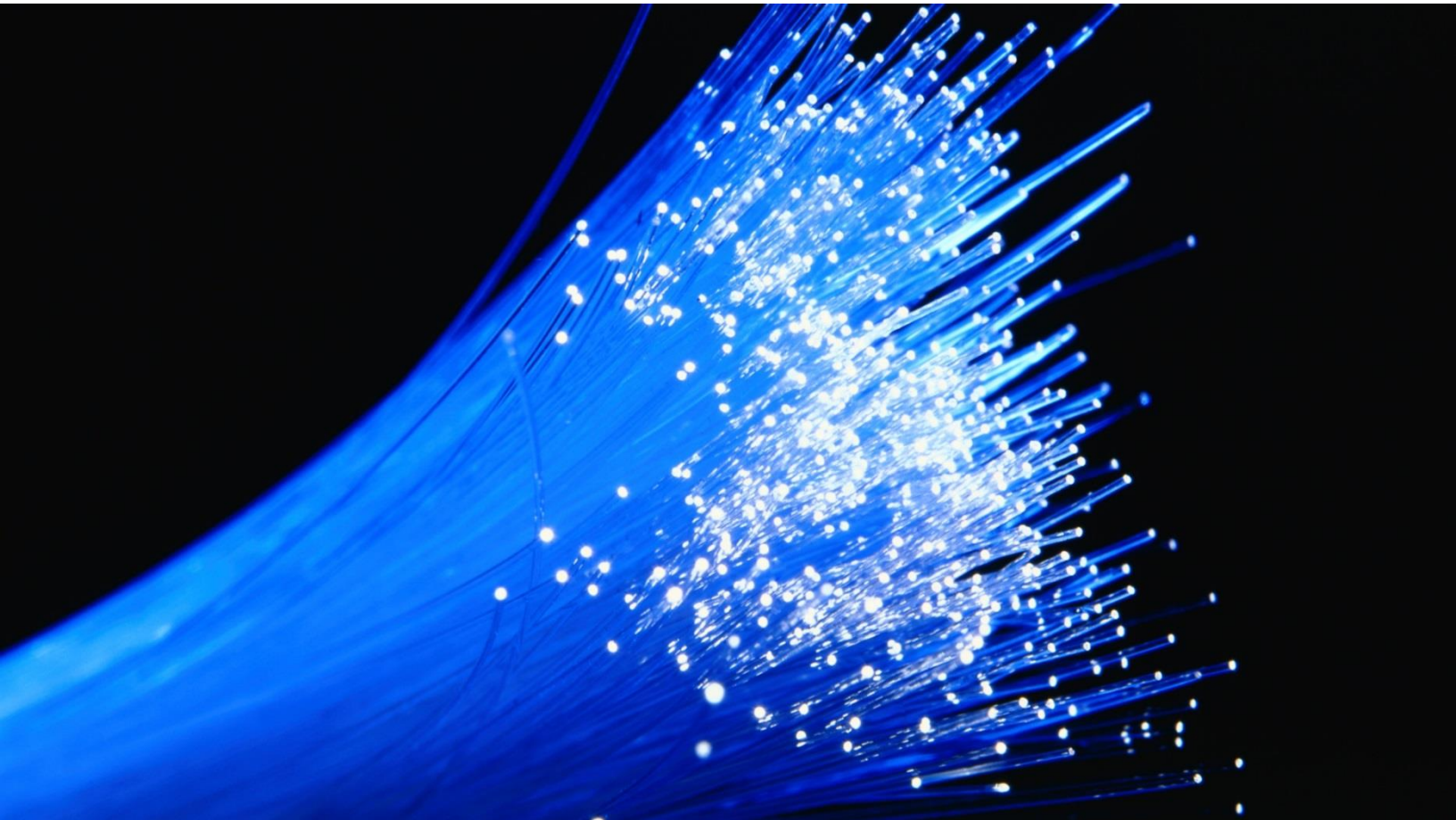**ctc technology & energy**
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Collaborative

Municipal Digital Equity Plan
Prepared for the Town of Fairhaven, Massachusetts
March 2024

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1   Executive summary

The Town of Fairhaven commissioned CTC Technology & Energy (CTC) to engage in a study to document gaps in digital equity—a condition in which all residents have access to adequate broadband service and devices and possess the skills to use these resources—and develop strategies to bridge these gaps. This report presents findings and recommendations to the Town. This project was funded by the Massachusetts Broadband Institute (MBI) at the MassTech Collaborative under its Municipal Digital Equity Planning Program. Funding came from State and Local Fiscal Recovery Funds provided under the American Rescue Plan Act (ARPA). This report will also be considered by MBI as it develops strategies for addressing digital equity gaps under the Massachusetts State Digital Equity Plan.[1]

1.1   Project overview

This report presents findings (see Section 2) and recommendations (see Section 3) that have been informed by the following tasks CTC performed over a six-month period, including:

- Analysis of the availability of broadband service, level of competition, and broadband pricing in Fairhaven (Section 4).

- Examination of enrollment in the Affordable Connectivity Program (ACP), which offered a $30 monthly subsidy toward broadband bills, and estimation of the gap in utilization by eligible households. (Section 4.3). Although this program ended new enrollments on February 7, 2024, the gap in ACP enrollment illustrates the need for enrollment support in any other current or future subsidy or low-cost program—or to the ACP program itself should Congress provide additional funding for the program.)

- Interviews with 20 stakeholders from 13 entities over the course of several meetings and follow-up interviews to further illuminate gaps in affordability, skills, and devices; existence of local programs; and the ability of stakeholders to start or expand those programs to fill the identified gaps. This information was entered into MBI's Asset Inventory portal. See Section 5 for a report on the stakeholder meetings and Appendix B: Stakeholder Questionnaire for the stakeholder questionnaire.

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[1] The Digital Equity Act is a $2.75 billion federal program that, in part, funds state planning processes to establish a vision for digital equity that will guide overarching strategies and goals. The first draft of MBI's "Massachusetts State Digital Equity Plan" (SDEP) was released for public comment on November 13, 2023, and can be viewed here: https://broadband.masstech.org/news/mass-broadband-institute-announces-municipal-digital-equity-planning-program-participants. The SDEP report was in the process of being finalized for submission to the NTIA at the time this report was provided to the Town.

- Promotion of MBI's statewide residential digital equity survey and reporting on Fairhaven-specific findings on topics including broadband utilization, affordability, skills, device access, and related topics (see Section 6 and Appendix A: MBI survey.)

- Development of recommendations with respect to strategies and activities designed to address gaps using potentially available funding, potentially augmented by local funds (see Section 3).

- Facilitation of a "Digital Equity 101" public session to inform Fairhaven residents about the Municipal Digital Equity Plan and provide a brief background on broadband access and digital equity in the city. See Section 0.

1.2   Digital equity funding landscape

To implement strategies recommended in this report, the Town and its stakeholders can potentially leverage a variety of federal and state funding sources.

Section 7 discusses the grant and funding landscape, including programs stemming from multiple COVID-19 relief efforts, as well as the federal Infrastructure Investment and Jobs Act (IIJA) and Digital Equity Act. Additional support through the Federal Communications Commission's E-Rate program may also be available as discounts on eligible internet access, telecommunications services and related equipment to eligible schools and libraries, including programs to close the homework gap. These programs will create opportunities for state and local entities to strengthen digital equity and inclusion within their communities. While the exact level of funding that will be available for programs in Massachusetts is unknown, it is likely that millions of additional funding dollars will be available in the state over the next five years to help the Town close digital equity gaps.

In Massachusetts, these programs include MBI's Broadband Innovation Fund, a $50 million fund that will support grants under the Digital Equity Partnerships Program and the Municipal Digital Equity Planning Program. This American Rescue Plan Act (ARPA) funding will support qualified organizations to work as partners to implement a suite of digital equity projects in six key issues areas to bridge the digital divide and will support municipalities to develop local digital equity plans (such as this plan). The Town can also leverage upcoming opportunities for federal funding under the $2.75 billion Digital Equity Act. This funding will support two large grant programs administered by National Telecommunications and Information Administration (NTIA). This funding will support programs that will require states to distribute federal digital equity funding over a five fiscal year period and will enable state and local organizations to create projects intended to advance digital equity goals. However, this level of funding is unlikely to meet all needs.

On a municipal level, MBI launched the Municipal Digital Equity Implementation Program in February 2024. This is a direct grant program for municipalities that have participated in the Municipal Digital Equity Planning Program or have a pre-existing local digital equity plan or related document. This money—a one-time grant of up to $100,000—is intended to help municipalities make local digital equity investments and execute projects that will increase access, adoption, and usage of the internet for populations most impacted by the COVID-19 pandemic.[2]

NTIA will also review digital equity planning documents from each of the states as it launches its own grant programs likely in the second half of 2024. After the NTIA finalizes its $1.44 billion Digital Equity Capacity Building Grant Program, it will invite states to apply for grants based on a set amount of funding allocated to each. NTIA is expected to launch this program in the second half of 2024 and allocate funding over the course of five years. At least some of Massachusetts' allocation is expected to flow to local entities in the form of subgrants through MBI.

It is anticipated that in 2025, NTIA will launch its nationwide direct competitive grant program—the Digital Equity Competitive Grant Program—where individual entities will apply for a portion of an additional $1.25 billion. If these state and federal funds are not adequate to meet local needs, the City could consider developing its own grant program for targeted digital equity efforts.

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[2] "Municipal Digital Equity Implementation Program", MBI, https://broadband.masstech.org/digital-equity-implementation.

2   Key findings

The following are key findings of this Digital Equity Plan. At the outset, it is understood that Fairhaven's broadband committee is—in an effort separate from the research done for this report—exploring ways to investigate Comcast service speeds as delivered to residents and businesses in the Town. These efforts are important and worthy of support from any available funding sources.

Pending results from any such investigation, this report finds that the digital equity gaps in Fairhaven are not rooted in a lack of available infrastructure; rather, they are about the affordability of the services, uptake in use of available broadband subsidy programs, skills in using broadband, access to adequate devices, and knowledge of online privacy and security best practices.

2.1   There is ubiquitous wired high-speed broadband service from Comcast in Fairhaven, but no second option for wired high-speed internet service

Comcast wired service is nearly ubiquitous in Fairhaven. As reported in FCC data, 6,444 addresses in Fairhaven (out of a total of 6,455 addresses in town) are served by Comcast, with speeds of at least 100 Mbps download, 20 Mbps upload (100/20 Mbps), the FCC's benchmark for high-speed fixed broadband. However, the town lacks a fiber optic-based service, leaving consumers without a wired service capable of symmetrical speeds (with the same upload and download speeds, e.g., 100/100 Mbps or symmetrical 1 Gbps speeds). More generally, the lack of competition with another high-speed wired provider leaves consumers without choices or the ability to take advantage of a competitive market dynamic, which can tend to lead to better service and pricing over time, including from improved promotional offerings. That said, there is licensed fixed wireless services from Verizon and T-Mobile ("5G Home Internet"), which in limited areas can provide high speeds, as noted in the next subsection.

2.2   Residents have some access to fixed wireless services as high-speed competition to Comcast, but service is not ubiquitous, and speeds vary

T-Mobile and, to a lesser extent, Verizon, offer fixed wireless home services (leveraging the networks previously used only for mobile service) in many areas of Fairhaven. These services provide a relatively affordable option, but with the significant caveat that performance is dependent on individual subscribers' distance from wireless facilities and that the data speeds may be cut (or "throttled") by these providers during times of congestion. FCC data show that 579 locations are reporting speeds of 100/20 Mbps or greater from T-Mobile. In total, 1,853 locations can receive speeds faster than 10/1 Mbps from either provider. As fixed wireless providers upgrade their equipment to improve speed, coverage, and reliability, this technology

may provide a meaningful competitive option for more Fairhaven residents and competitive pressure on Comcast, but it is not a full substitute for wired service.

