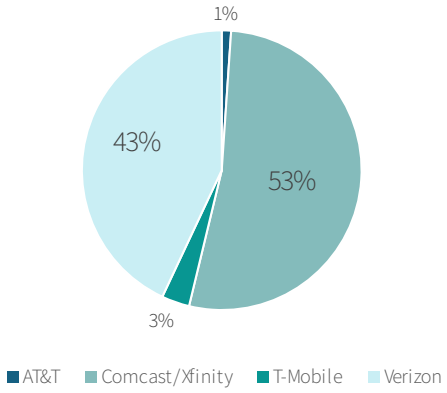


Figure 6. Survey Q7: Mattapoisett Respondents



Tables 6 and 7 show coverage and competition of ISPs in Rochester, Marion, and Mattapoisett.

Table 6. Coverage and Competition

	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
Rochester	99.96%	99.96%	88.55%
Marion	99.92%	99.92%	87.23%
Mattapoisett	100%	100%	90.48%

Table 7. Number of Internet Service Providers

	0 Providers	1 Provider	2 Providers	3 Providers	4 or More Providers
Rochester	0.04%	10.08%	74.14%	15.74%	0%
Marion	0.08%	12.02%	80.69%	7.22%	0%
Mattapoisett	0%	8.57%	72.3%	19.13%	0%

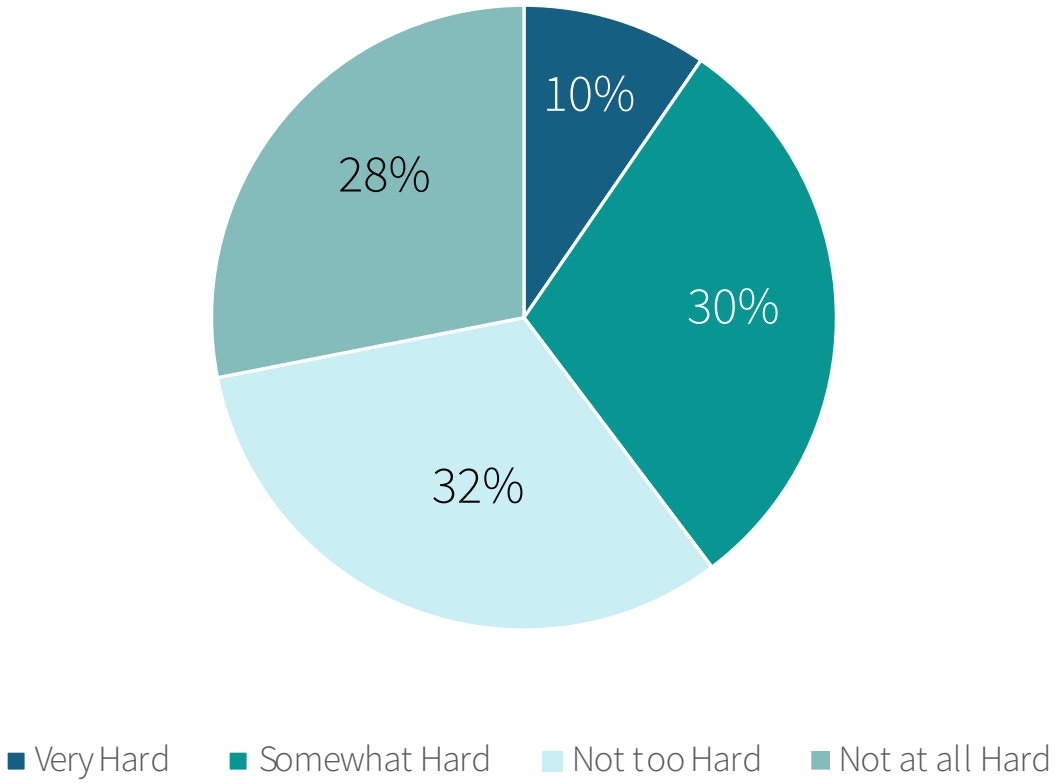
The entirety of Mattapoisett and the majority of Rochester (99.96%) and Marion (99.92%) have internet service coverage of 100/20 Mbps, which is considered broadband internet speeds, from at least one internet service provider. In terms of having 100/20 Mbps coverage from 2 or more providers, 88.55% of Rochester accomplishes this, alongside 87.23% of Marion and 90.48% of Mattapoisett. This means that most households have options when it comes to choosing an internet service provider, but there are still households in the Tri-Town region that only have one internet service provider option at their address, which forces them to pay whatever that provider is charging for internet if they want to have internet access in their home. Only 15.74% of Rochester, 7.22% of Marion, and 19.13% of Mattapoisett has access to internet service from three or more providers at their address. Having more providers creates competition in the market and ensures that residents have more options for cheaper and faster internet.

Affordability

One concern brought up throughout the public engagement process was the cost of internet being too high in comparison to the service received.

The below graph shows survey responses to the question “How hard is it for you to pay your internet bill?”. Of residents surveyed, 14 said it is very hard for them to pay their monthly internet bill and 44 said it is somewhat hard for them to pay.

Figure 7. Figure X: Survey Q 12, “How hard is it for you to pay your internet bill?”



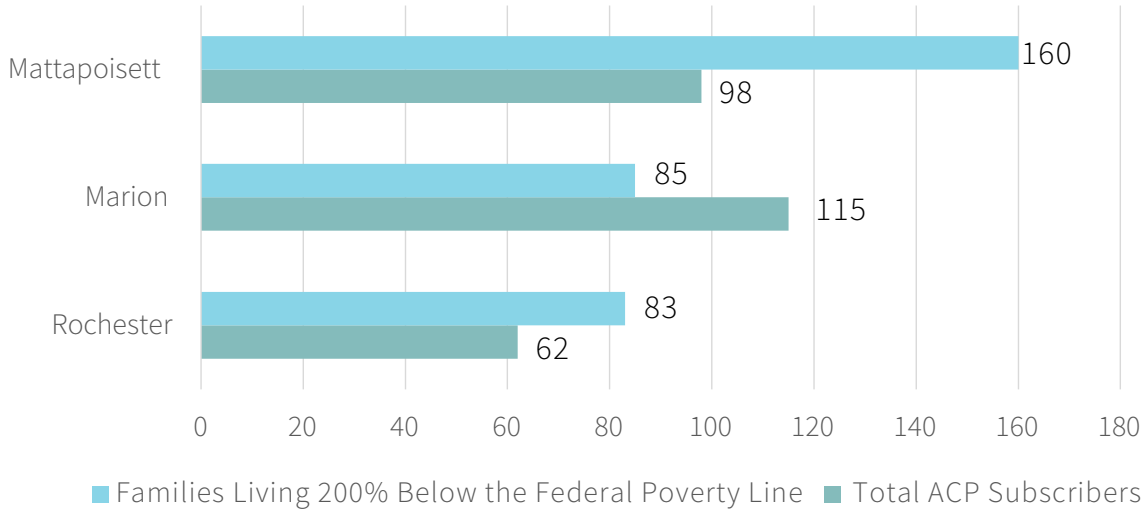
What can ACP Enrollment Tell Us?

The Affordable Connectivity Program (ACP) was a federal program created during the Covid-19 Pandemic aimed at alleviating the monthly price of internet for cost burdened households. The program provided households with a $30 credit off their monthly internet bill, and a $100 credit towards a device, or $75 off their monthly internet bill if they were living on tribal lands. Families who were living at or below 200% of the federal poverty line were eligible to participate in the ACP. Other things that constituted eligibility included having at least one member in the household who received a Federal Pell Grant that year, or if they were already enrolled in an assistance program, such as SNAP or Medicaid. The program ended in May 2024 due to a lack of funding at the federal level.

Image 3. Image X: ACP Has Ended for Now Website Banner

Figure 8 shows the number of families living at or below 200% of the federal poverty line versus enrollment in the Affordable Connectivity Program in Rochester, Marion, and Mattapoisett. The Town of Marion had the highest level of ACP adoption out of the Tri-Town area. Still, over half of the number of eligible households based on income requirements in Mattapoisett and Rochester were utilizing the Affordable Connectivity Program as well.

Figure 8. ACP Enrollment vs. Families Living 200% Below the Federal Poverty Line



Despite the end of the ACP, there are other lesser-known options that residents can utilize to obtain cheaper internet prices. The Comcast Internet Essentials Program offers 50 Mbps for $9.95 a month or 100 Mbps for $29.95 a month (Internet Essentials Plus). To participate in this program, people must qualify by currently participating in certain assistance programs.5 As of the end of 2022, 200 households in Marion had utilized the Internet Essentials Program. Staff were unable to obtain data on the number of households utilizing the program in Rochester and Mattapoisett.

Additionally, the Universal Service Administrative Company's (USAC) Lifeline Program provides a discount of $9.25 a month off of phone, internet, or bundled services for qualified participants. Participants can qualify via income or participating in another government assistance program.6 While these programs both provide some relief in the price of a monthly internet bill, neither are a true replacement for the ACP.

5 Xfinity, Internet Essentials Web page

6 USAC Lifeline Support Web page

Figures 9 - 11 show the cost of each internet service plan available at a sample address in each Rochester, Marion, and Mattapoisett. The average cost of a plan available at a sample address is $61.87 in Rochester, $73.32 in Marion, and $62.49 in Mattapoisett. These graphs do not take into account any affordable internet programs such as the Comcast Internet Essentials program as not all residents qualify.

Figure 9. Internet Service Packages Available at a Sample Address in Rochester

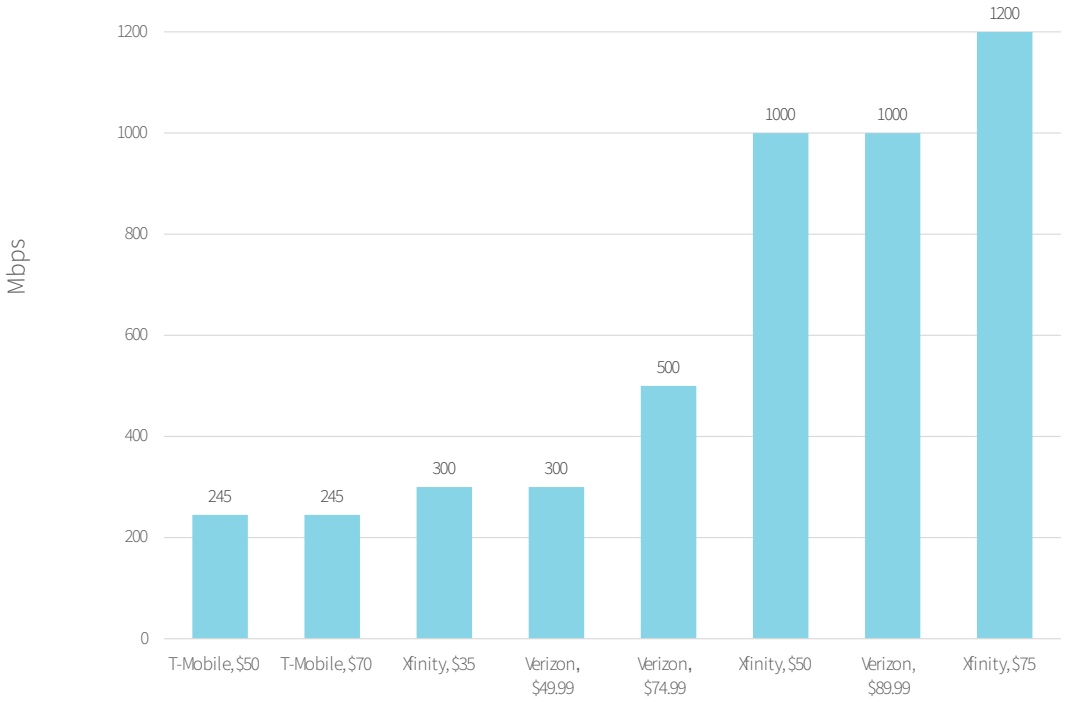


Figure 10. Internet Service Packages Available at a Sample Address in Marion

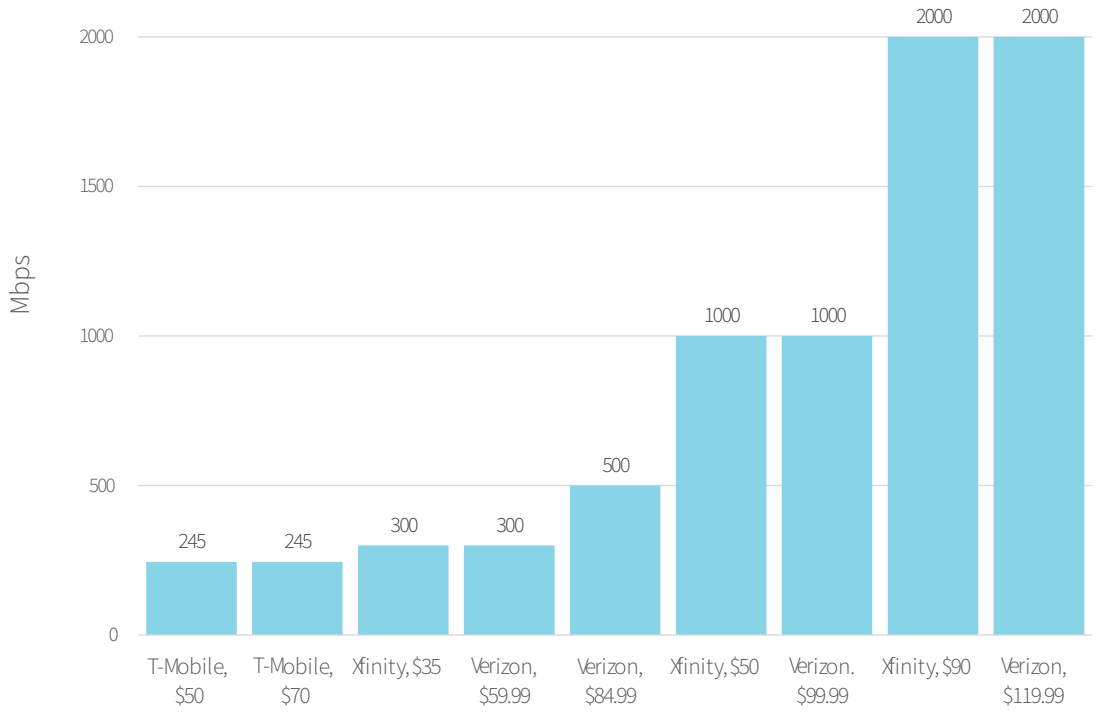
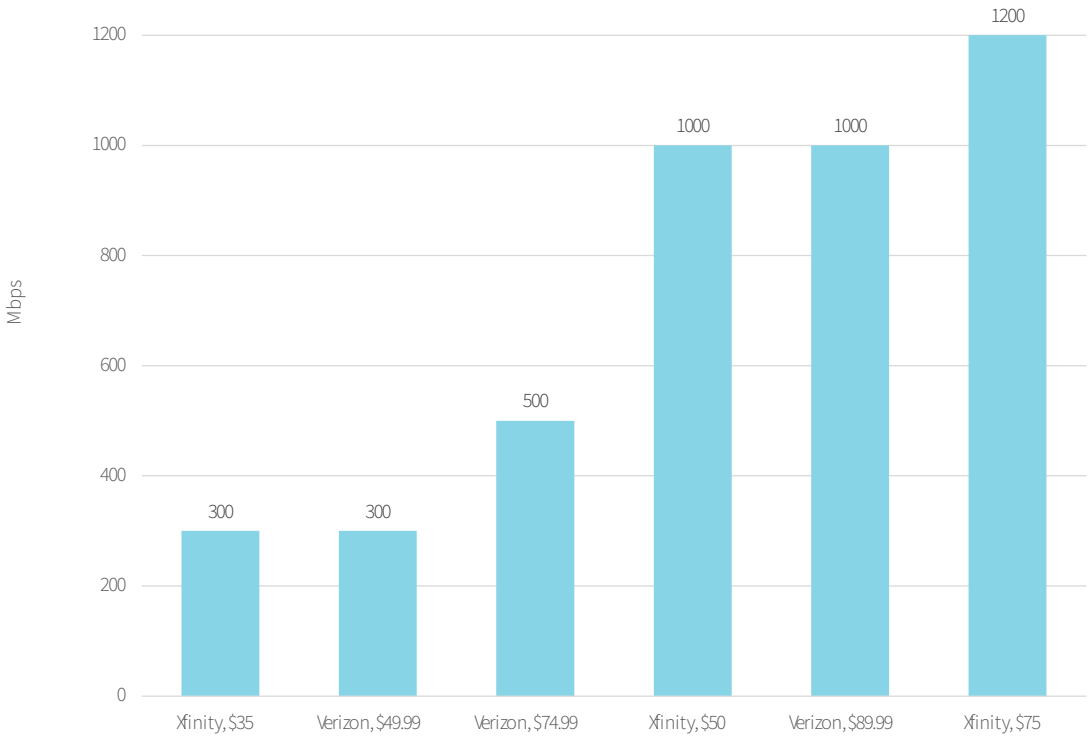


Figure 11. Internet Service Packages Available at a Sample Address in Mattapoisett



According to survey results, the average cost of a monthly internet bill in the Tri-Town is $140.88. This further breaks down to $126.86 in Rochester, $143.59 in Marion, and $142.03 in Mattapoisett.