2.3 DSL services are not offered at the same speeds across Fairhaven, but the prices are the same despite the different speed levels

Digital Subscriber Line (DSL) internet access service relies on Verizon's aging copper network infrastructure and provides extremely limited data transmission speeds that technically fall in the category of "unserved." Still, it is noteworthy to characterize this service for this report, as some residents may be using it. As reported by the FCC, approximately 2,028 locations in Fairhaven have access to these services—but according to the FCC data, this service is uneven, with most addresses getting only between .2/.2 Mbps (or 200 Kbps) and 10/1 Mbps, and some others getting between 10/1 Mbps and 25/3 Mbps. By researching offers on the Verizon website, CTC found current Verizon offers for DSL in two speed categories: 1.1-3 Mbps download and 3.1-7 Mbps download. Whatever the actual speeds delivered, Verizon charges the same price, meaning that DSL consumers all pay the same but some get slower service than others.

2.4 Fewer low-income residents subscribe to the internet, and they cite costs as a major barrier to access

According to the U.S. Census Bureau's American Community Survey (ACS) data, 23.1 percent of (or approximately 5,288) households in Fairhaven lack a wireline internet subscription, which lags the state's average of 20.3 percent but is ahead of the national average of 28 percent. The great majority of those are low-income families.

After accounting for the number of households in these income brackets, an estimated 87.6 percent of the Fairhaven households that lack wireline internet subscriptions earn below $75,000 per year, suggesting a significant gap in affordability or interest. Additionally, 74 percent of MBI survey respondents from households with income lower than $60,000 per year said it was somewhat hard or very hard to pay their internet bill each month, compared to 36 percent of respondents with annual household incomes of more than $60,000. The average monthly cost of home internet service for all Fairhaven residents who participated in the MBI survey is $136 for bundled service and $99 for unbundled service. Given that all Fairhaven providers offer their own low-cost programs, this finding underscores the need for wider enrollment support in these programs among low-income Fairhaven residents.

2.5 Device gaps also represents a challenge to low-income households in Fairhaven

ACS data reveals that 10.7 percent of (or 733) households in Fairhaven do not own a computing device. More specifically, approximately 22.3 percent of (or 5,337) households do not own a desktop or laptop computer device, which presents an obvious barrier to internet adoption. The

Town lags both the state and nation in this category, with 17.5 percent of Massachusetts households and 21.1 percent of households nationwide lacking a desktop or laptop, respectively. In MBI's residential survey, 87 percent of respondents said that everyone in their household has access to computing devices needed to meet their everyday needs for internet use. However, those with an annual income of $60,000 or less are less likely to use a laptop (only 46 percent of lower earners), desktop computer (only 24 percent of lower earners), or tablet (only 42 percent) compared to those earning over $60,000 per year. This suggests that device distribution programs and digital literacy and skills classes could be helpful for residents in Town.

2.6 Adoption of the FCC's Affordable Connectivity Program is extremely low in Fairhaven reflecting a need for enrollment support in any subsidy or low-cost broadband plan

At the time of this report, the ISPs serving Fairhaven all participated in the ACP, which pays a $30 monthly subsidy for broadband service for eligible low-income residents. As of December 1, 2023, estimates based on FCC-reported enrollment by ZIP code suggest that only 640 households in Fairhaven were receiving the ACP subsidy—about 13 percent of the estimated 4,680 eligible households.[3] This enrollment rate is significantly lower than the statewide average of 31 percent and the national figure of 40 percent. The low enrollment rates are likely due to low awareness, a challenging sign-up process, and perhaps reluctance among some Fairhaven residents. The gap in this area reflects a wider need for enrollment support in any current or future low-cost ISP program or available subsidy even if the ACP is never re-funded. Enrolling more households also tends to alleviate issues that hotspot lending programs pose, including incontiguous access to devices and unreliable connection due to existing infrastructure such as brick structures and line-of-sight complications.

2.7 Fairhaven respondents to the MBI survey who had household income of less than $60,000 reported significantly lower confidence in performing common online tasks

Comfortability navigating the internet or carrying out relatively common online tasks is a direct indicator for digital literacy. For Fairhaven residents that responded to the MBI survey, those that earn less than $60,000 per year stated they are less comfortable performing online tasks compared to their counterparts. For example, whereas 81 percent of respondents with household income above $60,000 reported that using telehealth services was "easy," only 60 percent of the respondents from lower-income households said so. Additionally, while 77 percent of respondents earning over $60,000 find it "easy" to search and apply for benefits or

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[3] Estimates are based on 2021 American Community Survey reported data on household income, food stamp recipiency, Medicaid recipiency, supplemental security income, and public assistance income.

resources online, only 46 percent of those earning less than $60,000 said the same. However, 64 percent of all Fairhaven respondents indicated that they would be interested in any of the four digital skills supports detailed in the survey (do-it-yourself training, online classes, in-person support from friend or instructor, or in person classes), which shows that although there is a significant information gap between lower and higher income respondents, there is a notable interest among Fairhaven residents for receiving digital literacy education and support.

2.8 Across the income spectrum, Fairhaven residents are very concerned about privacy and security online

Fairhaven residents who participated in the MBI residential survey expressed deep concerns about online safety and privacy, and these sentiments held across the income spectrum. Respondents are most concerned about their data being stolen or used without their consent— a concern cited by 91 percent of respondents. Additionally, 66 percent are most concerned that they or a loved one could get scammed or tricked, and 58 percent are most concerned they could be tracked or surveilled. This suggests a need for skills training and education generally in the community.

2.9 Numerous organizations in Fairhaven have expressed interest in offering digital skills programs to address identified needs in the community

The Council on Aging provides digital literacy classes in partnership with the Fairhaven School Department, as well as volunteers. The COA recently received a Digital Literacy Grant for Older Adults from the Commonwealth of Massachusetts Executive Office of Elder Affairs (EOEA). Classes range from basic skills such as web browsing and word processing to cybersecurity and hardware management. There is a clear need to expand the availability of digital skills training, especially to low-income and senior citizens. Representatives from Fairhaven TV, Millicent Library, Fairhaven Public Schools, and Murphy and Others, Living Interdependently for Future Endeavors, Inc. (M.O.L.I.F.E.) have all expressed interest in offering or facilitating digital education instruction.

More detail on these findings and supporting data can be found in Sections 4, 5, and 6.

3   Recommendations

CTC recommends the Town and its stakeholders explore the following strategies and pursue available funding sources to help close digital equity gaps in Fairhaven. Most recommendations involve work that established, proven, and trusted community partners could perform.

The Town of Fairhaven, potentially in concert with stakeholders, can play an important convening role to bring together key community partners in a collaborative process to ensure that funding opportunities are pursued in most efficient way.

Table 1: Summary of recommendations and the following subsections summarize the major recommendations of this report. The first recommendation—for setting up a digital equity coalition—would create an entity within Fairhaven comprised of the Town and its departments, local stakeholders, and any local charities or other entities. Taken together they would be tasked with facilitating coordination, setting priorities, and making funding recommendations.

Table 1: Summary of recommendations

Recommendation	Access and affordability	Devices	Skills	Privacy/ security	Potential annual cost
Convene a Digital Equity Coalition and facilitate biannual meetings to share information and set priorities	X	X	X	X	N/A
Consider setting up a modest Town grant fund to fill small gaps and reduce reliance on uncertain or finite state or federal funding streams	X	X	X	X	$25,000
Fund a digital navigator position to serve at COA, library, and other sites for skills training and enrollment support for low-cost broadband programs.	X		X	X	$80,000
Consider a fund to create a digital education curriculum to provide professional pathways for high school students			X	X	$40,000 for initial development/ implementation, $75,000 annually for an instructor

Recommendation	Access and affordability	Devices	Skills	Privacy/ security	Potential annual cost
Explore expansion of Fairhaven TV's role to include digital skills training, as is done in some other communities	X		X		No initial cost until programs are created
Pursue MAPC program to provide potential capital and operating support for Wi-Fi in housing authority buildings	X				No cost first year; TBD for subsequent years
Explore partnerships with device provision entities to meet the needs of community	X	X	X	X	$1,500 per learner
Purchase 37 iPads for COA and Community Connections	X	X	X	X	$13,000 one-time cost
Support the COD through funding for consulting and device access resources to adequately serve residents living with physical and developmental disabilities	X	X	X	X	Free initial consultation with Perkins School is a recommended first step
Explore cybersecurity programming/partnership opportunities				X	Track and pursue state cybersecurity programs[4]

3.1 Form a Townwide Digital Equity Coalition and convene annual or biannual meetings to harmonize efforts and support outreach to funders

Fairhaven's government is well suited to implementing some solutions, especially with respect to infrastructure, staffing, and certain kinds of programs, but it cannot address all challenges related to digital equity alone: connecting residents with subsidy programs, providing devices, assisting with device maintenance and updates, and helping people develop better computer skills.

Given these considerations, an important role the Town of Fairhaven could play is in forming a Digital Equity Coalition to convene the organizations already providing, planning to provide, or willing to contribute services in Fairhaven.

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[4] "About the Municipal Cybersecurity Awareness Grant Program," https://www.mass.gov/info-details/about-the-municipal-cybersecurity-awareness-grant-program#how-to-apply.

Entities including the Council on Aging, Veterans Services, Fairhaven Public Schools, Fairhaven TV, Millicent Library, and others (some of which cover overlapping populations) can convene with the Town to ensure that digital equity efforts were coordinated. A coalition meeting annually or biannually—with the structure to encourage members of the Coalition to distribute timely and relevant information and opportunities throughout the rest of the year—would help inform a holistic programmatic strategy and make recommendations to funders and philanthropies. Once the coalition is formed, an initial task would be to determine what existing Town staff position can take on the role of evaluating and operationalizing recommendations that the Town is in a position to fund or implement.

Such coalitions are critical to engage stakeholders and drive change. The Essex County Community Foundation (ECCF) has served in this convening role on the North Shore and is expected to continue serving this function. Another model in Massachusetts is the Alliance for Digital Equity, established in 2021 by Baystate Health and the Community Foundation of Western Massachusetts to address broadband affordability, access, and digital literacy for all residents of Berkshire, Hampden, Hampshire, and Franklin counties in western Massachusetts.

Working with MBI and other larger regional entities, the Town could also expand partnerships across communities with libraries, senior groups, and other social service and public health entities to further improve coordination.

3.2 Consider setting up a modest Town grant fund to fill small gaps and reduce reliance on uncertain or finite state or federal funding streams

The Digital Equity Coalition could position itself to understand the relationships between local organizations, track progress of local initiatives, and serve as a liaison and communications channel with MBI and other state and federal agencies working on digital equity issues.

The structure and landscape of federal and state digital equity funding is evolving. MBI has recently released the State Digital Equity Plan, and federal agencies are crafting rules for federal grant programs that will distribute $2.75 billion nationwide. The Town of Fairhaven is well positioned to serve as a conduit for distributing federal and state digital equity funds to local organizations; however, the exact role of local nonprofits and local government agencies in the administration of this funding is currently unclear. This is another reason creating a coalition to track funding sources and coordinate efforts in the next few years is important.

Given the uncertainty at the state level, the Town of Fairhaven would benefit from using local resources to create a grant fund to address specific gaps in digital equity and inclusion. The Town could consider creating a modest grant fund of perhaps $25,000, with awards of approximately $5,000 to $10,000 to local nonprofits and community organizations to support existing programs

and provide seed funding for new ones. The Town should reevaluate the total grant fund amount each year and consider incremental increases as additional funds become available.

A simple grant application, organized and managed by the Town, could allow local organizations serving Fairhaven to provide specific proposals for training, enrollment support for affordability programs, or device subsidy and assistance programs. The Town could develop metrics and reporting on timelines, financial accountability, and program results that will demonstrate the effectiveness of the use of these awarded funds and how they help meet digital equity goals and objectives created by MBI.

3.3 Fund a digital navigator position to serve residents at the library, the Council on Aging, schools, Veterans Services, the Housing Authority, and other entities

There is a broad need for technical and skills assistance for Fairhaven residents. One digital navigator position, with a presence at entities across Fairhaven, should include digital skills training, and enrollment support for government broadband subsidy programs and ISPs' low-cost programs as a core function. Entities that could benefit from having a digital navigator could include the Public Library, the Council on Aging, Veterans Services, and Housing Authority.

A digital navigator with a presence at various entities could potentially help residents learn how to access lower-cost internet services from Comcast's Internet Essentials and enroll in government programs online, in addition to helping residents better navigate the internet and gain digital skills more generally. The digital navigator could also be part of the suggested Digital Equity Coalition (see recommendation 3.2) to better understand the needs of residents and entities in Town.

Currently, the library operates a hotspot lending program for residents. A digital navigator could help individuals who frequently rent hotspots in enrolling in Comcast's Internet Essentials, or other low-cost broadband subscription programs, offering discounted service. Another Fairhaven entity that would benefit from the presence of a digital navigator is the Council on Aging. Currently the COA coordinates digital instruction for its senior population with Fairhaven High School's Professional Development Instructional Technology Specialist. In addition, the COA provides a weekly drop-in Tech Café as part of the EOEA Digital Literacy Program, which is run by volunteer high school and college students. The Tech Café provides support to seniors who may just need a few minutes of assistance on their digital device or phone.

3.4 Consider a fund to create a digital education curriculum to provide professional pathways for high school students

Fairhaven Public Schools has a 1:1 Chromebook program for all students in kindergarten through high school. Because of this, FPS is seeking financial support and staff to establish a curriculum for digital literacy instruction and online safety for all students, which would include a cyber safety certification for those in high school.

General planning for this curriculum has started. FPS seeks a strong emphasis on learning online research techniques and cybersecurity. These classes would be included in every grade and would culminate with high school seniors receiving a cybersecurity and digital literacy certification. This certificate could also support students who may not be college bound and are seeking employment in IT industries. Additionally, there may be opportunities for FPS students to provide digital skills and safety instruction services at entities across Fairhaven.

FPS estimates that $40,000 would be required to create this curriculum across all grades. Additionally, one or two instructors would be required to run this program and teach these classes at an annual cost of $75,000 per instructor.

3.5 Explore establishing digital skills programs at Fairhaven TV

Fairhaven's population experiences significant broadband and digital skills gaps. Fairhaven TV (FHTV) is a trusted and proven community partner that offers one-on-one training to educate community members on studio production, videography, editing, and lighting to those who request this hands-on training, in addition to airing local government meetings, managing the Town's website, and assisting in other community events.[5]

FHTV is located in the Town Hall building which provides free public Wi-Fi for all and access to an auditorium where FHTV staff have hosted many community events. The Town—in collaboration with FHTV—can consider exploring funding opportunities and potential partners for establishing digital skills training classes for the community.

Like other community TV stations around the country, Fairhaven TV's annual budget is facing pressure as cable providers' commitments to such funding are declining. The current budget is about $200,000, which covers staff and general operations but cannot support additional programming and classes for the Fairhaven community. However, FHTV staff have the skills and desire to offer programming for wider digital skills programs if funding allowed.

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[5] "About Us," Fairhaven TV, https://www.fairhaventv.com/aboutus.

3.6 Consider pursuing MAPC's Apartment Wi-Fi program and MBI's Residential Retrofit program for public and affordable housing properties

MBI has partnered with the Metropolitan Area Planning Council (MAPC) to provide procurement support, capital expense funding, and funding for the first year of operating expenses to provide free Wi-Fi internet access to residents of public and affordable housing in Massachusetts. The effort targets residents most likely to face barriers to connectivity—those experiencing housing insecurity who have access to broadband but cannot afford it.[6] Details by municipality are yet to be determined.

Low-income Fairhaven residents subscribe to broadband at lower rates than the population as a whole. Representatives from the Housing Authority report spotty and unreliable Wi-Fi connectivity due to signals being unable to effectively permeate walls. The Authority would benefit from a more robust Wi-Fi solution in its facilities.

The anticipated size of the grant program is $5.6 million, with plans to address roughly 2,400 housing units. The MAPC will provide funding, project management, and procurement support to enable the construction of Wi-Fi networks to provide residents with service equal to or superior to what is available from local ISPs, at no cost to residents. The funding covers all capital costs associated with network design, construction, and equipment, and the first year of ongoing operating expenses.

Additionally, or as an alternative, the Town or Housing Authority could consider exploring single-payer arrangements to deliver high-speed, reliable internet service to residents in public housing and other muti-family/unit dwellings. The Town may consider engaging with Comcast or other providers to seek quotes.

Additionally, MBI has established a new Residential Retrofit Program with the goal of deploying state of the art broadband infrastructure to approximately 22,000 public and affordable housing properties across the state. This program is being funded by the U.S Department of Treasury Capital Projects Fund grant, and will offer grants to cover all costs associated with the retrofit of eligible properties.[7] The online application must be completed in May, and the first round of awardees will be notified by August 2024.

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[6] "Smart Growth and Regional Collaboration: Apartment Wi-Fi," MAPC, https://www.mapc.org/our-work/expertise/digital-equity/apartment-wi-fi/ (accessed November 17, 2023).

[7] "Residential Retrofit Program," MBI, https://broadband.masstech.org/retrofit.

3.7 Explore partnerships with device-provision entities to ensure all Fairhaven residents who want a computer can obtain one

Device access is limited in Fairhaven, with the main distributor being the Fairhaven Public Schools through its 1:1 Chromebook program. Other entities engaged for this report highlighted two issues: a lack of devices at their organizations and a lack of awareness on how to engage and partner with third-party organizations focused on device distribution.

There are organizations across Massachusetts that aim to address the device gap. One is Tech Goes Home, which recently announced it is partnering with neighboring New Bedford Community Health.[8] Tech Goes Home (TGH) is a nonprofit organization that partners with community organizations to provide curated technology-based support through device distribution, internet access, digital literacy, and education. Upon successful completion of a TGH course through the community partner, students are provided with a device for personal use. The cost per pupil (including the device) is $1,500. Another device donation and distribution program, Computers4People, aims to "bridge the digital divide by repurposing e-waste into educational tools, ensuring equal access to technology for all." Individuals and non-profits can apply for computers through its website.[9] Additionally, TEK Collaborative,[10] an Amesbury-based nonprofit that refurbishes and supplies computers to those in need, may be another resource. However, at the time this report was delivered, TEK Collaborative indicated on its website that requests exceeded supply and that it could only place people on a waiting list for new devices.[11]

It is recommended that the town engage with these entities to explore partnership opportunities.

3.8 Consider the purchase of 37 iPads for entities in Fairhaven seeking this support

The Council on Aging (COA) and Community Connections are two entities that have explicitly stated their need for iPads for distribution to the populations they serve. The Town of Fairhaven should consider the purchase and dissemination of these devices.

The COA offers digital literacy classes twice a week, but estimates that only one-third of class attendees actually own devices or laptops. Instead, individuals borrow COA laptops for the duration of class and return them at the end of each session. The COA has two loaner iPads that

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[8] "Tech Goes Home adds 25 new community partners", *Jamaica Plain Gazette*, https://jamaicaplaingazette.com/2024/02/05/tech-goes-home-adds-25-new-community-partners/.

[9] "Our Mission," Computers4People, https://www.computers4people.org/about.html.

[10] In response to the digital equity needs illuminated by the Covid 19 pandemic, TEK Collaborative was established to help close the digital divide by providing adequate internet enabled devices at no cost to those in need. TEK Collaborative forms strategic partnerships with businesses, organizations, schools, and government to create an ecosystem of device access, internet access, and education.

[11] "About TEK Collaborative", TEK Collaborative, https://tekcollaborative.org/2023/08/11/about/

are available to borrow by Fairhaven Seniors. To address this device gap, the COA would like to purchase 25 iPad devices for students of their digital literacy classes to be distributed upon completion of the course. Similarly, Fairhaven's Community Connections office offers free Wi-Fi and technical support staff for daily visitors, but only has two iPads on its premises for public use currently. A representative at the organization believes that the purchase of 12 iPads would satisfy the current demand at this location.

The purchase of 37 devices at an approximate cost of $13,000 (roughly $350 per device) would satisfy this immediate demand.

3.9 Support the Commission on Disability with consulting and device resources to adequately serve residents living with physical and developmental disabilities

The Commission on Disability (COD) serves a distinctly vulnerable population whose digital equity needs are compounded by physical and developmental barriers. Representatives at COD cite affordability, navigating online program enrollment and services, device access, and lack of digital literacy programming as the most significant barriers to digital equity for the COD community. Additionally, it was mentioned that their population is more frequently and inadvertently overlooked in programming for digital accessibility, and it would like to begin implementing programming changes to address this gap. However, representatives at COD do not know how to begin.

The Perkins School for the Blind (Perkins) in Watertown, MA is a national leader in providing resources for individuals who are blind or experience low vision or deaf blindness, in addition to other disabilities. Perkins manages the FCC's National Deaf-Blind Equipment Distribution Program, which delivers devices and training to low-income individuals who are impeded by sight and hearing loss. [12] Perkins also operates The Perkins Access program, which provides consultation for technical assistance and resource identification to a variety of companies, organizations, and other entities to improve their digital accessibility by engaging and including all people, regardless of their abilities.[13] An initial introductory consultation is no cost. Additional State and local resources offering varied levels of guidance and resource support for communication access and technology services include the Massachusetts Commission on Disability[14], the Commission for the Blind,[15] the Commission for the Deaf and Hard of Hearing,[16]

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[12] "Q&A: Launch of the National DeafBlind Equipment Distribution Program", Perkins School for the Blind, https://www.perkins.org/qa-launch-of-the-national-deafblind-equipment-distribution-program/.

[13] "About Us", Perkins Access, https://perkinsaccess.org/about-us/.

[14] Mass.gov, https://www.mass.gov/orgs/massachusetts-office-on-disability

[15] Mass.gov, https://www.mass.gov/orgs/massachusetts-commission-for-the-blind

[16] Mass.gov, https://www.mass.gov/orgs/massachusetts-commission-for-the-deaf-and-hard-of-hearing

Vinfen,[17] and the Massachusetts Association for the Blind and Visually Impaired (MABVI).[18] MABVI is a sub-recipient of the Massachusetts Healthy Aging Collaborative Digital Equity Partner grant, which means that MBI could perhaps assist in facilitating future conversations where applicable. Additionally, though Vinfen does not serve Fairhaven as part of its Digital Equity Partnership grant, the organization (and its Alliance) are providing digital inclusion services to people with disabilities and may have perspective to share.

COD should pursue introductory conversations and potentially consulting services with those entities listed above, or any other potential partner that COD may identify, to begin addressing existing device access, digital literacy, and adaptive technology gaps among its served population.

3.10 Explore cybersecurity programming/partnership opportunities

Concerns about online safety and privacy in Fairhaven are significant, with 89 percent of Fairhaven respondents to the MBI survey stating they are either somewhat concerned or very concerned about their online safety, and 91 percent of Fairhaven respondents saying their main concern online is having personal data stolen or used without their consent. MBI's state digital equity plan (SDEP) states that a future action to address online safety will include the development of a statewide cybersecurity curriculum. Additional actions will include training existing digital navigators, so they support, protect, and inform clients about their online safety, and embedding cybersecurity awareness into youth digital literacy programming.

In the near term, Fairhaven stakeholders can leverage the resources of MassTech Collaborative's MassCyberSecurity online safety initiatives. As part of this, there is also a timely opportunity to apply for a state grant to enhance cybersecurity awareness for anyone using Town or other government networks.[19]

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[17] "What We Do," Vinfen, https://vinfen.org/about-us/.
[18] https://www.mabvi.org/
[19] "About the Municipal Cybersecurity Awareness Grant Program," Mass.gov, https://www.mass.gov/info-details/about-the-municipal-cybersecurity-awareness-grant-program#how-to-apply-.

4 Broadband availability conditions and participation in the ACP in Fairhaven

This section provides an analysis of current broadband conditions in the Town of Fairhaven related to infrastructure availability, level of competition, uptake of services (and of available subsidies) by residents, and device ownership. Data is based on publicly available information from the U.S. Census Bureau, the American Community Survey (ACS), and the Federal Communications Commission (FCC).

4.1 Fairhaven has ubiquitous wired broadband coverage from Comcast, but competition is mostly absent

A review of FCC data and research on websites of broadband providers operating in Fairhaven yielded the following market data on residential broadband pricing, availability, and level of competition.