This estimate is based on Question 11 of the survey which asks, “Not counting the costs of other services in your bundle, how much do you pay for the internet every month?”. The results could imply that some people may have answered with the price of their entire bundle, not just the cost of the internet portion. Excluding answers of $200 or more, the average cost it $98.30. Furthermore, excluding answers of over $120 (which was the highest priced plan found at the sample addresses discussed above), brings the average cost for a monthly internet bill to $80.31.

Figure 12 shows the average cost of a monthly internet bill broken down by each town in accordance with survey results while Figure 13 show a breakdown of answers by price category.

Figure 12. Average Cost of Monthly Internet Bill Breakdown by Town

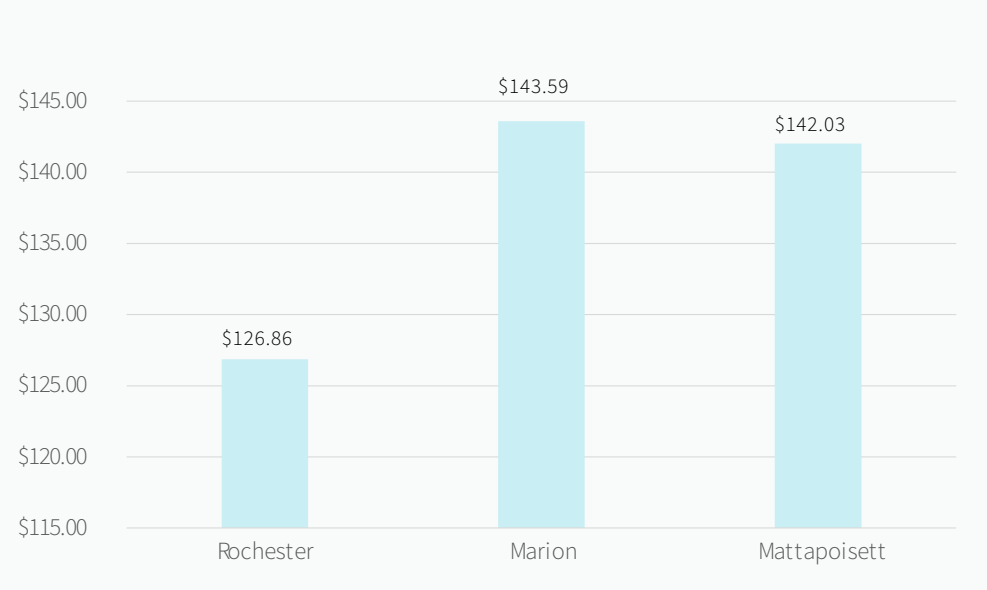
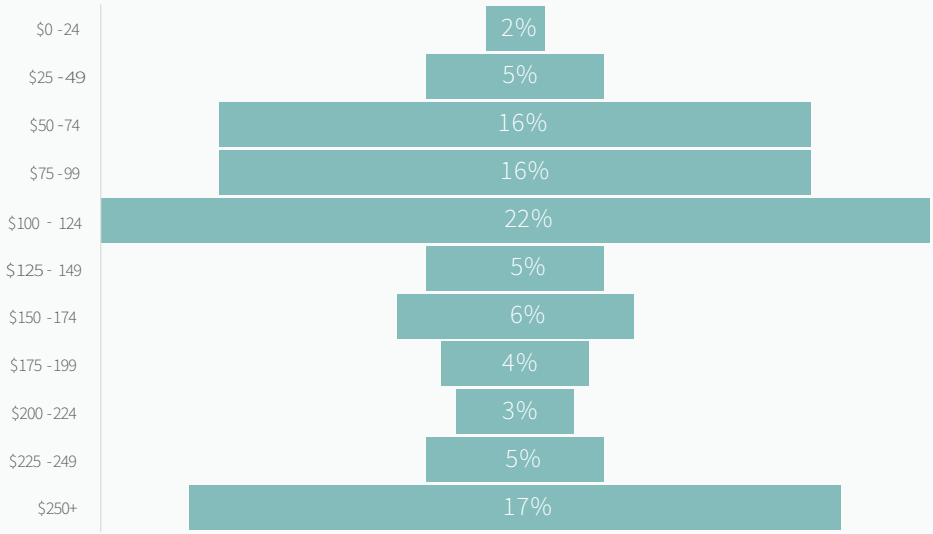


Figure 13. Average Cost of Monthly Internet Bill By Price Catergory



Device Access

Most households in the Tri-Town area have access to a computer in their home. According to US Census data, 4.5% of Rochester households, 4.6% of Marion households, and 4.3% of Mattapoisett households do not have a computer in their home. These numbers are slightly lower than that of the county and the state, where 5% of Plymouth County and 5.7% of the state do not have a computer in their household. Despite these numbers being relatively low, there are still a number of households in need.

Figure 14. Households Without a Computer

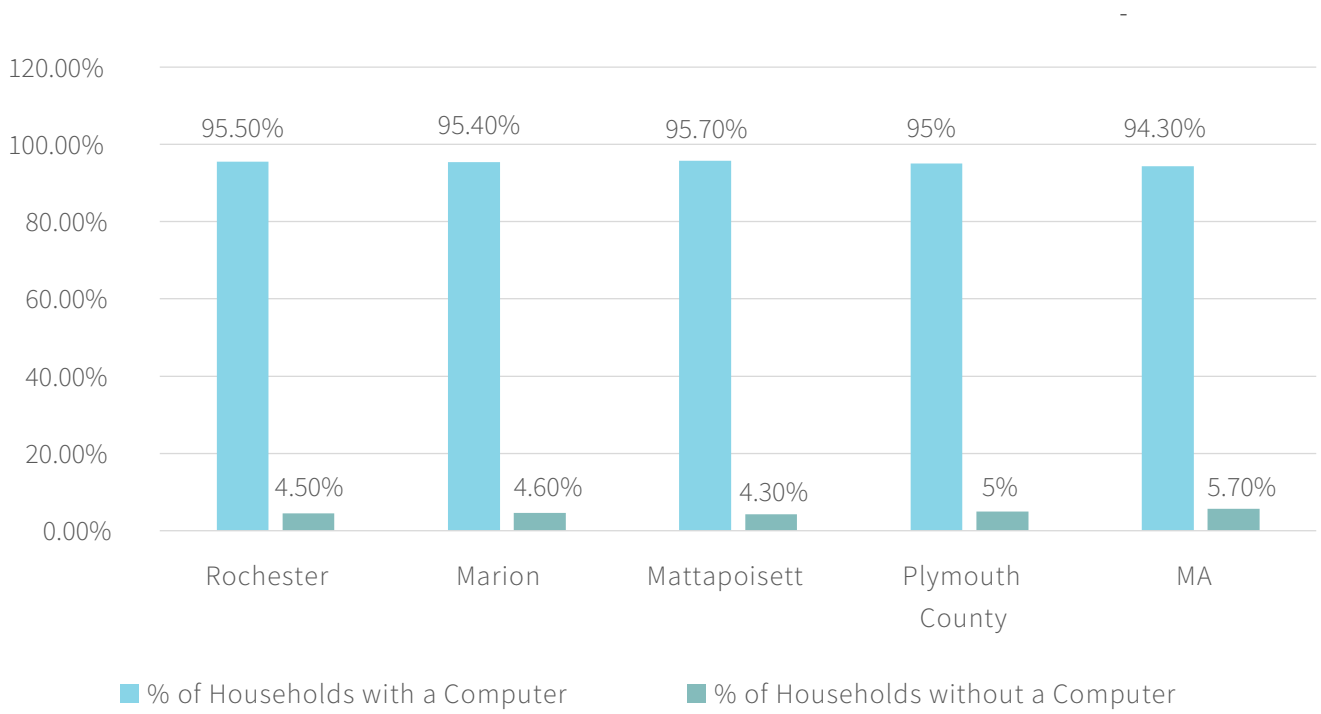
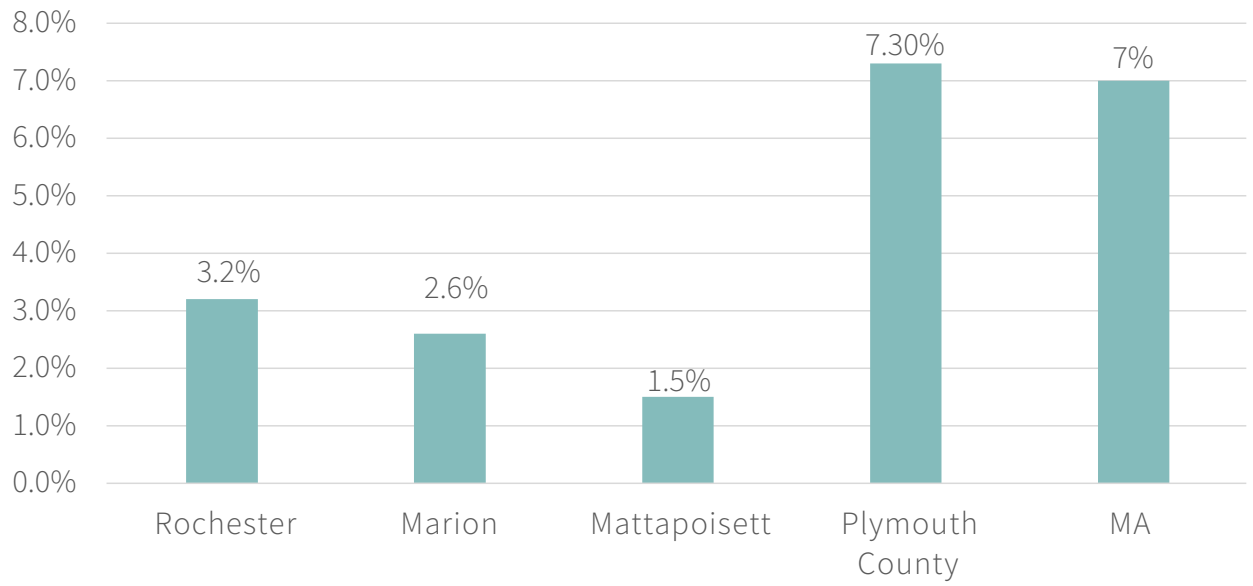


Figure 15 shows the percentage of households that have only a smartphone and no other type of computer device. In Rochester, 3.2% of households have a smartphone and no other computer, similar to 2.6% of Marion households and 1.5% of Mattapoisett households. In comparison, 7.3% of Plymouth County households and 7% of Massachusetts households have a smartphone with no other type of computer in their household. Though many Americans are shifting to rely more on smartphones to access the internet (this is notable among the 65+ population), certain websites and software limit what can be done on a smartphone, and in some cases, only work properly on a laptop or tablet.[7] Access to a computer can open opportunities to an adult learner who wants to pursue higher education, or to an elderly person who lacks access to transportation and therefore cannot visit or interact with their healthcare provider in person.

Figure 15. Households that Have a Smartphone with No Other Type of Computer



Source: American Community Survey, S2801: Types of Computers and Internet Subscriptions

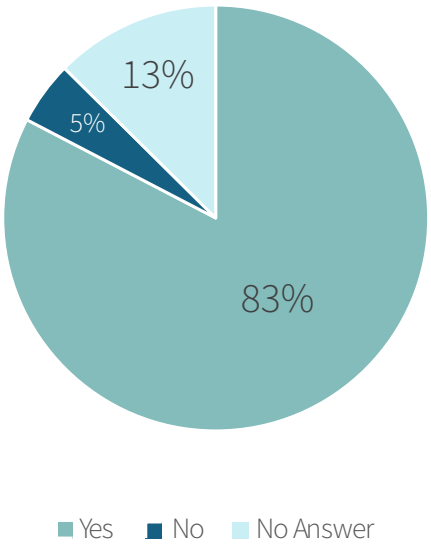
7 Pew Research Center, "Mobile Fact Sheet", https://www.pewresearch.org/internet/fact-sheet/mobile/, 2024

According to survey results, the devices that residents in the region use most frequently to access the internet include cellphones, desktop computers, laptop computers, and tablets. People also noted using the internet on other devices, including their televisions, printers, video gaming consoles, exercise equipment, and various streaming devices.

Figure 16 shows responses to the survey question "Does everyone in your household have access to the computer devices they need to meet their everyday needs for internet use?".

The majority of survey respondents (138) answered yes, that everyone in their household does have access to the computer devices they need to meet their everyday internet usage needs. However, there is still a small percentage of households (8 respondents) who do not have the computer devices they need in their household. This is important to note as it shows that there is a population within the Tri-Town that could use additional devices and support in accessing the internet.

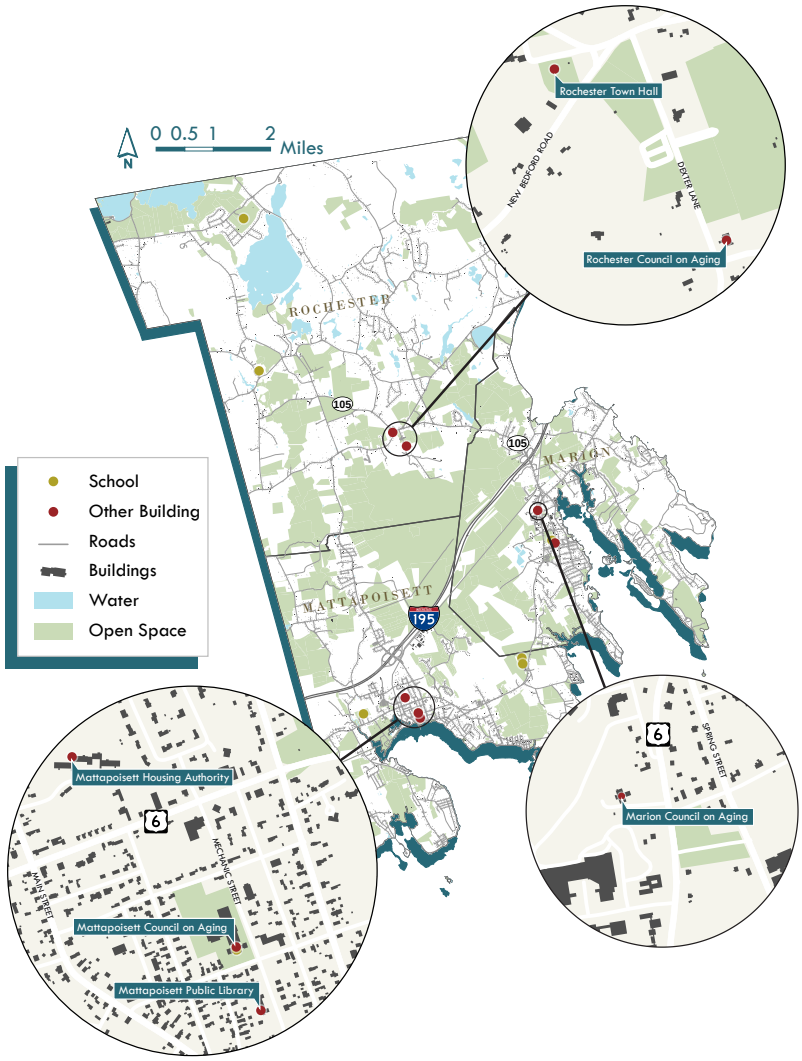
Figure 16. Survey Q16: Does everyone in your household have access to the computer devices they need to meet their everyday needs for internet use?



Digital Equity Assets

As part of SRPEDD's work with MBI in Fall 2023, staff compiled a list of digital equity assets throughout the Southeast region of Massachusetts. A digital equity asset is anything that supports or promotes digital equity. These can include things such as device distribution programs, digital navigators, any relevant plans, or other programs supporting digital equity.

Map 4. Community Anchor Insitutions in the Tri-Town



Public Instiutions and Programs

Town owned institutions like libraries and councils on aging provide a viatal resource for residents in the Tri-Town of any age.

Mattapoisett Public Library

Staff were able to gain a wealth of knowledge from a stakeholder interview with the Mattapoisett Public Library director. Staff heard that the director feels like there is little to no coordination between town services in Mattapoisett, as well as across the Tri-Town region in general. They currently do have some public access computers that residents can use at the library, but the service is lackluster, and sometimes it is hard to even print from the computers. Staff also heard about general cybersecurity worries from the library.

Image 7. Mattapoisett Public Library

Image 8. Sign in Mattapoisett Public Library

Image 9. Computer Area in Children's Section of Mattapoisett Public Library

Joseph H. Plumb Memorial Library
(Rochester Public Library)

Staff were able to visit the Rochester Public Library and conduct a stakeholder interview with the library director. Staff heard that there are no major digital equity concerns for the library or the patrons they serve. The main issue that came up was the library needing more space, specifically more space to offer more classes, including digital literacy classes. This library currently has three public computers for residents to use and four hotspots that are available to be borrowed.

Image 4. Inside Joseph H. Plumb Memorial Library

Image 5. Rochester Public Library

Elizabeth Taber Library
(Marion Public Library)

The Elizabeth Taber Library is the public library located in Marion. The library currently has four public access computers, an additional computer that can only be utilized to access the library catalogue, and four hotspots that are available for check out. In conducting a stakeholder interview with the library director, staff heard that the largest group of people that they find needing help with the internet is new people who have just moved to town and do not know where else to turn to for help. Staff also heard that many people come to the library in need of basic troubleshooting or general help with using their devices.

Image 6. Elizabeth Taber Library

Rochester Council on Aging

The Rochester Council on Aging is located near the town center and serves as one of the main meeting places in the town for community events. During a stakeholder interview with the director of the Rochester Council on Aging, staff heard that they used to have two laptops available at the Council on Aging for residents to use, but they are no longer there because no one was actually coming to use them. A main concern heard here was that there is no funding available for the Council on Aging to hold classes. The director stated that the biggest thing that he would like to see implemented in the area is a dedicated digital navigator or instructor for courses whose sole job it to help seniors in the Tri-Town with their digital equity needs.

Image 10. Rochester Council on Aging

Mattapoisett Council on Aging

The Mattapoisett Council on Aging serves as a hub for seniors in the Town of Mattapoisett. During the research and engagement portion of this plan, staff were not able to identify any digital equity programming that currently takes place at this council on aging. Mattapoisett also provides an extensive guide of digital equity resource on their website.

Image 12. Mattapoisett Council on Aging Sign

Marion Council on Aging

Similar to Mattapoisett and Rochester, the Marion COA serves as a hub for seniors in the Town of Mattapoisett. The Council on Aging often holds lectures related to various technology and digital equity related topics, such as a lecture series on Artificial Intelligence (AI) back in 2024.

Image 11. Marion Council on Aging

Mattapoisett Housing Authority

The Mattapoisett Housing Authority operated two public housing properties in the town, Homestead Court and Village Court. Homestead Court has 10 single family homes and Village Court has fifty-four one-bedroom units for elderly or disabled individuals. In a stakeholder interview with the members on the board of the housing authority, staff were told that there are some younger homeless individuals in town that don't have many resources to turn to and struggle with self-isolation.

Image 13. Mattapoisett Housing Authority Sign

Elementary Tech-Ed Classes

Currently, the Mattapoisett Elementary Schools, which are Center School and Old Hammondtown School have a Tech-Ed Teacher, who teaches technology classes to kindergarten-6th grade students in Mattapoisett. The students are taught things such as digital citizenship, internet safety skills, cyber bullying, Google suite, QR codes, Tinkercad 3D printing, TV training from the community TV network, robotics, drones, hardware and software, keyboarding, ethics, research, safety, and algorithms. Additionally, students all have a Chromebook that they are allowed to take home beginning in second grade, and kindergarteners and first graders have iPad in school, but they are not allowed to take them home. They also have more specific after school enrichment classes, such as robotics. When conducting a stakeholder interview with the Tech-Ed teacher, staff were told that there is an obvious divide between children in Mattapoisett versus children in Marion and Rochester when they reach the middle school, which is a regional school shared by all three towns. Many students in Marion and Rochester lack the necessary computer skills that are necessary for them to succeed in middle school and high school, because they are not receiving any formal technology lessons.

Image 14. Old Hammondtown School

Other Digital Equity Assets in the Tri-Town

Coastline Elderly Services

Coastline Elderly Services is a nonprofit group that "develops, provides, and coordinates a range of home care services designed to support and maintain the independent living of older adults within the community" throughout an area of eight towns, including Rochester, Marion, and Mattapoisett.8 One of the services they offer is teaching digital skills classes for seniors at councils on aging. As of October 2024, they had held three classes at the Rochester Council on Aging, as well as some larger group presentations at the Marion Council on Aging. Coastline Elderly distributes a community needs assessment, and beginning in 2020, the highest need they identified was technology literacy. This was the first time ever that transportation and housing were not found to be the highest need amongst seniors in their region. This showcases the growing demand for digital literacy and technology classes for seniors, especially throughout southeastern Massachusetts and the Tri-Town area.

Image 15. Coastline Elderly Services Logo

8 https://coastlinenb.org/about-us/

Broadband Equity, Access, and Deployment (BEAD)

The Broadband Equity, Access, and Deployment (BEAD) program's goal is to build high-speed internet connections to all unserved and underserved communities in Massachusetts, and across the United States. The purpose of the BEAD Challenge Process is to help catalogue unidentified broadband serviceable locations (BSLs) in the state. This process allowed eligible entities a chance to dispute the status of "served" (a location with an internet speed of 100/20 Mbps), "underserved" (a location with an internet service slower than 100/20 Mbps), or "unserved" (a location receiving internet service slower than 25/3 Mbps) BSLs. This process did not take affordability into consideration, it is only about the speed of the service.

Overview of the types of BEAD Challenges:

- "**Availability**: Service shown isn't available or service is currently available but isn't shown
- **Speed**: Service speed is slower than advertised that the location can be classified as underserved or unserved
- **Latency**: The round-trip latency of the broadband service exceeds 100 milliseconds (ms)
- **Data Caps**: The only service plans marketed to consumers impose an unreasonable capacity allowance
- **Enforceable Commitment**: Federal, state, or local funding is already paying to connect this location (or this location will be left out)
- **Planned Service**: Privately funded construction is underway to connect this location (this location will be left out)
- **Community Anchor Institution**: Location is (or is not) in one of the CAI categories defined in the Massachusetts State Challenge Process."[9]

9 Massachusetts Broadband Institute, "Bead Challenge Process", 2024`

Image 16. BEAD Dashboard for Rochester

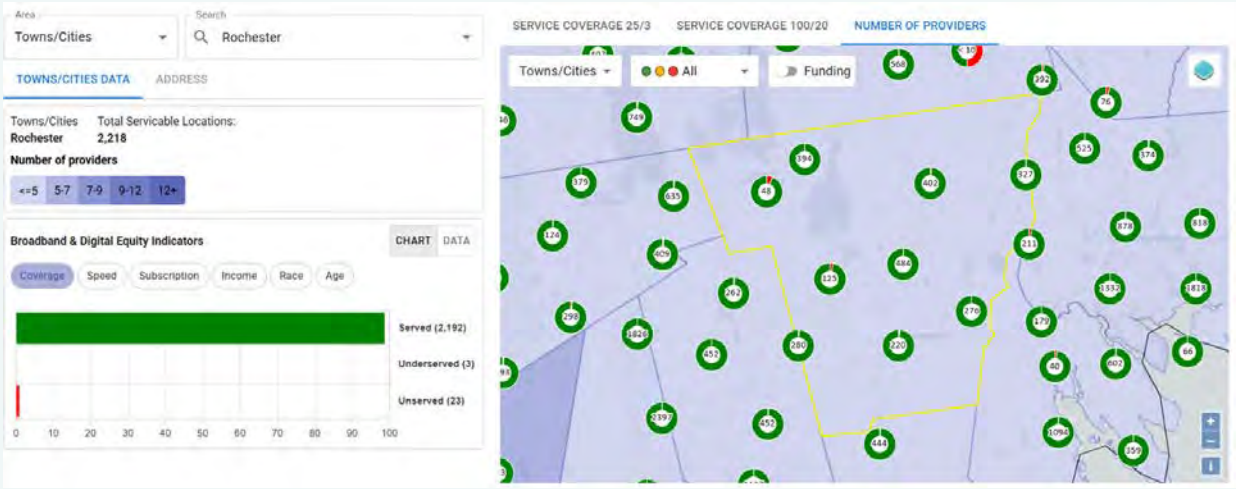


Image 17. BEAD Dashboard for Marion

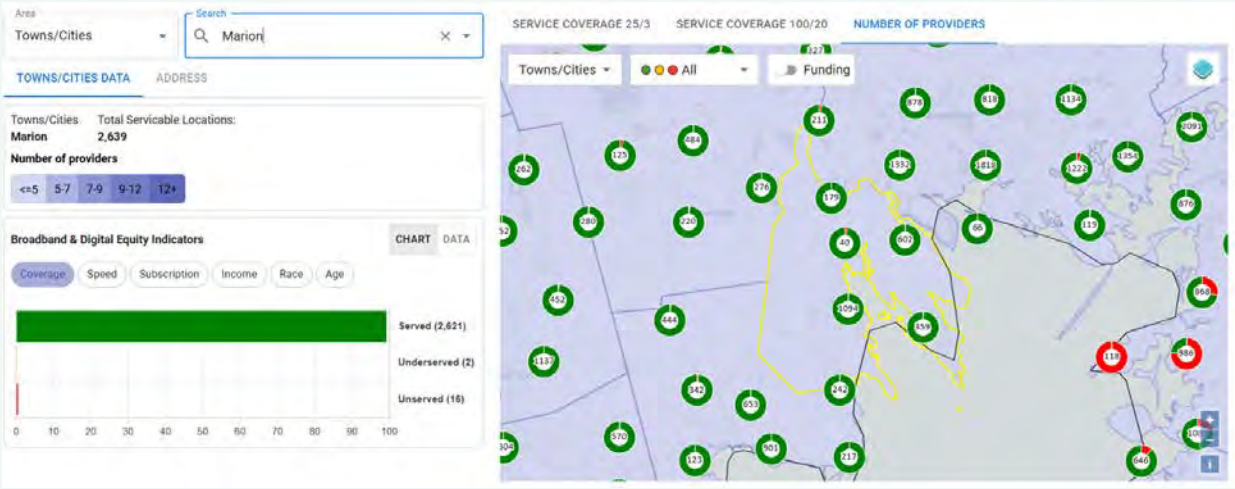
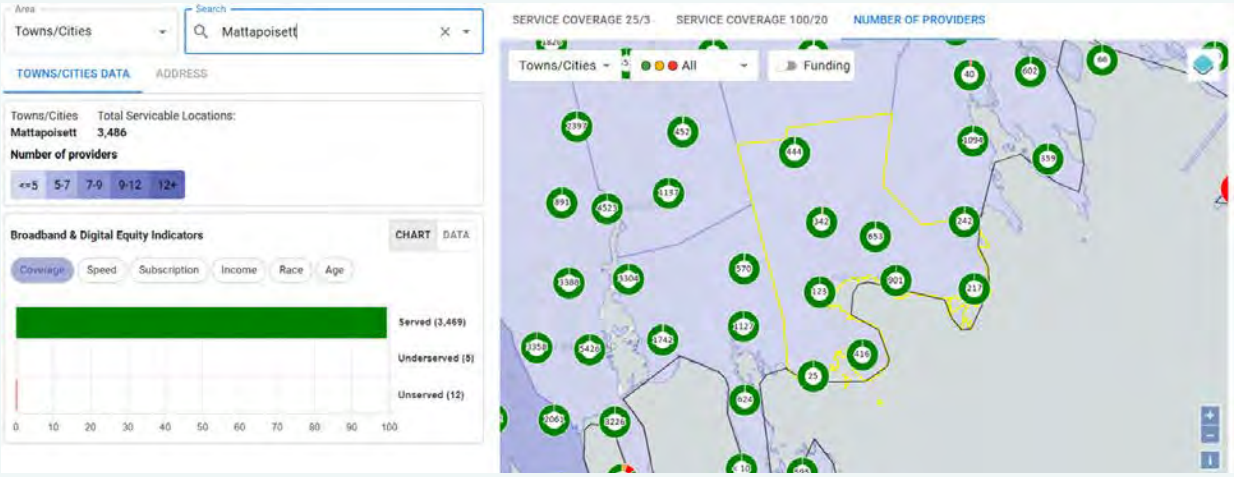


Image 18. BEAD Dashboard for Mattapoisett



Community Needs & Vulnerable Populations

The Massachusetts Broadband Institute (MBI) and the National Telecommunications and Information Administration (NTIA) recognizes the eight groups listed below as covered populations regarding digital equity:

Figure 17. Graphic of Covered Populations

In the Tri-Town, three of the eight groups, veterans, aging individuals, and individuals who live in a rural area, were identified as the most relevant groups for this plan. Rochester, Marion, and Mattapoisett are all identified as rural communities, making all residents of these communities members of a covered population. Even though these groups were identified as the most relevant, the Tri-Town still contains other covered populations, including individuals with disabilities, ethnic minorities, and those who may not speak English as a first language. All of these groups will benefit from digital equity initiatives. The following section outlines the prevalence of covered populations in the Tri-Town and their needs.