Comcast provides high-speed internet service throughout the Town with the exception of 11 locations. Verizon's DSL service, offered over its legacy copper network, is the only other wireline option for internet access service. Fixed wireless services (distinct from mobile services) are available from Verizon Wireless and T-Mobile to many households. Fairhaven households do not have the benefit of a residential fiber provider as an alternative to cable. Unlike cable, fiber-to-the-premises service provides symmetrical service (upload speeds are the same as download speeds).

Table 2 provides an analysis of FCC data for Fairhaven. FCC data—which are based on reports from service providers—show a total of 6,455 "broadband serviceable locations" (this generally means addresses, which may contain one or more units or apartments) in Fairhaven.[20] Table 3 provides an analysis of the competitive landscape in the community.

Table 23: Broadband service in Fairhaven from FCC data as of August 2023

Tech	ISP	Number of locations
Cable	Comcast (Xfinity)	**6,444** All at or above 100/20

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[20] The FCC Broadband Data Collection reporting uses the term "broadband serviceable location (BSL)" to represent address level information including physical addresses. A BSL is shown as a single served address for locations that may have more than one household or unit, as is the case with duplexes and multi-tenant or apartment buildings. In cases where an address or location is serviced by a single provider or technology, an assumption can be made that the same is true for all households or units at that location.

Tech	ISP	Number of locations
Licensed Fixed Wireless	T-Mobile or Verizon "5G Home Internet"	**4,772** 579 at or above 100/20 Mbps (T-Mobile) 1,274 between 25/3 and 50/4 (either provider) 2,919 between 0.2/0.2 and 10/1 (either provider)
DSL/Copper	Verizon	**2,028** 1,985 at between 0.2/0.2 and 10/1 Mbps 43 at between 10/1 and 25/3 Mbps
Total locations		**6,455**

Table 34: State of high-speed broadband competition in Fairhaven per FCC data

Availability of wireline broadband service		Addresses
Addresses where 100 Mbps download, 20 Mbps upload (100/20) or higher is available	Competition from two or more wireline providers	0
	FTTP available in competition areas	0
	Only one wireline provider (Comcast)	6,444
Served by licensed fixed wireless at various speeds		4,772
Served only by licensed fixed wireless		0
Underserved addresses—no options at 100/20 Mbps but can get at least 25/3 (wireline or licensed fixed wireless)		5
No 25/3 or greater (wireline or licensed fixed wireless)		6

Figure 1 shows Comcast's service availability in Fairhaven, showing essentially ubiquitous coverage by Comcast.

Figure 1: Comcast service availability in Fairhaven
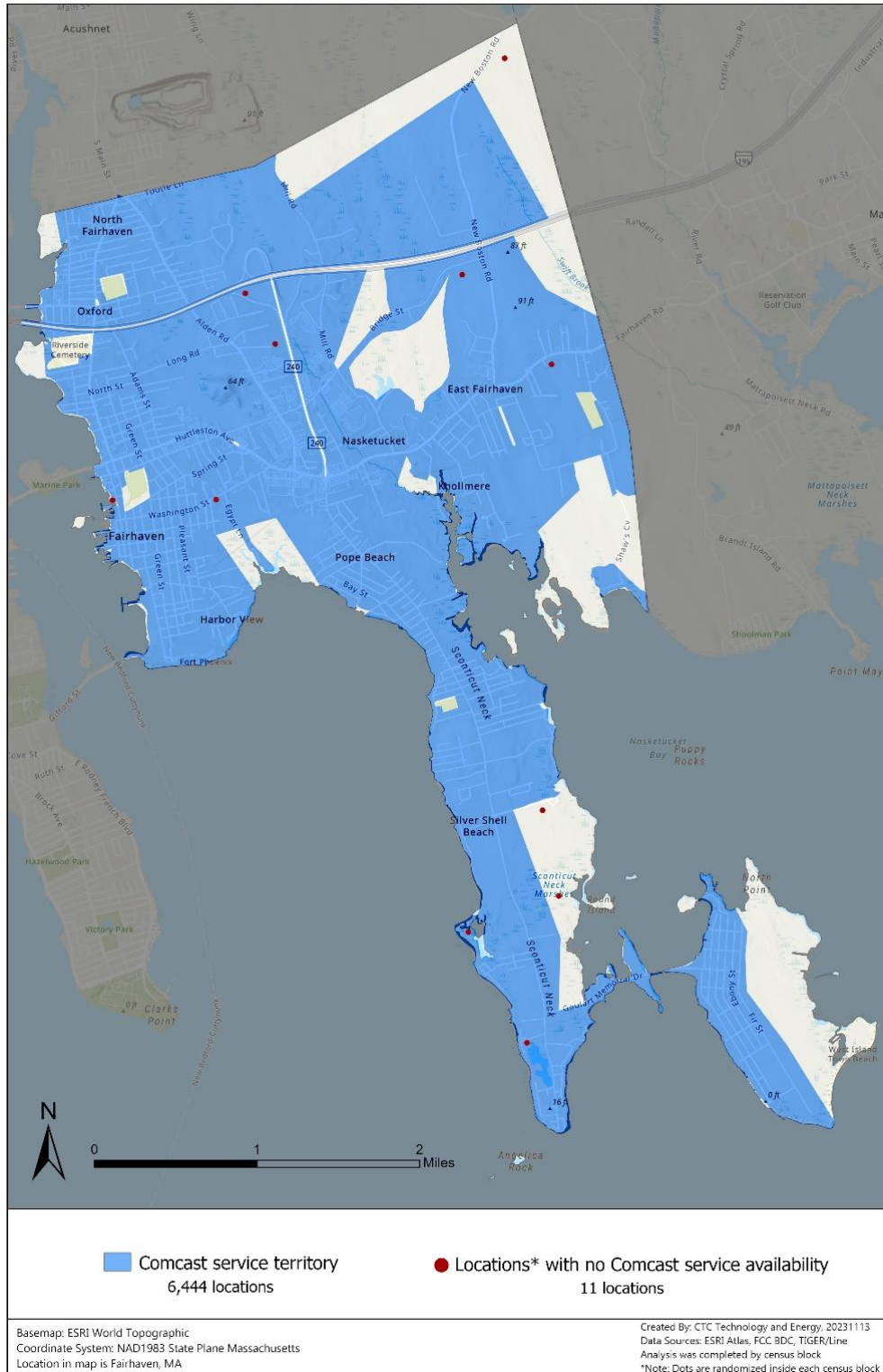
Figure 2 Figure 2: DSL coverage in Fairhavenshows DSL coverage at two speed categories, according to FCC data. Research revealed only two DSL offerings promise a range of slow download speeds, including 1.1-3 Mbps and 3.1-7 Mbps.

Figure 2: DSL coverage in Fairhaven[21]
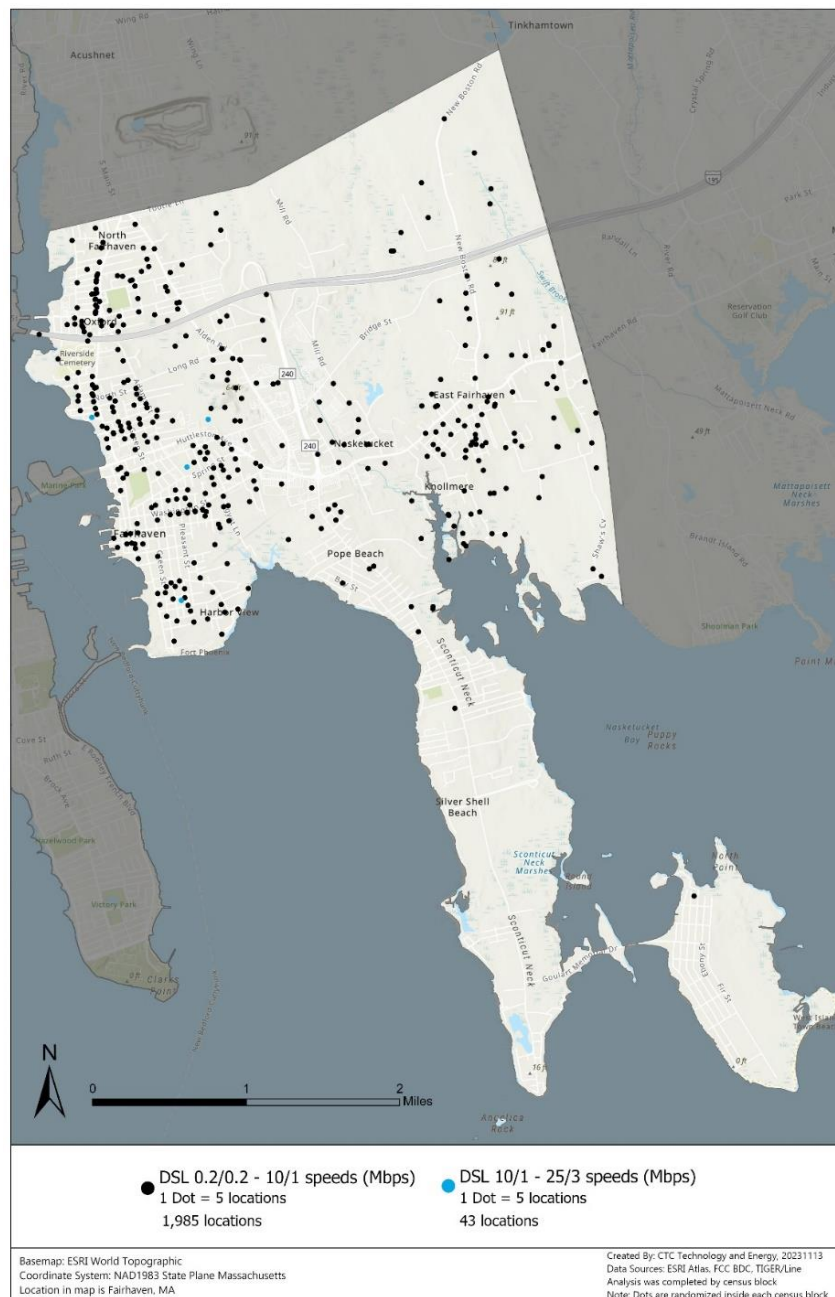
Residents have the option for "5G Home Internet" services from T-Mobile and Verizon. These are known as "licensed fixed wireless" or LFW services because they use licensed spectrum under the exclusive control of the respective companies. The FCC notes that mobile wireless providers

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[21] This map depicts FCC broadband reported data by census block and places dots in random locations representing locations served by DSL within the census block. Each dot represents five locations within the census block. Only those census blocks with 3 or more locations served by DSL will show any dots.

have been making these offerings an increasingly attractive alternative to services such as Comcast, given the more competitive pricing,[22] yet these remain a complement of, and not a full replacement to, services such as Comcast. Providers can throttle or reduce capacity in favor of mobile voice and data traffic during times of congestion.

Figure 3Figure 3: Fixed wireless coverage by speed in Fairhaven shows reported fixed wireless coverage levels by available speed. Although FCC data shows that 4,772 locations in Fairhaven are served by fixed wireless, the data shows that the majority of locations are served by the slowest speed tranche, between .2/.2 Mbps and 10/1 Mbps. Even this reported coverage may overstate what is actually available. The quality of the coverage will significantly vary depending on how far away the location is from the equipment or whether there are barriers that could block or weaken a signal, such as trees and buildings. Many premises may not receive the reported level of service on a consistent basis.

In these figures, the dots represent five locations and are positioned randomly within census blocks. The dots do not represent specific addresses.

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[22] 2020 Broadband Deployment Report, para 11.