Aging Individuals

Populations are aging across the region – and this is true in Rochester, Marion, and Mattapoisett, as well. Currently, 22.1% of Rochester, 19.2% of Marion, and 15.3% of Mattapoisett are over the age of 65. This is similar to what we see across the county and the state as well as the entire region continues to age, with 20% of Plymouth County and 18.1% of Massachusetts being over the age of 65 as seen in Figure 18.

Figure 18. Persons 65 and Older in the Tri-Town

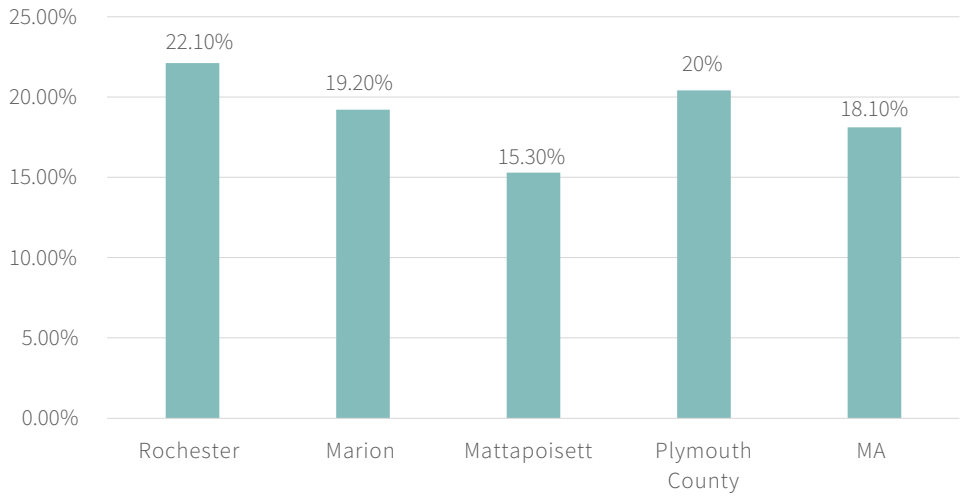
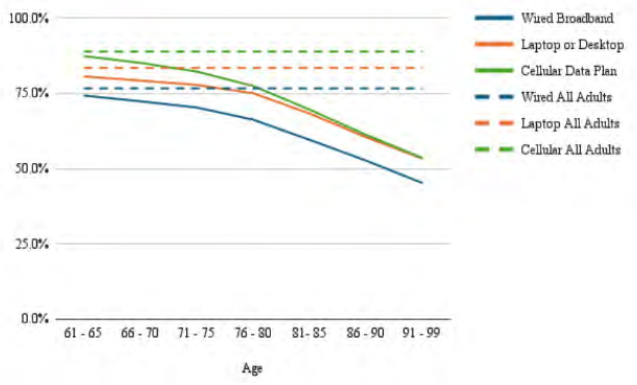


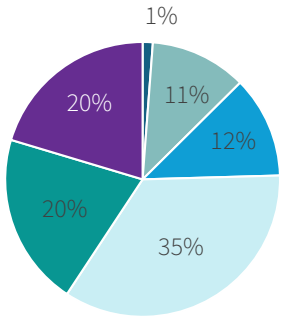
Figure 19 shows how technology access declines as people continue to age. Figure 20 shows responses to the survey question "What is your age?". Fifty-eight survey respondents were between the ages of 60 and 74 and thirty four survey respondents were over the age of 75.

Figure 19. Technology Access Declines as We Age



Source: "Older Adults Online: Measuring Internet Access and Use", the Benton Institute for Broadband & Society

Figure 20. Survey Q 29: What is your age?



Veterans

In Rochester, 4.4% of the population identifies as a veteran, alongside 3.3% of the Marion population and 8.2% of the Mattapoisett population. This compares to 4.8% of the Plymouth County population and 3.8% of the Massachusetts population. The Tri-Town area shares a Veterans Agent that services veterans in the entire region.

According to the Department of Veterans Affairs, 15% of veterans nationwide do not have an internet connection at home. Lacking an internet connection prohibits veterans from accessing online tools that are meant to help them thrive. For example, veterans who utilize the Veterans Administration (VA) for healthcare have access to HealtheVet, an online patient portal that allows veterans to refill prescriptions, message their care team, manage their appointments, and download their health information. For veterans who need help utilizing these services, they can visit one of the VA's Virtual Health Resource Centers (VHRCs). These centers teach veterans and their families how to use the virtual health care tools. Unfortunately, there are only three VHRCs in Massachusetts – two in Boston and one in Brockton.[10] This means that the Towns should prioritize providing veterans in the area with the digital skills training necessary so they can utilize tools like these to the best of their ability.

The report "Veterans and Digital Equity: Planning for Success", published by the Benton Institute for Broadband & Society outlines various challenges that veterans face when it comes to accessing the internet. Below is an overview of some of the main challenges faced by veterans in the United States that is outlined in this report.

Image 19. Cover of Veterans and Digital Equity: Planning for Success

10 VA, Virtual Health Resource Centers

Digital Acess Barriers Veterans Face

- **Rural Residency**: A quarter of veterans across the United States live in a rural area, and veterans are more likely to live in a rural area than individuals who are not veterans. Due to this, many veterans are lacking fast and reliable broadband infrastructure because rural areas often do not have as many options for internet service providers, or any option at all.
- **Device Access**: More veterans than non-veterans say that their biggest barrier in not having internet service in their home is because they do not have a computer, or they only have an inadequate computer.
- **Affordability**: While affordability is an issue for all low-income households, it is especially an interest for low-income veteran households, which causes many to go without an internet subscription in their home.
- **Age**: Most veterans are over the age of 65, and veterans of the Korean and Vietnam wars are more likely to be lacking digital skills.
- **Healthcare Access**: Due to the percentage of disabled veterans, and veterans living in a rural area, telehealth is very important for veterans to be able to access healthcare, making it extremely important that veterans have access to a device and internet in their home.
- **Employment Barriers**: It is common for veterans to struggle to find employment after leaving the military, even though they have work experience and skills. Because so many jobs require digital skills, and looking for a job also often requires the internet today, many veterans without these skills struggle to find employment.
- **Physical Challenges**: Many veterans, particularly older veterans, struggle with physical disabilities and challenges, such as poor vision and hearing, and dexterity issues that affect how a person can use technology. As of 2022, 30% of veterans across the United States had a disability related to their military service, and individuals with disabilities are also a covered population.11

11 Benton Institute for Broadband & Society, “Veterans and Digital Equity: Planning for Success”

Figure 21 shows the percentage of veterans in each town compared to the county and the state. Mattapoisett has the highest percentage of veterans in their population, with 8.2% of the population being a veteran, which is over double the statewide percentage of 3.8%. Rochester's population is 4.4% veteran and Marion's is 3.3% veteran, which compares to 4.8% of Plymouth County.

Figure 21. Veterans in the Tri-Town

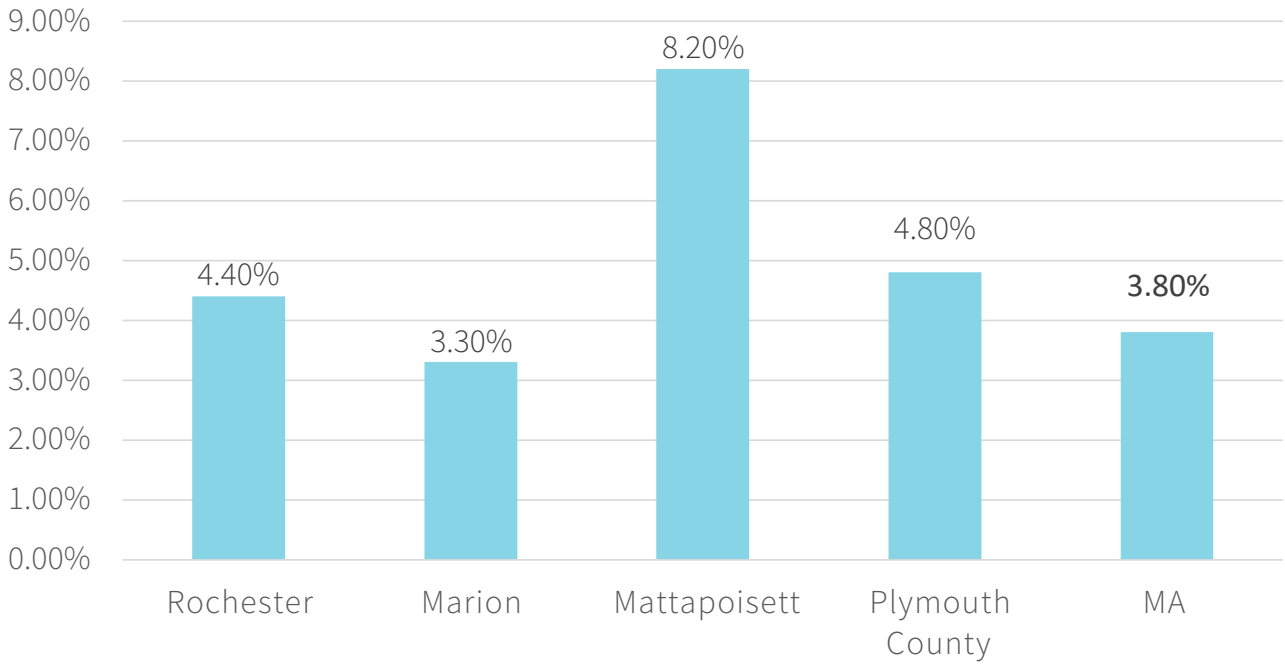
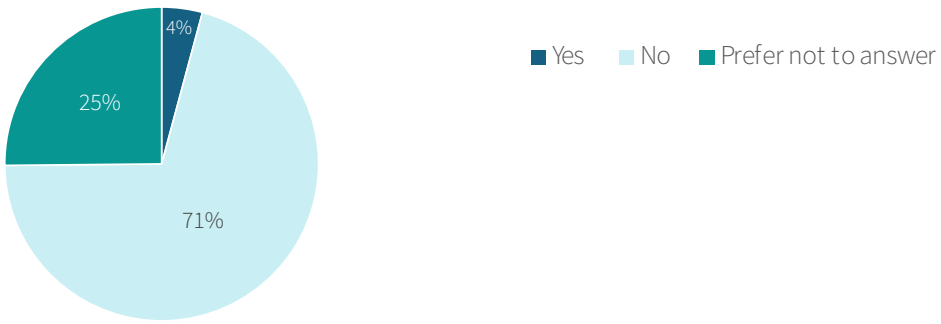


Figure 22 shows responses to the survey question, "Did you serve on active duty in the U.S. Armed Forces?". Seven survey respondents responded yes to this question.

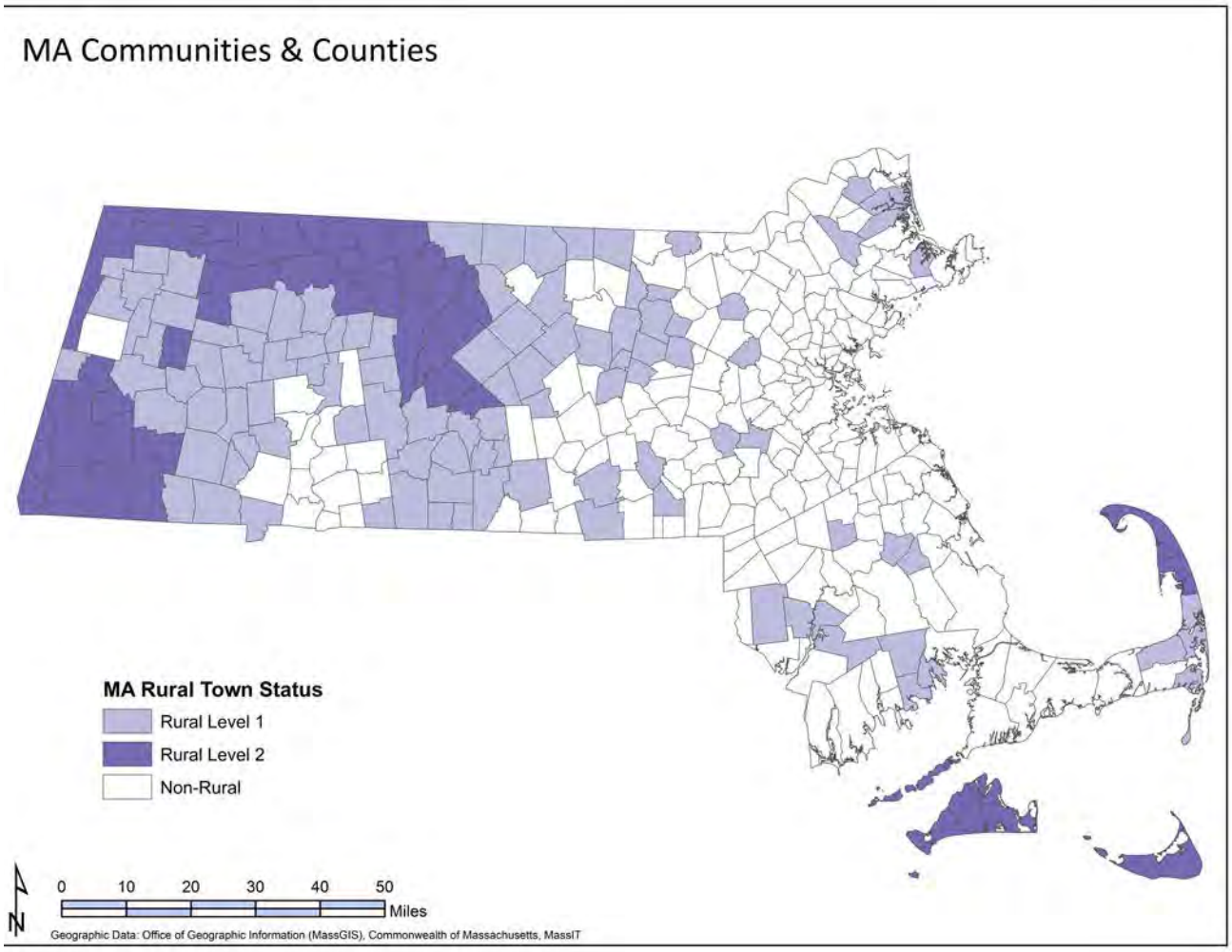
Figure 22. Survey Q41: "Did you serve on active duty in the U.S. Armed Forces?"



Rural Residents

Rochester, Marion, and Mattapoisett are all designated as Rural Level 1 Communities. This makes all residents of these towns qualified as members of a covered population. Individuals in rural areas face unique challenges concerning internet access and digital equity. For example, rural areas tend to have fewer options for internet service providers and lower coverage by internet providers and telephone service companies, accompanied by higher prices for these services.

Image 20. MA Rural Town Status



Source: State Office of Rural Health, https://www.mass.gov/info-details/state-office-of-rural-health-rural-definition

Students

While not one of the eight main covered populations identified by NTIA and MBI, students have been included as a vulnerable population in this plan due to their prevalence in these communities. The Towns share one school district, the Old Rochester Regional School District. The superintendents of both school districts, alongside the technology coordinator, located in the Tri-Town area provided great insight to this plan. The Old Rochester Regional Senior High School is the public high school for all students living in Rochester, Marion, and Mattapoisett. The Old Colony Regional Vocational Technical High School is a technical high school that provides both traditional academics alongside various vocational-technical programs. This school is located in Rochester and welcomes students from Acushnet, Carver, Lakeville, Mattapoisett, and Rochester.

The following schools comprise the Old Rochester Regional School District:

- Center School
- Old Hammondtown School
- Sippican Elementary School
- Rochester Memorial School
- Old Rochester Regional Junior High School
- Old Rochester Regional High School

Today, students of all ages require reliable internet access for educational purposes, including online learning and research. Many schools utilize online learning tools outside of the classroom, and even utilize the internet as their main form of communication with parents and guardians. The total student enrollment in Rochester is 1,213 students, 1,335 students in Marion, and 1,146 students in Mattapoisett. This highlights the need for robust digital infrastructure to support their educational needs. Additionally, there is a portion of the student enrollment population that is over the age of 35, indicating a multigenerational educational digital divide that affects both traditional and non-traditional students. This accounts for 1.5% of the student population in Rochester, 2.8% in Marion, and 0.6% in Mattapoisett.

Table 8 breaks down the educational attainment in each town.

Table 8. Educational Attainment in Tri-Town

	Rochester	Marion	Mattapoisett
Population 18-24			
Less than High School	**14.6%**	**12.9%**	**14.7%**
High School Graduate	**28.5%**	**12.6%**	**29.5%**
Some College or Associate's Degree	**37.2%**	**70.6%**	**32.6%**
Bachelor's Degree or Higher	**19.7%**	**4%**	**23.2%**
Population 25 Years and Over			
Less than 9th Grade	**1%**	**1.4%**	**1.9%**
9th to 12th Grade, no Diploma	**2.1%**	**2.5%**	**1.4%**
High School Graduate	**2.8%**	**29%**	**18%**
Some College, No Degree	**12.3%**	**13%**	**15.9%**
Associate's Degree	**12.1%**	**7%**	**8.5%**
Bachelor's Degree	**28.3%**	**25%**	**33%**
Graduate or Professional Degree	**20.3%**	**22.3%**	**21.5%**
High School Graduate or Higher	**96.9%**	**96.2%**	**96.7%**
Bachelor's Degree or Higher	**48.7%**	**47.3%**	**54.4%**

Statistics on Other Covered Populations

Below is an outline of other underserved communities that are present in the Tri-Town area. While they are less prevalent than other covered populations that served as a focus for this plan, they will still benefit from digital equity initiatives, alongside all residents.

Low-Income Households

The median household income in Rochester is $114,604, $111,351 in Marion, and $110,179 in Mattapoisett. This is compared to a median household income of $105,387 for Plymouth County and $99,858 for Massachusetts. While the median household income in these towns is relatively high, there is still a number of people living in poverty. In Rochester, 5.2% of the population is living in poverty, alongside 5.9% of Marion, and 3.2% of Mattapoisett.

Individuals with a Language Barrier

Individuals with a language barrier or who are in a limited English-speaking household account for 1.6% of the Rochester population, 1.2% of the Marion population, and 0% of the Mattapoisett population.

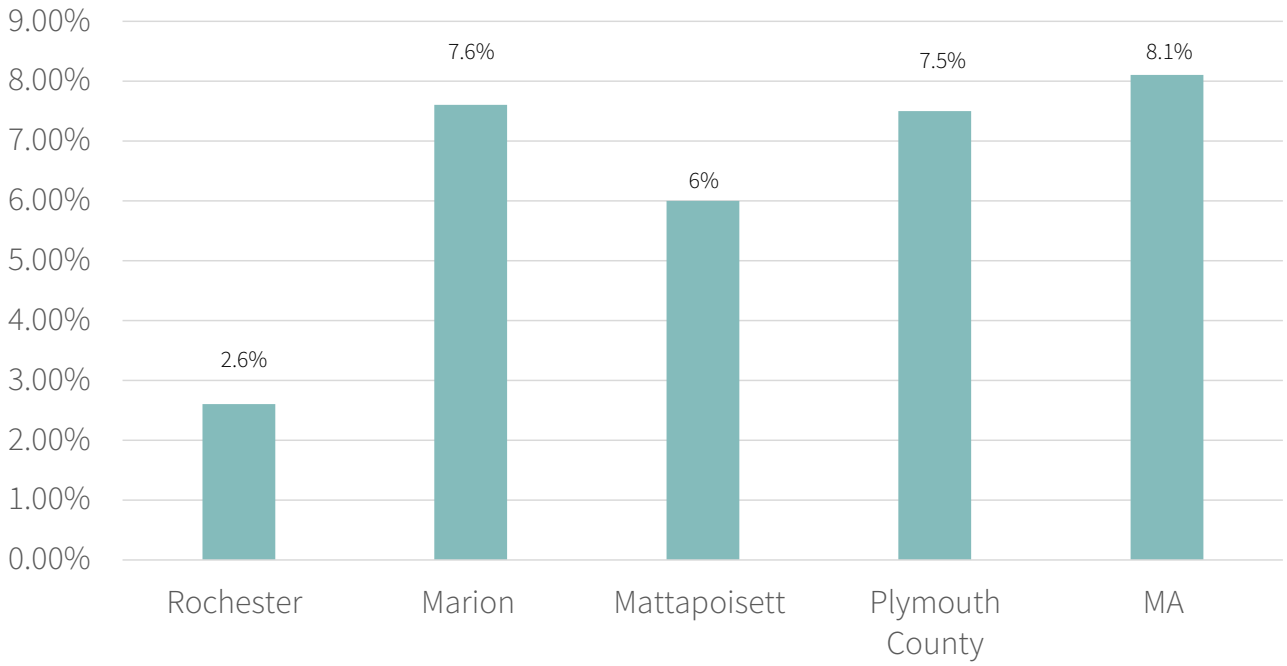
Individuals who are members of a racial or ethnic minority group

The percentage of people who are members of a racial or ethnic minority group is 4.5% in Rochester, 13% in Marion, and 1.9% in Mattapoisett.

Individuals with Disabilities

In Rochester, 2.6% of the population has a disability, 7.6% of Marion, and 6% of Mattapoisett. This compares to 7.5% of Plymouth County and 8.1% of Massachusetts.

Figure 23. People with a Disability, Under Age 65



Public Outreach & Engagement Process

Project Kick Off

In August 2024, SRPEDD staff kicked off the public engagement process by meeting with main town staff. In October 2024, the plan was kicked off with the Steering Committee, which was formed by help from Town administrators. At this meeting, committee members were introduced to digital equity as a concept and assisted in creating strategy to meaningfully target underserved populations in the communities. Throughout the planning process, the Steering Committee assisted in organizing tabling events, hosting the digital equity charette, and connecting SRPEDD staff with local champions. Members of the Steering Committee represented:

- Planning Departments
- Town Administration
- Libraries
- Councils on Aging
- Schools

Department Head Questionnaire

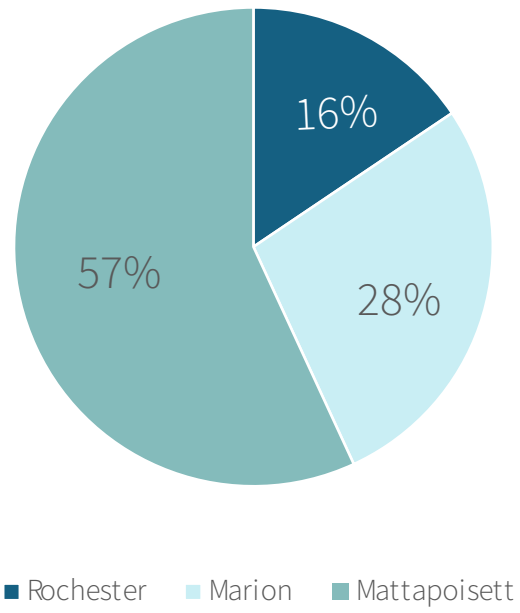
Information was gathered from town staff through a detailed questionnaire for department heads. The intent was to better understand how the state of internet use in their departments affects their ability to assist residents with one-on-one help and civic participation. Responses to the department head questionnaire can be found in the plan appendix.

Surveys and Online Engagement

The project survey was distributed through MBI and promoted at in-person events and key communication platforms online. The project received a total of 167 survey responses on the digital equity survey which assisted in understanding the state of internet affordability and town demographics.

Figure 24 shows the number of survey respondents per town. Forty-six responses came from Marion, ninety-five responses came from Mattapoisett, and twenty-six survey responses came from Rochester residents. Respondents noted finding out about the survey via community meetings, community anchor institutions and their websites, emails from the Towns, flyers, and various social media platforms.

Figure 24. Survey Q 4: Which Massachusetts municipality do you live in?



Stakeholder Interviews

During the outreach and public engagement process, a large portion of time was spent identifying community stakeholders and conducting stakeholder interviews. Takeaways from the stakeholder interviews and other engagement opportunities are discussed in the key findings and digital equity assets sections of this plan. These conversations provided important insights to digital equity initiatives throughout the towns. Staff interviewed:

- Zach Boyer and Dionne Gomes, Coastline Elderly Services
- Eric Poulin, Rochester Council on Aging
- Colleen Tierney, Library Director
- Kimberly Conn, Mattapoisett Housing Authority
- Chuck McCullough, Mattapoisett Housing Authority and Turning Point of Wareham
- Maria Ferreira-Bedard, SER Jobs for Progress
- Elizabeth Sherry, Elizabeth Taber Library
- John Ashley, IT Specialist, Old Rochester Regional High School
- Aaron Polansky, Superintendent, Old Colony Regional Vocational Technical High School
- Lisa Lourenco, Elementary TechED Teacher

Digital Equity Charette

Staff facilitated the Tri-Town Digital Equity Charette at the Old Rochester Regional High School on Wednesday, December 4th. Here, staff gave a short presentation introducing attendees to the concept of digital equity and this planning process. Then, a series of boards were presented which each highlighted a different aspect of digital equity. Attendees were able to provide their thoughts on each aspect, including affordability, digital literacy, and internet service providers. Materials from the charette can be found in the plan appendix.

Image 21. Digital Equity Charette Welcome Sign

Image 22. Digital Equity Charette Board

Community Pop-Ups

Tabling and community pop-ups allowed staff to engage with residents directly to hear more nuanced takes on digital equity needs. At all in-person events, staff spoke with residents about digital equity and ongoing planning efforts in Rochester, Marion, and Mattapoisett. Residents were given flyers with information about the plan, paper surveys, QR codes to access the plan website and the online version of the survey, along with pens and sticky notes to leave feedback about internet service in the town on informational boards. This section describes the various community pop-ups that project staff held.

Rochester Council on Aging TRIAD Meeting

Image 23. TRIAD Logo

On Wednesday, November 6th, staff attended the monthly meeting of the TRIAD group at the Rochester Council on Aging. The TRIAD group is run by the Plymouth County Sherriff and District Attorney and aims to reduce criminal activity targeted towards seniors. Staff introduced the plan to this group and collected feedback related to internet access and cybersecurity in the Tri-Town area.

Tabling at Old Colony Regional Vocational Technical High School Spring Advisory Board Meeting

Staff set up a table outside the Spring Advisory Board Meeting at the Old Colony Regional Vocational Technical High School to greet parents and families with information related to this plan as they arrived to the meeting.

Image 24. SRPEDD Table at OCRVTHS Spring Advisory Board Meeting

Veteran's Dinner at Rochester Council on Aging

On April 3rd, staff attended a quarterly Veterans dinner hosted by the Tri-Town Agent at the Rochester COA. Staff set up in the lobby and invited veterans to vent about their issues/concerns regarding the state internet access for veterans in the Tri-Town. Some attendees expressed fears around the safety of their information on banking platforms and social media sites.

Image 25. Photo of Veteran's Dinner

Tabling at Marion Council on Aging Bingo and Lunch

Image 26. Marion COA Bingo and Lunch

On April 28th, staff attended a bingo luncheon at the Marion COA. Staff went table by table and asked a series of general questions regarding internet usage and access based on questions in the statewide survey. Many residents expressed disinterest in internet use and relying on family members to complete online tasks. Others only expressed interest in using the internet streaming services to watch the news or sports.

Tabling at Rochester COA

Image 30. SRPED Table During Rochester COA Block Party

On June 19th, staff attended the Block Party at the Rochester Council on Aging to present the goals and strategies for the plan and get feedback from community members, especially seniors, about what they would like to see implemented from this plan and where.

Image 31. Old Rochester High School

Key Findings

The following section outlines key findings shaped by the engagement process and data review. These findings informed the recommendations outlined in the following section.

Opportunities to improve Tri-Town Coordination

The Tri-Town School District serves as a strong foundation for the Towns of Rochester, Marion, and Mattapoisett to interact with one another socially, professionally and inter-governmentally. Similarly, the Tri-Town Veteran Agent and the TRIAD allows these three communities to share resources and a general sense of community. There is however a lack of coordination beyond these foundational collaborations – and through the engagement process, staff were able to gain a better understanding of ways the Tri-Town communities could potentially help one another.

Image 32. Screen Shot of Mattapoisett COA's Computer Education and More Web Page

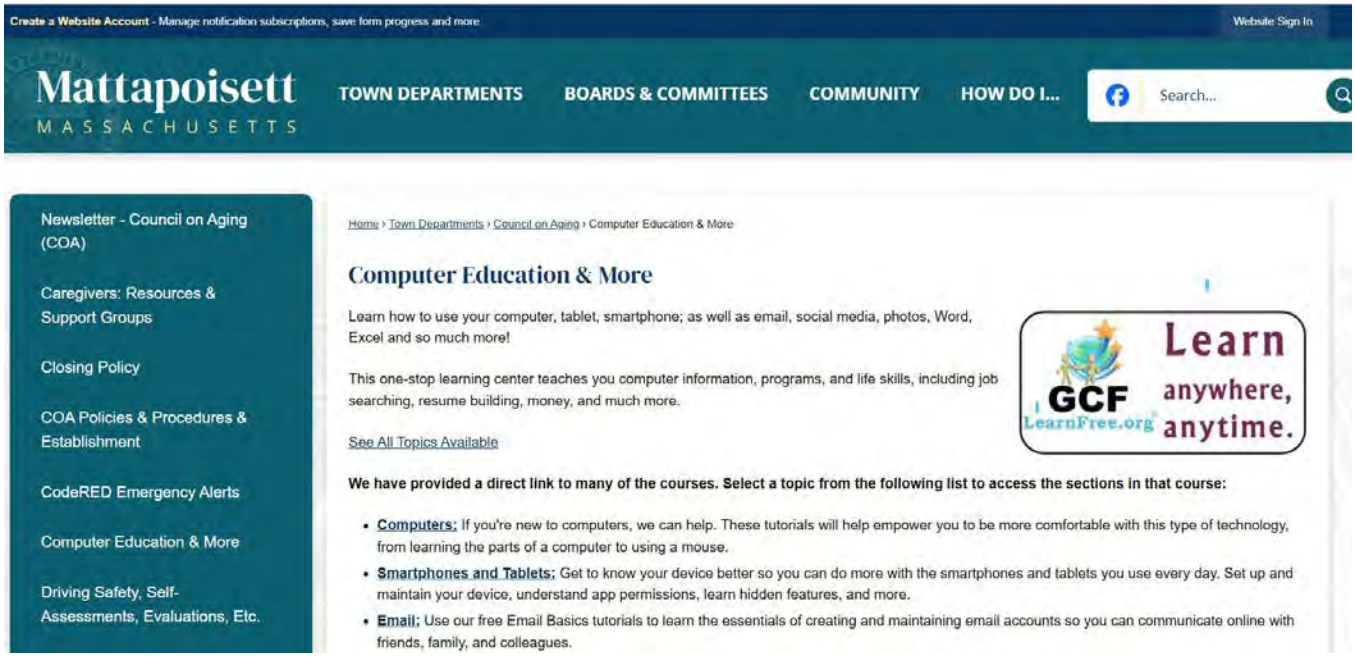


Image 30 shows a screen shot of the Mattapoisett's COA Computer Education & More Page, a skills building resource all COA's could share in a centralized location for all Tri-Town Residents.