Figure 3: Fixed wireless coverage by speed in Fairhaven[23]

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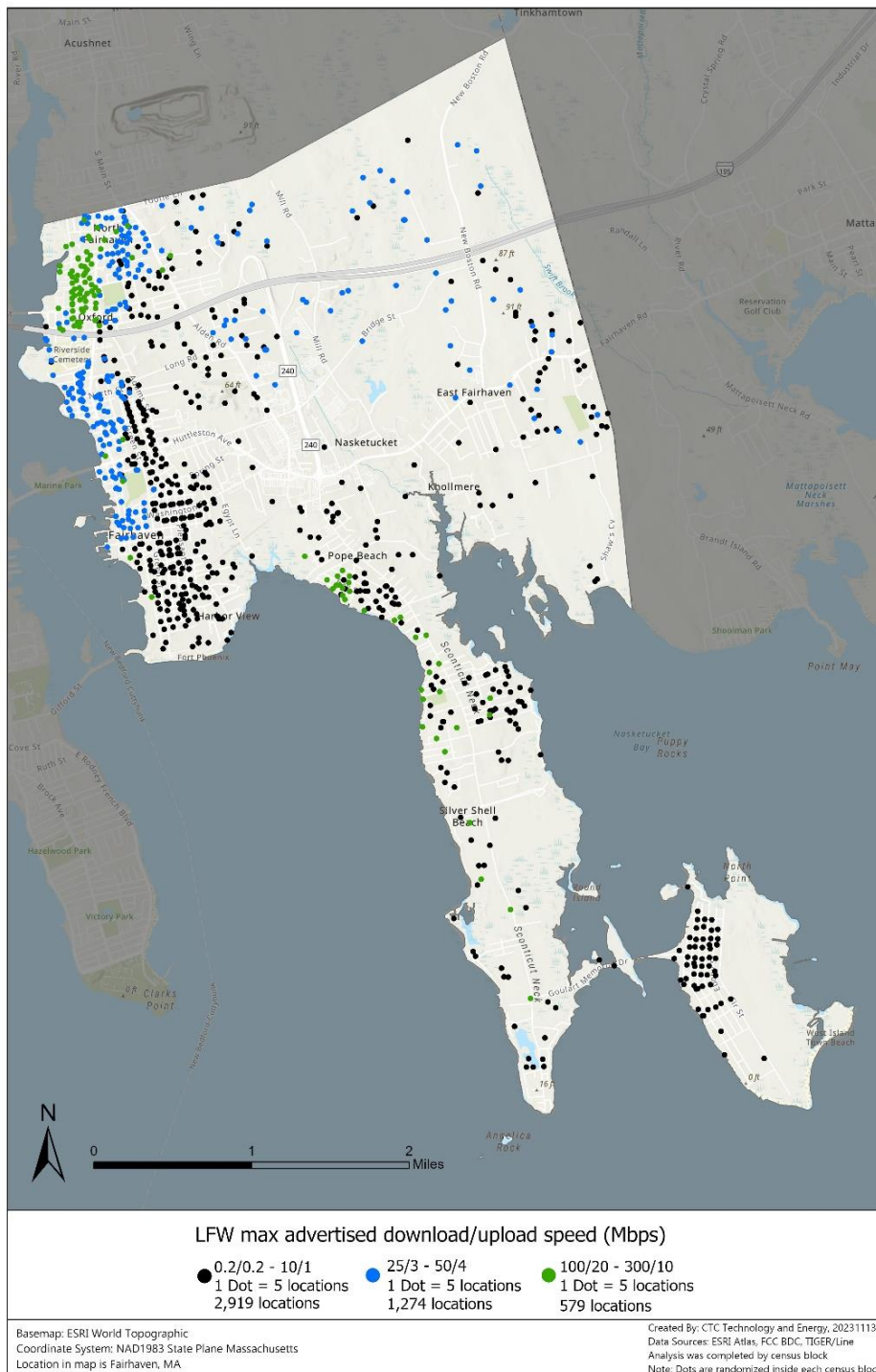
[23] As reported to the FCC using the federal Broadband Data Collection rules, gaps in speed ranges reflect no reported locations at speeds between the ranges. The slowest fixed wireless speed reported is .2/.2Mbps and the fastest is 300/10 Mbps.

Figure 4 shows fixed wireless coverage by provider.

Figure 4: Fixed wireless coverage by provider in Fairhaven
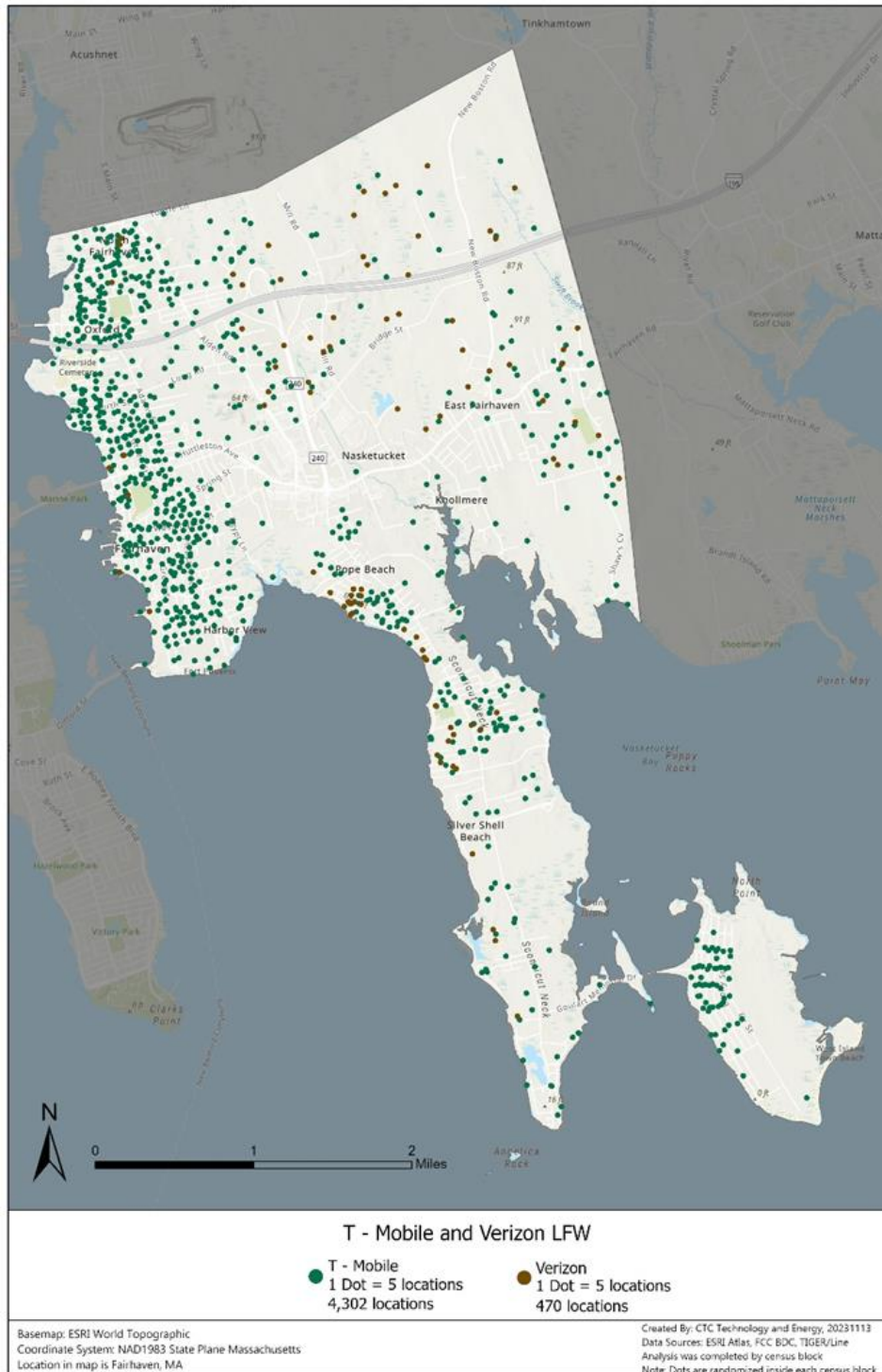
4.2 Approximately 586 Fairhaven households rely on mobile services alone

ACS data reveals roughly 586 Fairhaven households reported they are solely using a cellular internet service for broadband connectivity at home. Some consumers who rely on cellphone data plans can use their smartphones to connect to wireless hotspots and connect other computing devices to the internet.

The FCC has repeatedly noted that mobile service is an inadequate substitute for fixed broadband services;[24] however, an estimated 15 percent of U.S. adults continue to rely on their smartphones and mobile data plans as the only source of home broadband connectivity[25]—a trend that is more common among young adults and low-income households[26] and that is reflected here in Fairhaven.

4.3 The ACP participation rate in Fairhaven is very low, with only 13.6 percent of potentially eligible households using the subsidy

The Affordable Connectivity Program (ACP), which provides a monthly subsidy toward home internet subscriptions, presents an opportunity for many low-income residents to purchase a quality broadband subscription more affordably.

As of December 1, 2023, estimates based on FCC data reported by ZIP code show that roughly 640 households in Fairhaven were receiving the ACP subsidy—which is only about 13.6 percent of the estimated 4,680 eligible households in Fairhaven.[27] This enrollment rate is lower than the statewide average of 31 percent and the national figure of 40 percent. This data is shown in Table 45: ACP enrollment in Fairhaven

The relatively low enrollment rates might be ascribed to a lack of awareness of the program and a challenging sign-up process; many eligible residents may need to go to a library or other location with internet access to even start the registration process. As a result, many local governments and other digital divide stakeholders conduct active outreach to candidate populations to make them aware of the program and assist in the sign-up process. And with the program no longer accepting new enrollments as of February 7 and funding projected to expire in April 2024 (barring new funding from Congress), residents may still need help enrolling in low-cost programs offered by the City's broadband providers, as described in the next subsection. While outreach may increase enrollment in some areas, some eligible residents will be

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[24] E.g., October Broadband Deployment Report, para 11.

[25] Andrew Perrin, "Mobile Technology and Home Broadband 2021," Pew Research Center, June 3, 2021, https://www.pewresearch.org/internet/2021/06/03/mobile-technology-and-home-broadband-2021/.

[26] Andrew Perrin, "Mobile Technology and Home Broadband 2021."

[27] Estimates of total number of eligible households are based on 2021 American Community Survey reported data on household income, food stamp recipiency, Medicaid recipiency, supplemental security income, and public assistance income.

uninterested or unwilling to participate. This may be the case if a household cannot afford internet even if it receives the ACP, feels no need to use the internet, receives satisfactory service from a cellular provider, receives free internet access through a communal source, or does not want to apply for a federal subsidy program—which can be a particular concern for recent immigrants.

Table 45: ACP enrollment in Fairhaven[28]

	Eligible households enrolled	Enrolled households	Eligible households	Unenrolled eligible households
Fairhaven	13.6%	640	4,680	4,040
Massachusetts	31%	358,383	1,156,300	797,917
United States	40%	22,190,763	55,179,000	32,988,237

4.4 Fairhaven residents have obtained free high-speed internet service with the ACP benefit, but initial prices rise sharply after promotional periods end

All broadband providers in Fairhaven participate in the ACP, either directly or through an affiliate, and some offer their own low-cost programs. When the discounts are combined, these programs have enabled qualifying low-income residents to receive service at no cost. (Mobile plans are also ACP-eligible, but each household can only use ACP once—so if a household is using the benefit for a mobile plan, they cannot get the benefit again for a home plan.) Those who do not qualify for a discounted plan must pay a minimum of $77 per month (the price after promotional periods end), for reliable wired broadband service. Residents can obtain initial pricing from Comcast at $25 per month, but this price rises sharply following the promotional period.

The ACP program has stopped accepting new enrollments as of February 7, 2024, and at the time this report was finalized, will stop providing this broadband discount to existing ACP participants by May 2024.[29] Residents currently enrolled in this program will need assistance navigating and pursuing alternative low-cost internet service options.

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[28] "ACP Enrollment and Claims Tracker," USAC, data as of November 30, 2023, https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/.

[29] "Public Notice: WC Docket No. 21-450," FCC, https://docs.fcc.gov/public/attachments/DA-24-274A1.pdf.

4.4.1   Comcast service offerings and prices

Table 56shows Comcast's service offerings in Fairhaven. Options that are free with ACP and/or are designed for eligible low-income residents are shaded green.