Cost

While not as prominent a concern as digital literacy and digital skills, cost was still a concern that came up more than once. Due to the rural character of these communities, many households still only have one or two options for an internet service provider in their household, which is oftentimes paired with lackluster service and a high price point.

Planning for Digital Equity in Aging Communities

The Tri-Town, like many communities across the Commonwealth, has a growing aging population and community leaders in the Tri-Town cited seniors as having the largest need for digital equity initiatives like technology classes or 1-1 help. Below are common themes staff heard from aging residents.

General Fear and/or Disinterest in using Technology

The most common concern brought up during this planning process was the lack of digital literacy within the population. Community leaders in the Tri-Town area note that most people have access to the internet and a device in their household, but many people lack adequate digital literacy and digital skills. Speaking with the residents at various events illuminated the fact that many do not care to use the internet and generally rely on family help them with online tasks.

Cybersecurity fears

A common concern brought up during the outreach process were fears of cybersecurity threats. The emergence of generative AI seemed to be a concern among younger residents and community leaders while veterans were notably more fearful of having their information stolen – with some even forgoing using the internet all together despite wanting to connect with their families and communities online.

Figure 25. Survey Q 24: How concerned are you about internet safety?

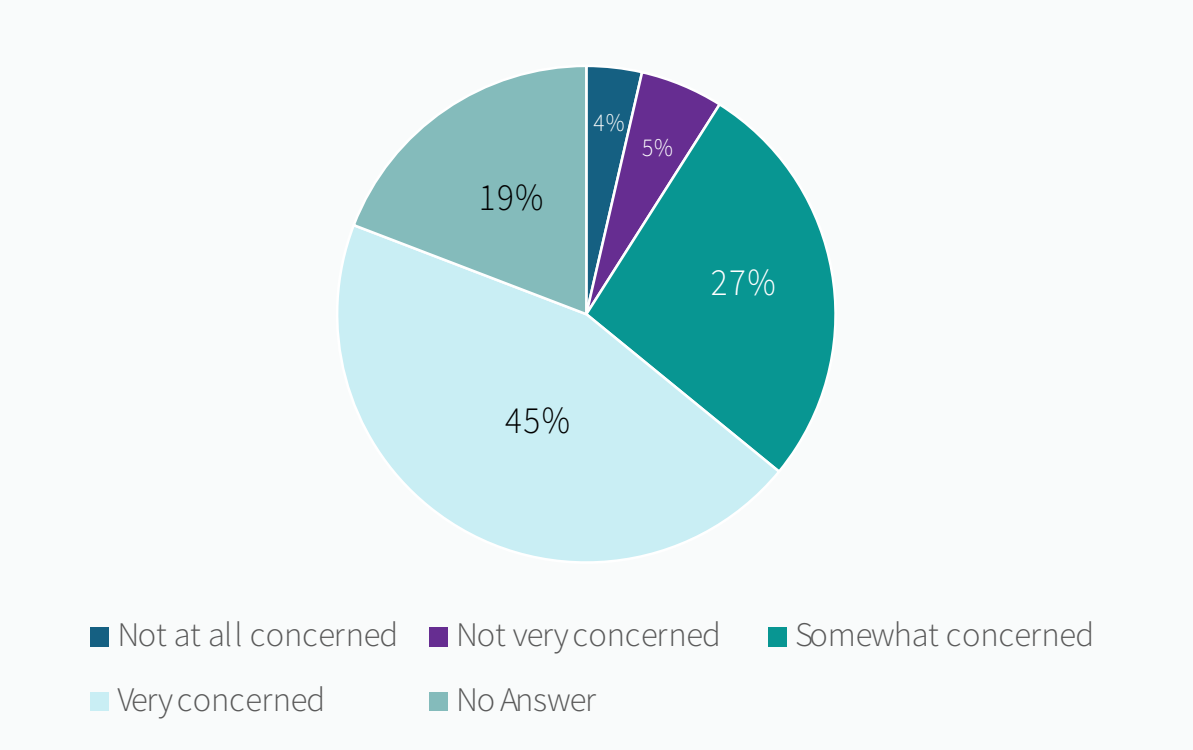


Figure 25 shows survey responses to the question "How concerned are you about internet safety?". The majority of survey respondents (75) replied that they are very concerned about internet safety, with the second most common answer being somewhat concerned (45 respondents).

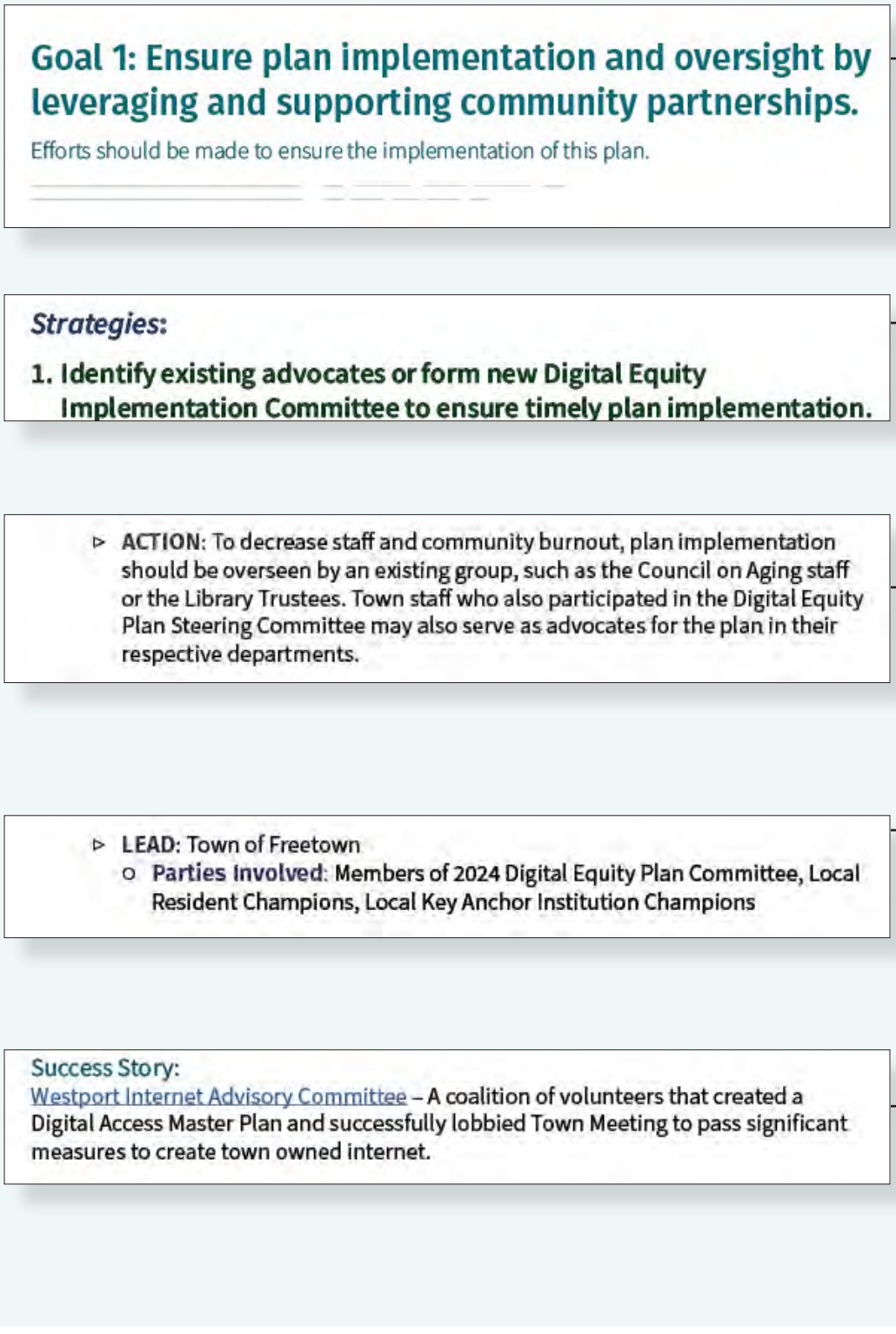
Recommendations

The Tri-Town can leverage state, federal, and community resources to implement the goals presented in this plan. The following section outlines goals and strategic strategies for the Towns to take in order to increase digital equity based on current data and key findings found throughout the engagement and research process.

These recommendations are organized by four general goals- the first of which outlines steps the community can take towards closing the digital divide and three which correspond to a specific digital equity pillar. Each goal provides strategies that may include action items, tools, success stories, a timeline, and other steps the Tri-Town can take to lead and fund these digital equity initiatives.

Image 27. Mattapoisett in the Fall

How to Read Reccomndations Layout



Goal 1: Ensure successful plan implementation by leveraging and supporting community partnerships.

Strategies:

1. Identify an existing regional group or form a new committee to oversee the Tri-Town Digital Equity Plan implementation.

- **ACTION**: To decrease staff and community burnout, plan implementation should be overseen by an existing group, such as the Council on Aging staff, the Library Trustees, or Old Rochester Community Television. Town staff who participated in the Digital Equity Plan Steering Committee may also serve as advocates for the plan in their respective departments.
- **LEAD**: Towns
  - **PARTIES INVOLVED**: Members of the 2024-2025 Digital Equity Plan Committee, Local Resident Champions, Libraries, COAs
  - **POTENTIAL PARTIES INVOLVED:** Old Rochester Community Television, TRIAD
- **TIMELINE**: Immediate

Success story:

- Westport, MA Internet Advisory Committee: A coalition of volunteers that created a Digital Access Master Plan and successfully lobbied Town Meeting to pass significant measures to create town owned internet.

2. Prioritize annual or bi-annual implementation review at standing meetings or in annual reports.

- **ACTION**: The Tri-Towns could consider adding an agenda item to regional check ins and assess the implementation of the digital equity plan. Towns may also consider adding a status report of the digital equity plan implementation into their respective annual reports.
- **LEAD**: Towns
- **TIMELINE**: Long-Term

Goal 2: Increase availability and knowledge of affordable internet options through regional coordination.

Strategies:

1. Consider implementing a dig once policy.

A study done by the University of Massachusetts Amherst found that utilizing a dig once approach and replacing multiple utilities at once was 40% more cost effective than replacing them separately.[12]

- **ACTION**: The Towns should implement a dig once policy to permit the installation of new broadband infrastructure during future road construction or repairs.
- **LEAD**: Towns
  - **PARTIES INVOLVED**: Zoning Board of Appeals, Planning Board, Internet Service Providers, SRPEDD
- **TIMELINE**: Intermediate
- **IMPLEMENTATION TOOLS**: Disctrict Local Technical Assistance (DLTA)

Success story:

- Shrewsbury, MA: UMASS Amherst used the town of Shrewsbury as a case study for utilizing a dig once policy to co-underground their utility lines. In the case study, the town would dig their roads up once to place all utility lines underground. This would cost the town $45.4 million over the course of 40 years, but it would help the town avoid $55.1 million in outages.

12 https://www.umass.edu/news/article/new-study-suggests-simultaneously-burying-broadband-and-electricity-could-be-worth

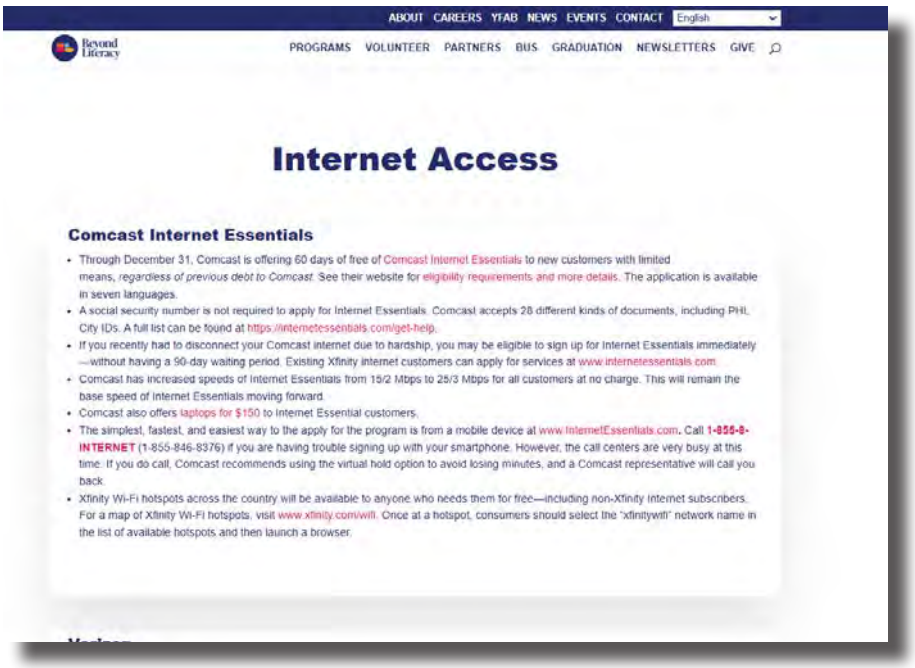
2. Advertise and increase awareness of individual internet plans.

- ▹ **ACTION**: The Towns should lead efforts to increase residents' knowledge of individual internet plans, rather than paying for a bundle of internet, cable television, and telephone. The Towns could utilize a joint public communications campaign via social media and other methods to increase knowledge of purchasing a non-bundled internet plan.
- ▹ **LEAD**: Council on Aging Outreach Coordinators
  - ○ Parties Involved: Old Rochester Community TV, Libraries, Schools, Town Administration, ISPs.
- ▹ **TIMELINE**: Intermediate

Success story:

- ■ Beyond Literacy Philadelphia – Digital navigator organization offering resources for low cost internet services and devices.

Image 33. Screen Shot of Beyond Literacy Resources Page



3. Assess rural areas with low cell coverage.

The town should seek grants or jointly fund an effort to assess cellular infrastructure in rural and coastal 'dead zones' where residents may rely on accessing the internet via hotspot over a standard connection. Special consideration should be given to assessing cellular infrastructure and service surrounding and within the Old Colony Regional Technical Vocational High School, as there is currently little to no cell coverage within the school, which can potentially lead to public safety issues.