Table 56: Comcast (Xfinity) advertised service plans in Fairhaven (low-income programs in green)

Package	Internet speed	Monthly cost	Notes
Internet Essentials	50/10 Mbps	$9.95 (free with ACP subsidy)	Available to eligible low-income customers following an application process and subject to certain conditions. Internet Essentials also includes added benefits; customers can purchase a refurbished computer for $149.99.[30]
Internet Essentials Plus	100/20 Mbps	$29.95 (free with ACP subsidy)	Available to eligible low-income customers following an application process and subject to certain conditions. Internet Essentials also includes added benefits; customers can purchase a refurbished computer for $149.99.
Connect More	200/10 Mbps	Promotional price $25/mo. first year; $45/mo. second year; $77/mo. thereafter	No term contract. Promotional discount is $52/mos. for the first year and $32/mos. for the second year. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account or $5/mo. when using a stored credit card.
Fast	400/10 Mbps	$35 for the first 24 months, then $92 plus $15/mo. router rental fee	No term contract. Promotional discount is $52/mos. for the first year and $32/mos. for the second year. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account or $5/mo. when using a stored credit card.
Superfast	800/10 Mbps	$60 for the first 24 months, then $97 plus $15/mo. router rental fee	Pricing guaranteed for 24 mos. with no term contract or 36 months with a term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account or $5/mo. when using a stored credit card.
Gigabit	1000/20 Mbps	$70 for the first 24 months, then $102 plus $15/mo. router rental fee	Pricing guaranteed for 24 mos. with no term contract or 36 mos. with a term contract. Includes $10/mo. automatic payments and paperless billing discount with a stored bank account or $5/mo. when using a stored credit card.

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[30] Comcast, "Comcast Broadband Opportunity Program," https://www.xfinity.com/support/articles/comcast-broadband-opportunity-program (accessed October 2023).

Package	Internet speed	Monthly cost	Notes
Gigabit Extra	1200/35 Mbps	$80 for the first 36 months, then $107 plus $15/mo. router rental fee	Pricing guaranteed for 24 mos. with no term contract or 36 mos. with a term contract. With term contract Includes $27/mo. Discount and $10/mo. automatic payments and paperless billing discount with a stored bank account or $5/mo. when using a stored credit card. Installation cost up to $500.

4.4.2 Verizon DSL service offerings and prices

Verizon's DSL service is a flat charge of $40 per month regardless of the network performance and speeds delivered to the household. As with any DSL service, the underlying landline phone service is required, which in this case costs $34.99. Verizon's DSL service and bundled home phone plan is almost the same price as Comcast's non-promotional prices for a plan with far faster speeds.

CTC checked 20 addresses in Fairhaven and found offers for DSL that promise a range of slow download speeds (1.1-3 Mbps or 3.1-7 Mbps). Those download speeds will not meet the needs of a typical household but can facilitate basic internet access functions such as email. FCC service availability data demonstrates that some Fairhaven households may be receiving service significantly below even these speeds, but others may be receiving faster speeds if the residence is located closer to Verizon's central network equipment. (Verizon's own marketing materials state that the service could provide download speeds between 1.1 Mbps and 15 Mbps but also state that the majority of customers will only receive 1.1 to 3 Mbps and that rates are only good for one year.)[31] Table 67shows the service plans offered in Fairhaven.

Table 67: Examples of Verizon DSL service plans offered in Fairhaven[32]

Package	Internet download speed	Monthly cost	Notes
DSL High-Speed Internet	1.1 to 3 Mbps or 3.1 to 7 Mbps	$40	Requires underlying landline phone service at $34.99. Customers may use their own router or purchase one for $99.

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[31] "Verizon DSL Internet: Talk and surf at the same time," https://go.verizon.com/residential/high-speed-internet (accessed November 20, 2023).

[32] From CTC checks of more than 21 addresses in Fairhaven. Other offers may be available.

4.4.3 Fixed wireless service offerings and plans

Table 78shows pricing for T-Mobile's 5G Home Internet service plan at $50/month for 5G Home Internet-only service. T-Mobile will provide 5G Home Internet at $30/month if it is bundled with a cellular plan that costs between $60 and $100 per month for a single line.[33] T-Mobile prices its 5G Home Internet plans regardless of provided speeds.

T-Mobile does not participate in ACP directly for either its 5G Home Internet or mobile data plans.[34] Only T-Mobile affiliates – Metro by T-Mobile and Assurance Wireless – participate in ACP and offer discounts on mobile data plans. Fairhaven residents who qualify for ACP must sign up with prepaid provider Metro by T-Mobile for 5G Home Internet and can apply the ACP discount to the bundled 5G prepaid mobile plan. Metro by T-Mobile offers a 5G Home Internet plan and a mobile prepaid voice and data plan for $50 a month without the ACP discount and $20 with the ACP discount.[35] Assurance Wireless does not offer 5G Home Internet.

Table 78: T-Mobile fixed wireless advertised service plans in Fairhaven

Package	Internet speed	Monthly cost	Notes
5G Home Internet	75/20 Mbps*	$30 mo. for T-Mobile 5G Wireless customers; $50 mo. for 5G Home Internet service only	Pricing includes a $5/mo. autopay discount. $30 service is only available to customers with a T-Mobile 5G phone and plan offered between $60-100/mo., plus the cost of a handset. Gateway router provided at no charge but one-time $35 device connection charge at sign up.

*Speeds are estimated and rounded. Quoted download speeds were 76-245 Mbps with claims that 50% of customers experience speeds in this range and the remaining customers could receive service faster or slower than this range. Upload speeds were quoted as 21-40 Mbps.

Table 89shows Verizon Wireless' 5G Home Internet service plans. Verizon does not require users to subscribe to Verizon Wireless mobile plans to get these home internet options, but significant discounts are only available if the fixed wireless service is bundled with a Verizon mobile plan

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[33] See T-Mobile Home Internet webpage, https://www.t-mobile.com/home-internet/plans?INTNAV=tNav%3APlans%3AHomeInternetPlan (accessed November 19, 2023).

[34] See T-Mobile Newsroom, February 8, 2023, Press Release, "Taking part in ACP- through both Assurance Wireless and Metro by T-Mobile – is just one way that T-Mobile demonstrates its commitment to bringing wireless access to everyone." https://www.t-mobile.com/news/community/t-mobile-expands-acp; See also, T-Mobile website, "T-Mobile is proud to participate in the new federal Affordable Connectivity Program, which offers internet service payment assistance to eligible households. We're making the program available through Metro by T-Mobile and Assurance Wireless." https://www.t-mobile.com/brand/affordable-connectivity-program?INTNAV=fNav%3AAdditionalSupport%3AAffordableConnectivityProgram.

[35] Metro by T-Mobile 5G Home Internet, https://www.metrobyt-mobile.com/plans/home-internet (accessed November 19, 2023). Customers that are not participating in autopay will pay $25/month. Customers must also purchase a modem for a one-time fee of $49.99.

and handset. These plans include a Verizon Forward program which can provide 300/20 Mbps service that is free to eligible low-income households with the ACP and Verizon discounts.

Table 89: Verizon Wireless fixed broadband service plans (low-income program in green)

Package	Internet speed	Monthly cost	Notes
5G Home Internet	50/5 Mbps	Discounted price $35/mo.; regular price $60/mo.	$10 discount available with Autopay and paperless billing. $15 discount when bundled with postpaid Verizon cellular plan and 5G phone. Pricing guaranteed for 24 months. Wireless Router and $50 Amazon gift card included. Pricing for wireless plan and phone not included here.
5G Home Internet Plus	80/10 Mbps	Discounted price $45/mo.; regular price $80/mo.	$10 discount available with Autopay and paperless billing. $25 discount when bundled with postpaid Verizon cellular plan and 5G phone. Pricing guaranteed for 36 mos. Wireless Router, whole-home internet, and choice of Echo Show or $200 Amazon gift card included. Pricing for wireless plan and phone not included here.
5G Home Internet (Verizon Forward Program)	85/10 to 300/20 Mbps	Free with ACP and Verizon discounts	Must meet ACP eligibility requirements; wireless router included; available to existing customers. Cannot use ACP discount for wireless phone plan if used for home internet service but can use Lifeline discount if applicable.

4.5 American Community Survey data reveal that low-income Fairhaven residents face gaps in subscriptions and device ownership

Data on internet adoption and device ownership is important to fully understanding the nature of the digital divide in Fairhaven. ACS survey data show that Fairhaven lags the state and national averages in internet adoption and device ownership. While high-speed broadband services are available throughout Fairhaven, many households do not subscribe or own devices necessary to fully use these services—and those lacking subscriptions or devices are largely lower-income households.

The ACS is conducted yearly and nationwide by the U.S. Census Bureau. However, it is important to note a five-year sampling period (2016 – 2021)[36] that may not accurately illustrate most recent trends.

A preliminary analysis of the ACS data found that in Fairhaven:

- 23.1 percent of households lack a wireline internet subscription.

- 87.4 percent of households that lack a wireline internet subscription also earn less than $75,000 annually.

- 22.3 percent of households do not own a desktop or laptop computer device.

4.5.1 Fairhaven lags state and national adoption rates for residential internet subscriptions, and low-income residents face the most significant gaps

According to ACS data, 86.6 percent of Fairhaven households subscribe to residential internet services. Most of these subscriptions, 76.9 percent, are via wireline technology (cable or DSL). The town lags both the state and nation in internet subscriptions of any kind, and slightly lags the state in wireline internet subscriptions, as shown in Figure 5.

Figure 5: Internet subscription rates in Fairhaven compared to the state and nation
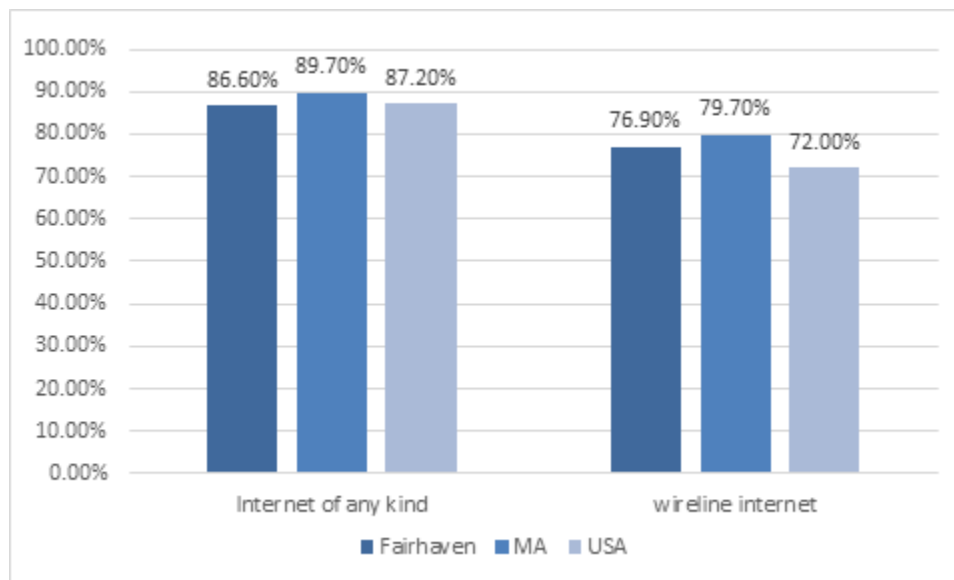
While internet adoption rates are relatively high in Fairhaven, an estimated 1,584 (or 23.1 percent of) households lack residential wireline internet service (see Figure 6). Of those

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[36] The U.S. Census Bureau does not release data for communities the size of Fairhaven for sampling periods less than five years in order to keep margins of error to a minimum.

households without wireline service, roughly 586 are solely using a cellular internet service from their homes. Lower income households may use their cellular connection and smartphone in lieu of a more robust connection. However, reliance on cellular service will not enable all members of a household to participate in the digital economy, because of data caps and the potential for the service to be throttled in times of mobile network congestion.