- **ACTION**: The town can explore funding a study or Wireless Telecommunications Plan to better understand community needs and actual broadband/cellular speeds. This study can later be presented to local cellular provider or relevant town staff to address issue directly.
- **IMPLEMENTATION FUND**: USDA Telecom Programs, Federal Grants Funding for Emergency Communications
- **LEAD/PARTIES INVOLVED**: Local Digital Equity Advocates, SRPEDD or Relevant Consultant

Success Stories:

- 'Cell on Wheels' - Williamsburg, VA,
- 'Wireless Telecommunications Master Plan' - Fort Collins, CO
- CTC Report on How Localities Can Improve Wireless Service

4. Explore the possibility of expanding municipal fiber in Tri-Town Area.

- ▹ **ACTION**: The Towns of Rochester and Marion should explore creating a municipal fiber network. A municipal fiber network will allow residents an additional option for an internet service provider. Oftentimes, a municipal network is also able to provider a cheaper option for residents while giving them the same broadband speeds.
- ▹ **LEAD**: Towns
- ▹ **TIMELINE**: Long-Term
- ▹ **IMPLEMENTATION TOOLS**: Municipal Fiber Grant Program: This program gives municipalities up to $250,000 to create or expand a municipal fiber internet network.

Success Story:

- ■ Mattapoisett, MA: Mattapoisett has received a total of $327,013 in the past four years for the creation and expansion of their municipal fiber network.

Goal 3: Provide residents with increased options for device access in the community.

Strategies:

1. Purchase additional hotspots to be available for checkout at the library or other community anchor institutions

- **ACTION**: Additional hotpots should be purchased to be available at the libraries in the Tri-Town region or other relevant community anchor institutions. Hotspots can help to expand internet access throughout rural areas where there is not other existing internet infrastructure.
- **PARTIES INVOLVED**: Libraries, Councils on Aging
- **TIMELINE**: Immediate, scoping can begin once this plan is finalized.
- **IMPLEMENTATION TOOLS**: MBI Digital Equity Implementation Fund

Additional Reading:

- Bridging the Digital Divide: Wi-Fi Hot Spots as a Means of Digital Equity – An academic paper detailing the success of Montana State University's Library Hot Spot Lending Program

2. Upgrade computers and other devices at libraries and other relevant community anchor institutions.

- **ACTION**: The Towns should identify out-of-date computers and other digital devices at libraries, councils on aging, and other community anchor institutions and seek funding to obtain newer devices for these spaces.
- **LEAD**: Towns
  - **PARTIES INVOLVED**: Libraries, Councils on Aging, Coastline Elderly Services
- **TIMELINE**: Intermediate, scoping can begin once this plan is finalized.
- **IMPLEMENTATION TOOLS**: MBI Digital Equity Implementation Fund

Success story:

- New Bedford COA Computer Lab - Newly opened computer lab in New Bedford offers more technology classes.

Goal 4: Assist vulnerable and underserved populations in safely and effectively navigating the internet and provide resources for troubleshooting digital devices and the internet.

Strategies:

1. Add more digital literacy classes to community anchor institution programming and offer opportunities for advanced learners.

- **ACTION**: The Towns should work to increase the number of digital literacy available at community anchor institutions and offer more advanced digital literacy and digital skills courses. The libraries and COAs can work together to pursue this and share curriculum across community anchor institutions.
  - **PARTIES INVOLVED**: Libraries, Councils on Aging

- **TIMELINE**: Intermediate

- **IMPLEMENTATION TOOLS**: MBI Digital Equity Fund, T Mobile Hometown Grant Program

2. Ensure that students in Marion and Rochester are digitally literate

- **ACTION**: Consider hiring an additional technology teacher or incorporating technology curriculum for students at the Rochester Memorial School and Sippican Elementary School.
- **LEAD**: School District
- **TIMELINE**: Intermediate/Long-Term
- **IMPLEMENTATION TOOLS**: Tools and Guidance from DESE's Office of Educational Technology (EdTech)

Success Story:

- Center School and Old Hammondtown School (*See Key Findings*).

3. Acquire help from Old Colony Regional Vocational Technical High School students to provide digital skills help to seniors.

- **ACTION**: Students in the Old Colony Regional Vocational Technical High School cosmetology program visit the area Councils on Aging to do seniors' nails. This program should be expanded to include technology skills, or an additional program should be created to involve students in another program at the high school in teaching digital skills classes to seniors.
- **LEAD**: Old Colony Regional Vocational Technical High School
- • **PARTIES INVOLVED**: Councils on Aging
- o **TIMELINE**: Intermediate

Success story:

- Carson, Nevada Students Host Senior Tech Help

4. Identify a person in the Tri-Town area who can help with residents' digital equity and digital literacy needs.

- **ACTION**: Using a similar model to the role of the Tri-Town's Veteran's Agent, the Towns should work together to identify or hire an individual part-time who can serve as the main point of contact for residents' digital equity or internet related needs.
- **LEAD**: Towns
- **TIMELINE**: Intermediate
- **IMPLEMENTATION TOOLS**: NDIA Digital Navigator Model

Success story:

- 'How Hoopa's Digital Navigator is Helping Small Business Go Cashless'
- Philadelphia Partners with United Way to Offer Digital Navigator Program
- Connecticut State Library: In Connecticut, eight libraries received a $250,000 grant to split to create a regional digital navigator sharing plan.

Conclusion

Thank to the collaboration and willingness of Town staff and residents, the project team developed meaningful goals and strategies. Taking action to fufuill these goals will help put Rochester, Marion, and Mattapoisett closer to providing affordable, fast internet and devices, and the digital literacy skills necessary to utilize the internet properly, for all residents, especially those who are members of a covered population.

By employing a regional approach, the plan will hopefully result in an effective communication strategy to ensure resources are delivered to those who need it. SRPEDD will continue to work in its capacity as the Tri-Town's Regional Planning Agency support ongoing and future projects related to bridging the digital divide in the Tri-Town Area.

Readers are encouraged to look through the glossary and appendix for additional definitions and details.

Image 34. Donkey at East Over Reservation in Rochester

Glossary

AFFORDABLE CONNECTIVITY PROGRAM (ACP) - A program created during the pandemic to ensure that everyone had access to broadband in their households. The program provided households with a $30 credit off their monthly internet bill, and a $100 credit towards a device, or $75 off their monthly internet bill if they were living on tribal lands. This program ended in May 2024.

BROADBAND - Internet that has speeds of at least 100/20 Mbps.

BROADBAND SERVICEABLE LOCATION (BSL) - A residential location or business where internet can be installed.

COVERED POPULATIONS - The Massachusetts Broadband Institute (MBI) and the National Telecommunications and Information Administration (NTIA) recognizes the eight groups below as covered populations regarding digital equity: Low Income Households, Aging Individuals, Incarcerated Individuals, Veterans, Individuals with Disabilities, Individuals with a Language Barrier, Individuals who are members of a racial or ethnic minority group, Individuals who live in a rural area

DIGITAL EQUITY - The condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy, and economy

DIGITAL EQUITY ASSET - Any services, programs, documents, organizations, etc. that support or promote digital equity. For example, device distribution programs, digital navigators, and relevant planning documents are digital equity assets.

DIGITAL LITERACY - The skills necessary to use technology and navigate the internet, such as the ability to maintain devices, communicate effectively online and evaluate online information and security risks.

DIGITAL REDLINING - According to the Boston University School of Public Health, digital redlining is "discriminatory disinvestment in broadband infrastructure that disproportionately affects people of color, low-income communities, and rural populations, worsening disparities in access to healthcare, social services, education, and employment for these populations."[13]

HOTSPOT - Intel defines a hotspot as "a physical location where people can access the Internet, typically using Wi-Fi, via a wireless local area network (WLAN) with a router connected to an Internet service provider."[14]

JITTER - A measure of network performance that refers to the irregularity in the time it takes for a data packet to travel from its source to its destination, potentially leading to disruptions and inconsistencies in the flow of data.[15]

LATENCY - A measure of network performance referring to the time it takes for a data packet to travel from its source it its destination.[16]

SPEED TEST - measures the speed at which data transfers back and forth from a web server to a device via a router in megabits per second (Mbps). On March 14th, 2024 the Federal Communications Commission raised "the Commission's benchmark for high-speed fixed broadband to download speeds of 100 megabits per second and upload speeds of 20 megabits per second."[17]

13 Jillian Mckoy, "Combating Digital Redlining 'Is Imperative for Advancing Health Equity'", 2024

14 Intel, "What is a Hotspot- Wi-Fi Hotspot Definitions and Details"

15 LiveAction, "Jitter vs Latency: Unraveling the Nuances in Network Performance"

16 Ibid

17 Federal Communications Commission, "FCC Increases Broadband Speed Benchmark", 2024

Appendix

Charette Boards

Introduction to the Plan

What is a Digital Equity Plan?

A Digital Equity Plan seeks to understand and address barriers to digital access to ensure residents of all backgrounds and ages have a fast, affordable, and reliable connection to the Internet.

Plan Contents

Digital Equity Plans may vary based on community members' needs. These plans typically contain:

- Town Vision
- Current State of Digital Equity
- Stakeholder Engagement Process
- Objective & Implementation Strategies
- Evaluation & Updates

Project Team

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Massachusetts Broadband Institute

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.

Timeline

2023
Asset Mapping and Municipal Digital Equity Program promotion in SRPEDD region.

Fall 2024
Stakeholder kickoff, project branding, steering committee formation, and charette planning.

Winter 2024
Promotional events, digital equity charette, and existing conditions analysis.

Spring 2025
Digital equity plan writing and final outreach push.

Summer 2025
Finalize plan and present to the Public and Steering Committee.

Introduction

What is Digital Equity?

Digital equity describes **a community's (or an individual's) ability to engage with the internet**, and involves **efforts to build the necessary resources, knowledge, and skills** in communities that may need them **to fully participate in online aspects of our society or economy.**

There are three main ways to understand digital equity and barriers to digital access:

Connection: Having a fast, affordable, and stable connection to the internet.

Devices: to access education, career development, socialization, and more.

Literacy: using technology, maintaining devices, evaluating online information and security risks.

Barriers: connectivity interruptions, digital redlining, or the inability to afford or access services.

Barriers: outdated software, a device not matching a user's needs, or lack of affordability.

Barriers: limited skills, fear or shame, or inaccessible trainings.

Questions

1. How do you think digital equity might impact people or communities in the Tri-Town area?

Data sources: National Digital Inclusion Alliance

Demographics

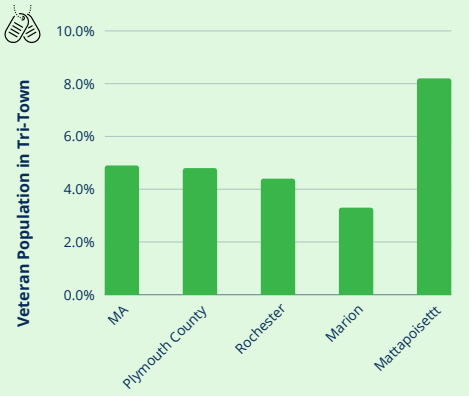
Who may lack access to the internet?

Digital Equity Act

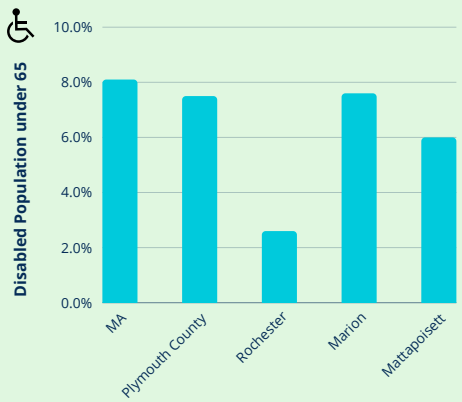
The Digital Equity Act of 2021 identifies 8 covered populations that have historically experienced lower rates of computer and internet use. These populations include:

- Persons who are 60 years of age or older
- Veterans
- Persons with disabilities
- Rural residents
- Members of a racial or ethnic minority group
- Individuals with a language barrier
- Individuals living in households with incomes not exceeding 150 percent of the poverty level
- Incarcerated individuals

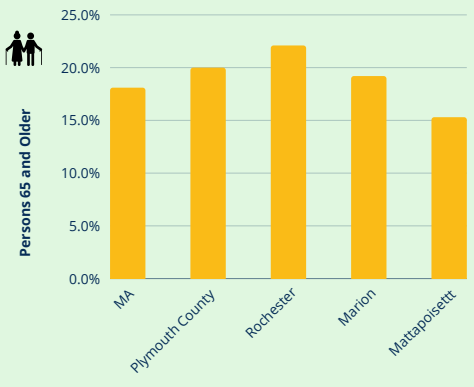
Covered Populations in the Tri-Town



Mattapoisett has a significant number of veterans compared to state, county, and regional trends.



The number of people with a disability under the age of 65 is similar to the county and the state in Marion and Mattapoisett, but lower in Rochester.



Communities are aging across the Commonwealth, and senior populations are slightly higher in Plymouth County. In the Tri-Town region, Rochester's senior population is significantly higher compared to Marion and Mattapoisett.

Questions

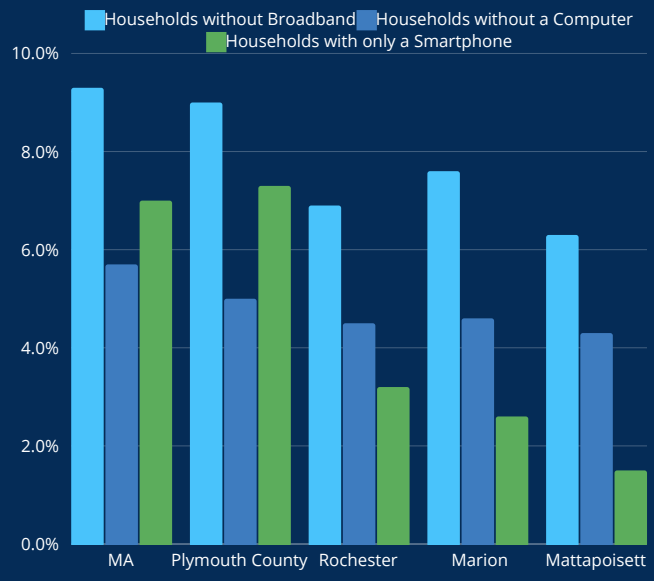
1. Are there other covered populations we should focus on in the Tri-Town?

Data sources: American Community Survey, 2018-2022

Device Access

Do households have access to functioning computers?

Most households have access to devices in the Tri-Town area, but some a significant amount of households do not have an active broadband subscription.

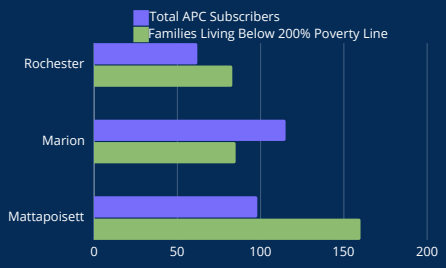


Lack of Device Access by Town

Affordable Connectivity Program (ACP)

This recently defunct public program helped ensure that households were able to afford broadband and provided a discount of up to $30 per month toward internet service for eligible households and up to $75 per month for eligible households on tribal land.