Figure 6: No access to wireline internet and mobile-only subscriptions compared to the state and nation
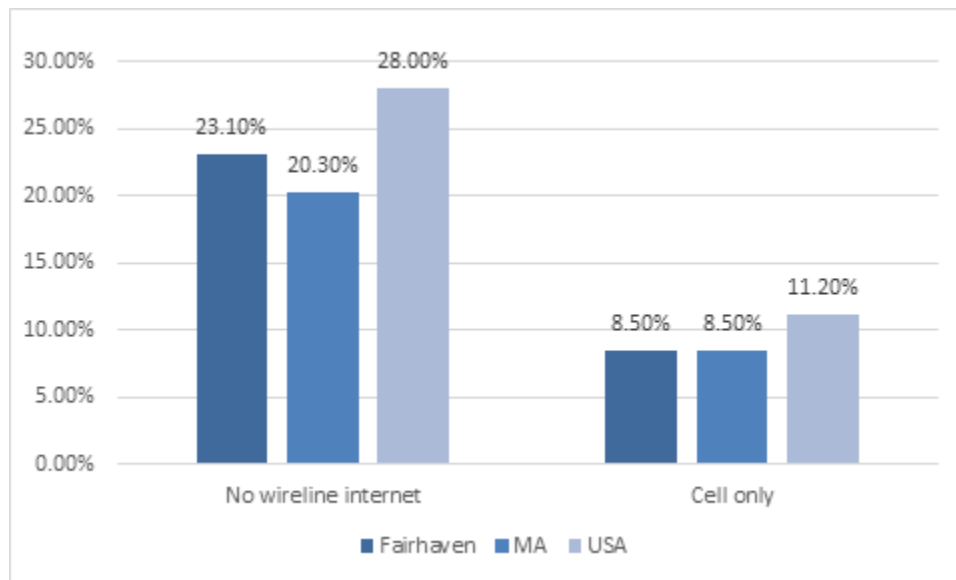
4.5.2 Most Fairhaven households that lack wireline internet access earn less than $75,000 per year

In Fairhaven, most of the households lacking an internet subscription are lower-income households. Whereas 96.6 percent of households making more than $75,000 subscribe to wireline internet services, only 83 percent of households making between $20,000 and $75,000 do so, and 56.5 percent of those earning less than $20,000.[37] After accounting for the total number of households across all three income brackets, an estimated 87.4 percent of (or 808 out of 924) households without an internet subscription earn less than $75,000 per year. Figure 7 shows subscription rates by income bracket.

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[37] For both of these income brackets, some households are likely able to afford service yet choose not to purchase it because they simply are not interested. For this reason, a 100 percent subscription rate does not represent the ideal or goal rates for any given population.

Figure 7: Wireline internet subscription rates by income level
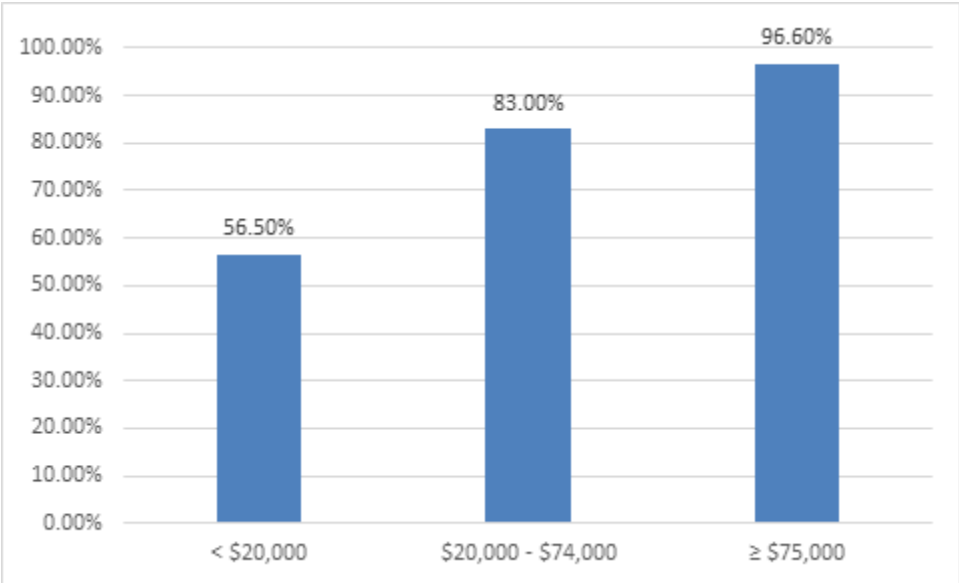
4.5.3 Fairhaven lags both state and national device ownership rates, and 10.7 percent of households lack device access

ACS data show that 89.3 percent of households in Fairhaven own one or more computing devices, a figure that lags both the state and national figures. Access to affordable devices that meet a household's needs is a critical element of the effort to expand broadband access to any community. Looking across different types of devices, including desktop, laptop, smartphone, and tablet ownership, Fairhaven's ownership rates show that the town struggles with access to devices (see Figure 8).

Figure 8: Device ownership rates in Fairhaven compared to the state and nation
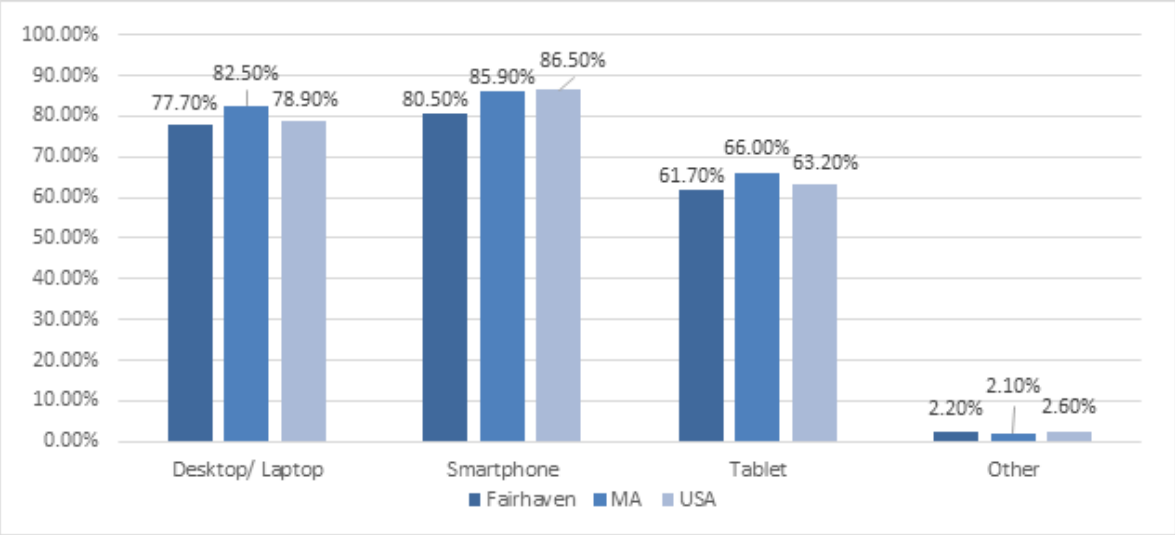
Figure 9 shows that 10.7 percent of Fairhaven households lack a device, indicating a barrier to full digital inclusion. Indeed, 22.3 percent of households in Fairhaven do not have a laptop or desktop leaving these residents to rely on smartphones or tablets and making it difficult to fully engage in the digital economy or successfully learn and work from home.

Figure 9: Lack of devices in Fairhaven compared to state and national averages
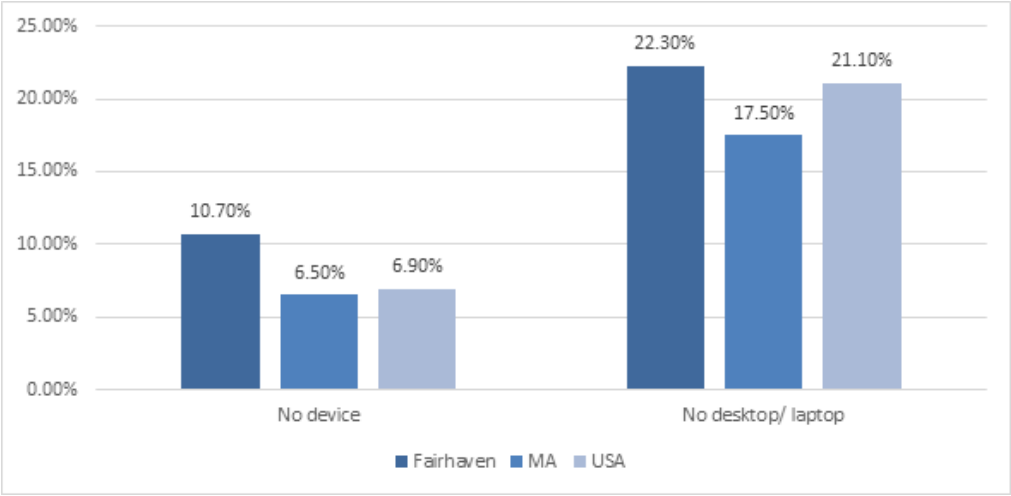
Additional device barriers may exist even after device ownership numbers are improved. For example, for households with many individuals, a single desktop or laptop will likely not deliver sufficient capacity for all members of the household to meaningfully use the internet. Further, ownership of a device is not sufficient to ensure full access to the benefits of broadband. Many

households will require digital literacy training and access to technical support to maximize the benefits of these services.

5 Fairhaven stakeholders report significant gaps but also point to successful programs that are having an impact and could be expanded if funding allowed

The Town of Fairhaven and CTC convened and facilitated several stakeholder meetings to gather feedback about the digital needs and challenges in Fairhaven. CTC also prepared and disseminated an online questionnaire to participants in these meetings. The questionnaire was designed, in part, to facilitate orderly data collection about existing programs underway, the services offered, populations served, existing capacity, remaining gaps, and the potential for expanding these programs.

The stakeholder meetings were organized around the following theme areas, though there was considerable overlap on these themes:

- Education and libraries
- Seniors and veterans' services
- Government agencies and committees, including the Fairhaven Broadband Study Committee
- Private and community organizations serving vulnerable populations

The following subsections—organized by theme and entity—identify the participants and organizations in these meetings and summarize the insights provided by each stakeholder during the meetings and in questionnaire responses (if provided).

The questionnaire is provided in Appendix A: MBI survey. The complete package of online responses to the questionnaire was provided to the Town under separate cover. Recommendations developed from a synthesis of stakeholder data, survey data, and other research performed for this study are provided in Section 30.

5.1 Education and libraries

The Town of Fairhaven and CTC met with and/or sent questionnaires to the representatives of Public Schools, the Millicent Library, and the Public Library. The following is a list of participants or recipients:

- Steven Rosa, Manager of Networking, Infrastructure, and Energy, Public Schools
- Tara Kohler, Superintendent, Public Schools
- Nikki Verronneau Potter, Business Manager, Public Schools
- Morgan Matthews, Engagement Coordinator, Family Engagement Center
- Kyle DeCicco-Carey, Director, Millicent Library
- Allison Thiel, Youth Services Librarian, Millicent Library

The following are summaries from each stakeholder.

5.1.1 Fairhaven Public Schools

Fairhaven Public Schools (FPS) currently serves 2,200 students across two elementary schools, a middle school, and a high school. Fairhaven Public Schools prides itself on being proactive and adaptive to the needs of its community. As an example, schools were recently able to accommodate the emergency and temporary needs of incoming migrant families housed at Seaport Hotel by providing devices, technical support, and language acquisition to students and their households. Additionally, representatives at FPS have noted a dramatic increase in the number of low-income students and families, from approximately 30 percent to nearly 50 percent. This is being shown through FPS elementary schools recently surpassing the 40 percent threshold for eligibility in the Federal Free and Reduced Lunch Program (FRLP) to qualify all students in the school into the lunch program. Fairhaven's middle school was recently granted eligibility as well. The school system abandoned an early hotspot loan program because at the time it was determined that access to reliable broadband was not a concern for their students.

Devices and access to broadband: In 2019, FPS began operating a 1:1 Chromebook distribution program for all high school students. With the rise of the Covid-19 pandemic, new funds became available, allowing FPS to expand its Chromebook program to all students from kindergarten through twelfth grade. Students in kindergarten through middle school exclusively use their devices at school and leave them in class at the end of the day, while high school students can bring their devices home.

Technical support: FPS offer technical support during the first three weeks of the academic year on school computers for families seeking assistance to complete online emergency forms. FPS does not currently have the capacity or resources to offer technical support to its students and their families year-round. However, FPS stated that it would like to hire two tech support staff to provide device support and education on online safety, security, and digital literacy to all students. FPS suggested that these positions could operate at the library through a help desk where they can address ongoing accessibility needs of new and existing students and their families and oversee the development of a digital skills and literacy curriculum and certification program for students in each grade.