Recent ACP Enrollment data shows residents in Marion where taking the most advantage of the program while qualifying families in Rochester and Mattapoisett missed out on the program.



ACP Enrollment vs. Families Living 200% below federal poverty line

Questions

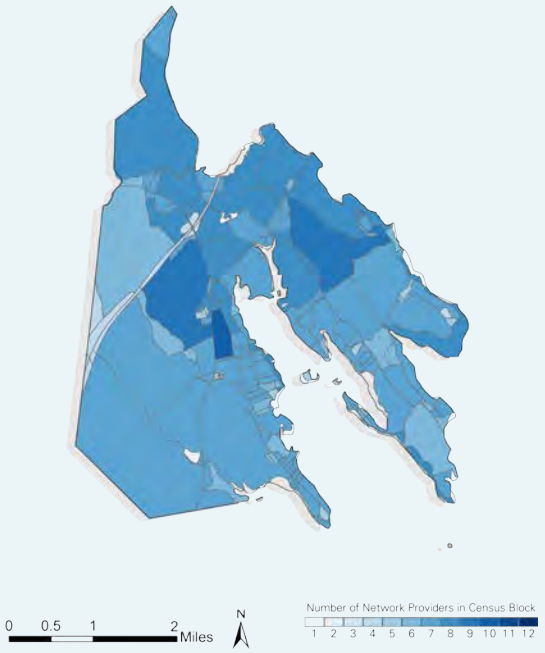
1. What device do you use to access the internet?

2. Do you have adequate access to a device at home?

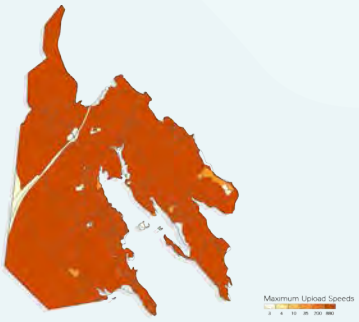
Data sources: American Community Survey, 2018-2022.

Marion
Network Coverage, Speed, and Affordability

Network Provider Coverage

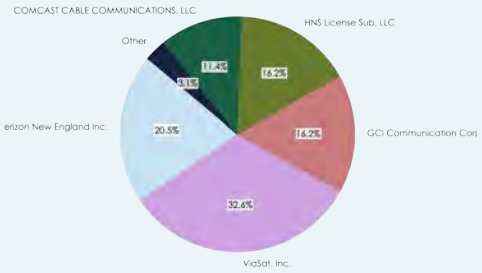


Max Upload Speeds

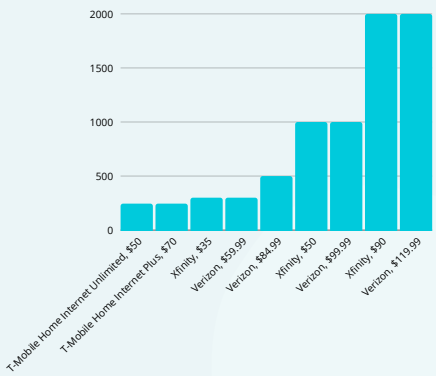


Max Download Speeds

Internet Service Provider (ISP) Distribution in Marion



Service packages found at Sample Address in Marion by Max Download Speed

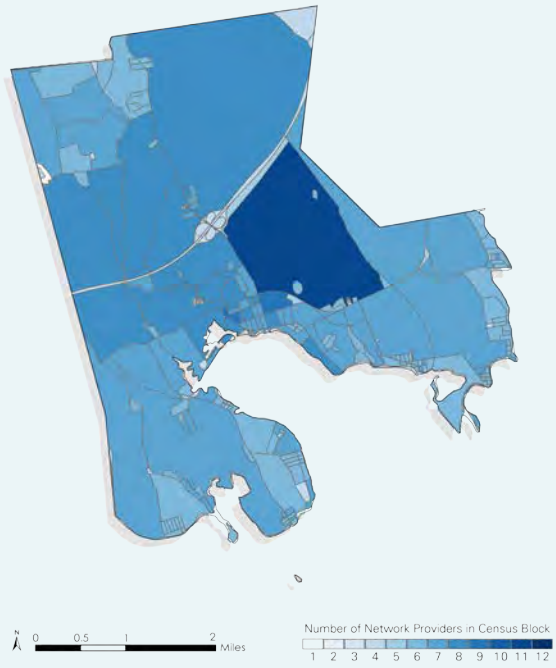


Most households in Marion have access to broadband internet speeds from at least two internet service providers.

Data sources: Federal Communications Commission

Mattapoisett
Network Coverage, Speed, and Affordability

Network Provider Coverage



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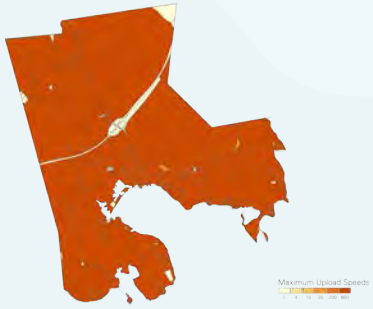
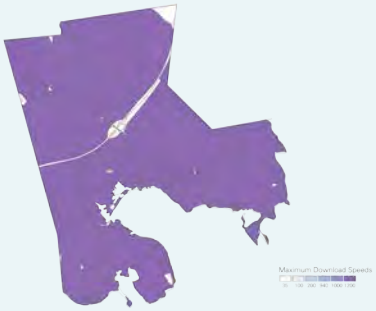
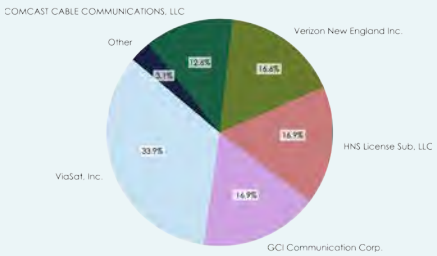


Max Download Speeds

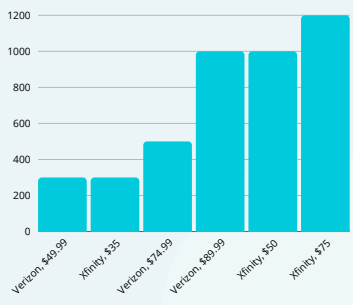


Internet Service Provider (ISP) Distribution in Mattapoisett



Most households in Mattapoisett have access to broadband internet speeds from at least two internet service providers.

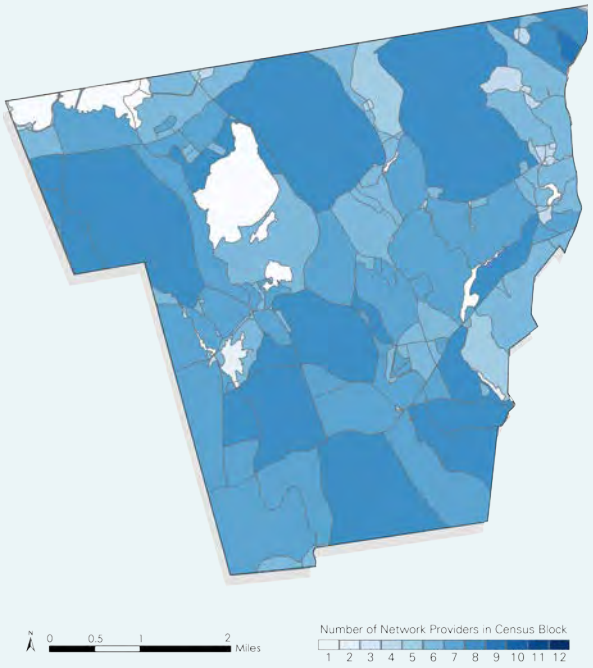
Service packages found at Sample Address in Mattapoisett by Max Download Speed



Data sources: Federal Communications Commission

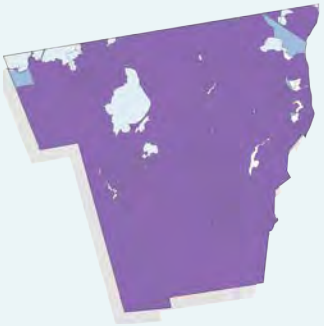
Rochester
Network Coverage, Speed, and Affordability

Network Provider Coverage



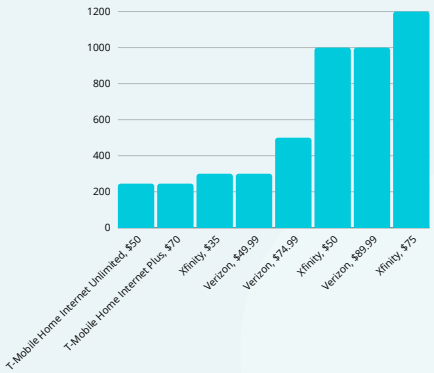
Max Upload Speeds

Max Download Speeds



Internet Service Provider (ISP) Distribution in Rochester

Service packages found at Sample Address in Rochester by Max Download Speed



Most households in Rochester have access to broadband internet speeds from at least two internet service providers.

Data sources: Federal Communications Commission

Regional Snap Shot
Digital Equity Assets

What is the Tri-Town area already doing to address the digital divide?

Current Digital Equity Assets Identified in Rochester:

- Coastline Elderly Services Classes at COA
- Hotspot Lending Program and Free Public Wi-Fi at Library

Plumb Memorial Library

Current Digital Equity Assets Identified in Marion:

- Computer Lab at Library

Elizatbeth Taber Library

Current Digital Equity Assets Identified in Mattapoisett:

- Hotspot Lending Program and Free Public Wi-Fi at Library
- Technology Training/ Resources for Seniors and Students


Old Hammondtown School

Next Steps

What we've heard so far and what we need from you!

Previous Engagement:

- *Town Department Questionnaire*
- *Stakeholder Interviews*
- *TRI-AD Presentation*
- *Digital Equity Steering Committee*

Current Key Takeaways

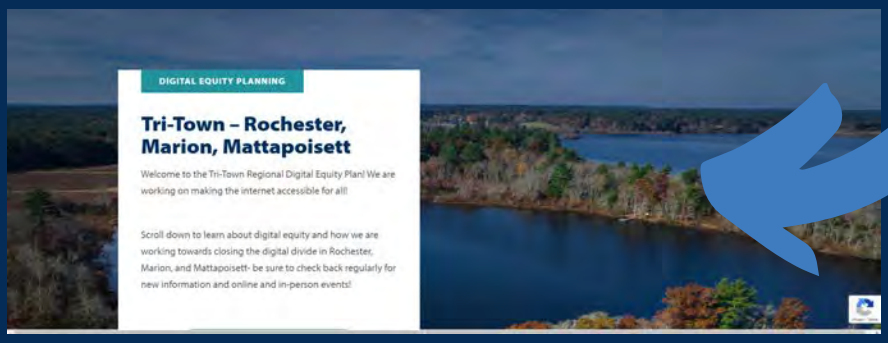
- Most residents in the Tri-Town have access to working devices and connections.
- There are certain hubs that host digital equity programming, but information could be better publicized.

Thank you for coming!

Take the MBI Statewide Survey

srpedd.org/tri-town-digital-equity

Scan the QR Code to visit the project page and take the survey!



Help us connect with the Tri-Town community!

- Our staff is willing and available to meet with individuals or community groups to better understand digital equity needs in the Tri-Town.

Department Head Questionnaire

Responses Overview

Active

Responses	Average Time	Duration
21	197:26	293 Days

1. What is your full name and role?

21
Responses

Latest Responses
"Kristie A Costa, Treasurer/Collector"
"Heather O'Brien, Finance Director"
"Kathleen Massey Natural Resource Officer"
...

4 respondents (19%) answered Director for this question.

2. What department do you oversee?

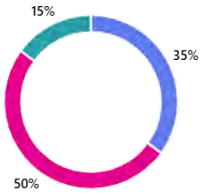
21
Responses

Latest Responses
"Treasurer/Collector including Payroll and Benefits"
"Finance"
"I oversee the animal control department and the Shellfish department"
...

4 respondents (19%) answered Department for this question.

3. Would you consider your department a Community Anchor Institution?

Yes	7
No	10
Maybe	3
Other	0



4. Where is your department located?

21
Responses

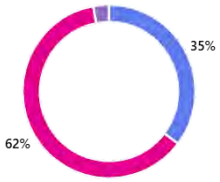
Latest Responses
"Mattapoisett Town Hall"
"Town House, Marion"
"Mattapoisett"
...

10 respondents (48%) answered Mattapoisett for this question.

Street **Mattapoisett** Town Hall Marion

5. Please select all the ways your department accesses the internet.

Data plan for smartphone, hotspot, or tablet	12
Wireline connection (cable, fiber, DSL, etc.)	21
Dial-Up Internet	0
Satellite Internet	1

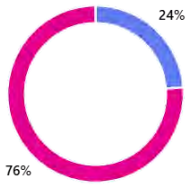


6. How well does your department's internet service work?

Good enough to meet my department's needs	20
Not good enough to meet my department's needs	1
I don't know	0

7. Is there any concern about the privacy or safety of your department's data?

Yes	5
No	16
I don't know	0



8. Do residents need to interface with an online portal or other web-based tools to access your department's services?

20
Responses

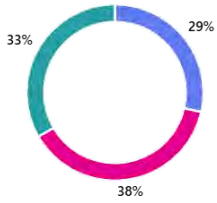
Latest Responses
"yes, we have a link for online payments"
"Yes"
• • •

6 respondents (30%) answered No for this question.

start with my assistance
accounting page
residents
payment system
town website
No
online portal
hopefully more will be offered
online payments
site for the public
Multiple methods
assistance
phone
register online
Board members
majority of the services
online site
services or tasks
access
paper

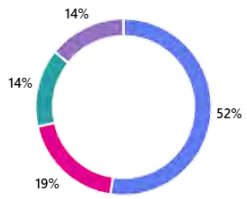
9. Do residents need help navigating online portals or other web-based tools when accessing your department's services?

Yes	6
No	8
Other	7



10. Do you or your staff have the capacity to help residents navigate online portals or web-based tools?

Yes	11
No	4
Not Applicable	3
Other	3



11. Which of the following target populations does your department interface with regularly?

12. Are there specific or general geographic locations in Rochester, Marion, or Mattapoisett you feel lack adequate internet access?

13
Responses

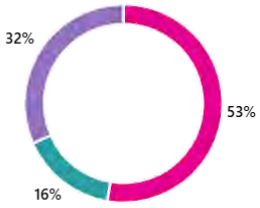
Latest Responses
"I don't believe so"

3 respondents (23%) answered internet access for this question.

13. Which of the following factors needed for digital equity are residents in Rochester, Marion, and Mattapoisett in the greatest need of?

14. What types of digital equity programs/initiatives do you think Rochester, Marion, and Mattapoisett residents could benefit from?

Device Distribution Programs	0
Digital Skills Classes	10
Internet Affordability Programs for Low-Income Residents	3
Other	6



15. Does your department currently host or facilitate any digital equity programs/initiatives?

18
Responses

Latest Responses
"No"
"no"
...

3 respondents (17%) answered Access for this question.

16. Is there anyone in the broader community who you think should be included in the discussion of digital equity in Rochester, Marion, or Mattapoisett?

11
Responses

Latest Responses
"No"
...

5 respondents (45%) answered No for this question.