5.1.1.1 Family Engagement Center

The Family Engagement Center (FEC) at Fairhaven Public Schools provides information on school and community resources to support students and their families. Services that address the most immediate needs of students include after school programs, mental health and counseling services, housing assistance, clothing and food pantries, and language resources. While the FEC

does not itself operate digital equity programs, it plays a critical role in identifying digital needs of the families it serves that can be subsequently addressed by the school.

5.1.2 The Millicent library

The Millicent Library is an independent nonprofit corporation that currently serves as the public library for the Town of Fairhaven. Funding for the library comes primarily from the Town of Fairhaven and is supplemented privately through the nonprofit organization Friends of the Millicent Library. The library expressed the need for additional staffing support to improve communication, upgrade their website, and to offer onsite technical support as needed.

Accessibility. The Library offers publicly accessible Wi-Fi and a computer lab equipped with nine devices, which include desktop computers, Chromebooks, and a MacBook. Several of the devices are outdated and in need of upgrading. While patrons have access to the computer lab during library hours, staffing limitations mean that available technical support is limited and inconsistent. Due to an outdated electrical system and lack of air conditioning, the library is forced to close on occasion during the summer months, limiting access to connectivity and devices to vulnerable residents. The Library anticipates that an electrical upgrade will be funded in the next fiscal year.

Devices. In addition to the computers available in its computer lab, Millicent Library operates its own hotspot lending program which began in 2019. Currently, there are 11 hotspots available for one week rental. This modest lending program is popular among residents; it is not unusual for all devices to be checked out simultaneously. The library has identified two types of patrons for the hotspot program: those who rely on hotspots to maintain continuous connection, and those who require temporary connectivity for task-based use or travel. The Library is interested in increasing its inventory to 20 devices, which would make it possible to allow patrons to check out the devices for up to two weeks.

5.2 Seniors and veterans

The Town and CTC met with and/or sent questionnaires to the representatives from Fairhaven's Council on Aging and Veterans Services. Following is a list of participants or recipients:

- Martha Reed, Director, Council on Aging
- Mike Jenny, Veterans Services Officer, Veterans Services
- Bradford Fish, Veterans Services Officer, Veterans Services

5.2.1 Council on Aging

The Council on Aging is focused on improving the digital divide of Fairhaven's aging population through comprehensive digital literacy support services. It is estimated that 45 percent of seniors served by the COA are over the age of 75. Needs assessments conducted during initial visits

indicate that seniors are interested in basic computer, laptop, and smart phone classes, assistance with online government assistance applications, communicating with family and friends, playing games, and streaming movies. The COA and the Veterans Service Office are located at the Fairhaven Senior Center and offers public Wi-Fi.

Digital literacy. The Council on Aging provides digital literacy classes in partnership with the Fairhaven School Department, as well as volunteers. The COA recently received a Digital Literacy Grant for Older Adults from the Commonwealth of Massachusetts Executive Office of Elder Affairs (EOEA). The grant also allowed the COA to replace aging laptops and purchase loaner iPads to increase their capacity to offer free onsite classes.

Beginning in January 2024, the COA began offering a combination of hands-on classroom instruction lead by staff provided through the schools. 90-minute classes will be offered twice weekly and will alternate between the following course offerings:

1. Introduction and Refresher on Computer and Internet Cyber Safety
2. Web Browser Safety
3. W10 Operating System and Moving Towards Windows 11
4. Introduction to Computer Word Processing Part 1
5. Introduction to Computer Word Processing Part 2
6. Let's Learn all about Smartphones
7. Smartphone Apps for Seniors
8. Gmail 101
9. All Things Google
10. External Drives, Flash Drives, Mechanical Drives and SSD Drives: What's all the Fuss About?

The grant will also fund an intergenerational program that offers one-on-one support through technology cafés to be staffed by public and private high schoolers, tech school students, and Boy Scouts.

Devices: COA maintains a laptop cart from which seniors can borrow devices for personal use or for use in digital literacy classes offered at the senior center. In its first year of operation, the COA anticipates this device program will serve approximately 100 seniors. The COA hopes to add an additional three iPads at an approximate cost of $1,800 to meet current demand and help assuage tech reluctance.

The COA estimates that one-third of class attendees do not own devices. To create pathways to device ownership, the office would like to purchase 25 iPad devices at an approximate cost of

$14,500 (roughly $569 each) that would be given to students who complete a specified course series.

With adequate funding and staffing, the office would also like to expand other programs to address privacy and cybersecurity, employ digital navigators to provide technical support to improve digital skills and literacy, increase access to broadband, and create accessible and inclusive internet content.

5.2.2   Veterans Services

Veterans Services serves primarily older veterans, many of whom have had a limited exposure to technology and struggle with basic digital services. Although a more formalized program for digital navigation services does not exist at the Veterans Services office, veterans frequently seek out digital support from office staff for completing online applications and filing claims. A representative at Veterans Services mentioned the desire for more resources and staff to house and offer access to public computers and provide digital navigation services for members, however, it currently lacks the space and financial resources to purchase new computers and hire additional staff.

Due to the close physical proximity of COA and Veterans Services, staff at both offices have indicated a willingness to share devices and resources as needed.

5.3   Government agencies and committees

The Town and CTC met with and/or sent questionnaires to the representatives from the Commission on Disability, the Broadband Study Committee, Office of Planning and Economic Development, and Fairhaven TV. Following is a list of participants or recipients:

- Janet Falone, Director, Housing Authority
- Carol Alfonse, Chair (former), Housing Authority
- Paul DiGiuseppe, Director, Planning and Economic Development
- Eleanor Chew, Chair, Commission on Disability
- Pamela Whynot, Vice Chair, Commission on Disability
- Sean Powers, Chair, Broadband Study Committee
- Robert Espindola, Select Board Representative, Broadband Study Committee
- Derek Frates, Director, Fairhaven TV
- Bruce Webb, Conservation Sustainability Coordinator

5.3.1   Housing Authority

Fairhaven's Housing Authority (HA, Authority) manages five buildings that house 278 residents. Residents include the elderly, non-elderly disabled persons, and families. The HA has identified

affordability and access as the most pressing digital equity challenges facing the community they serve.

Accessibility and digital literacy: Staff at the Housing Authority highlighted concerns about unreliable Wi-Fi access due to the inability for signals to permeate the brick construction of buildings --a common issue in public housing.

The Housing Authority's largest building, Oxford Terrace, houses 107 residents. Two computers and a printer have been made available for use by residents at this building. However, the HA estimates that typically only three residents take advantage of these workstations. A representative at the HA attributed the low utilization of public workstations to a lack of digital literacy, security concerns, and tech hesitancy. While the Authority does not currently offer any digital equity programming, representatives expressed the need and desire to create accessible and inclusive internet content, provide more reliable broadband access, offer technical support, and educate residents on data privacy and cybersecurity. The Housing Authority is unsure of where to start planning however they are willing to work with other entities to start developing and offering programming in these areas, including the introduction of a digital navigator or other technical coordinator.

5.3.2 Fairhaven Planning and Economic Development

Fairhaven Planning and Economic Development (FPED) is a government department that manages the regulatory process for development proposals by evaluating said proposals for their compliance with local laws and regulations, contribution toward planning goals, and to assess their impacts on the Town. Additionally, the Department researches and prepares grant applications and manages the Town's Community Development Block Grant program.[38]

The Department has identified the need for improved access to digital education as the most pressing digital equity challenge faced by Fairhaven residents. As an example, a representative at the Department suggested that many small business owners struggle with reliable high-speed internet connections, have old and outdated websites, and lack point of sale (POS) software. Representatives expressed interest in establishing a program to address broadband access, provide devices, and offer digital literacy education to businesses.

5.3.3 Commission on Disability

The Town of Fairhaven's Commission on Disability (COD) is an all-volunteer advisory board that serves to identify and eliminate existing systemic and structural barriers to ensure all residents have equitable access to resources. For instance, COD advised Fairhaven TV on accessibility and

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[38] "Planning & Economic Development," Fairhaven, Massachusetts, https://www.fairhaven-ma.gov/planning-economic-development.

as a result, all public televised content is now broadcast with closed captioning. The commission's board has seven of nine positions filled and an annual operating budget of $1,000.

Representatives at COD cite affordability, navigating online program enrollment and services, device access, and lack of digital literacy programming as the most significant barriers to digital equity for the COD community. The COD encourages the Town of Fairhaven to consider the unique needs of disabled individuals when planning and making decisions to ensure equitable access to digital technology.

One resource in Massachusetts that COD could explore is Perkins School for The Blind[39] located in Watertown, which provides consultation and resource identification services for individuals with disabilities Through their Perkins Access Program. Additional State and local resources include the Massachusetts Commission on Disability[40], the Commission for the Blind,[41] the Commission for the Deaf and Hard of Hearing,[42] and the Massachusetts Association for the Blind and Visually Impaired (MABVI).[43] These entities offer guidance and communication access services and technology services, including telecommunication and assistive listening devices.

5.3.4 Fairhaven Broadband Study Committee

In October 2020, the Town released a broadband survey resulting in residents expressing a desire to attract more internet providers to Fairhaven. The Town established a Broadband Committee to explore how to attract new providers to Fairhaven. To explore the possibility of operating a municipal broadband business, Fairhaven's Town Meeting voted to authorize establishing a Municipal Light Plant, an entity that could allow the Town to run its own broadband business, but the Town has not funded or staffed such a project.

The Town of Fairhaven owns and operates an existing fiber loop that provides broadband to all municipal buildings in town. In June 2022, Fairhaven was awarded a $250,000 grant through Massachusetts Community Compact Cabinet Municipal Fiber grant program.[44] Fairhaven initially earmarked this award for a Wi-Fi project in collaboration with the Fairhaven Housing Authority. The project has been put on hold and the Town is considering alternative projects, including an economic development initiative that would create a fiber network to serve local businesses. As

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[39] Perkins School for the Blind, https://www.perkins.org.

[40] Mass.gov, https://www.mass.gov/orgs/massachusetts-office-on-disability.

[41] Mass.gov, https://www.mass.gov/orgs/massachusetts-commission-for-the-blind.

[42] Mass.gov, https://www.mass.gov/orgs/massachusetts-commission-for-the-deaf-and-hard-of-hearing

[43] Massachusetts Association for the Blind and Visually Impaired (MABVI), https://www.mabvi.org/.

[44] "Congratulations! The Town of Fairhaven receives a grant award of $250,000.," Town of Fairhaven, June 2, 2022, https://www.fairhaven-ma.gov/home/news/congratulations-town-fairhaven-receives-grant-award-250000.

of March 2024, the project is currently under review by the Town Administrator, after which the Town will seek approval from the State for the change in the project's scope.

The Broadband Committee is working with Open Cape, a non-profit regional middle mile fiber provider, in hopes of attracting competition and ultimately extending fiber service to residents. The Town recently received a letter from Comcast seeking a letter of support for gap funding to reach unserved locations, but the Town declined to provide the letter, opting instead to focus on attracting competitors.

5.3.5 Fairhaven TV

Fairhaven TV (FHTV) is a cable access program that is operated by the Town of Fairhaven. In addition to airing Government and Public Access channels, it also offers free, one-on-one training to educate community members on studio production, videography, editing, and lighting to those who request this hands-on training.[45] The FHTV office is in the Town Hall and receives publicly accessible Wi-Fi from the building. FHTV is under a 10-year contract (expiring in 2028) with Comcast and funded through an access fee on Comcast's monthly customer bills. Revenue is split between FHTV and the school system which broadcasts educational content.

Currently, FHTV has three iMac computers that are used by its staff and does not have additional computers available for members of the public that use FHTV resources. As a result, staff will share their work computers with individuals upon request. FHTV would like to increase the number of computers at their office for the public but are financially strained and lack the space for a computer lab.

FHTV frequently hosts community events in the Town Hall auditorium and is open to exploring ways to incorporate digital literacy and training events in this space with interested partners and volunteers. While Fairhaven TV has the skillset to expand its programming toward digital literacy training or to host digital literacy programming, it does not currently have the financial and staff capacity to do so. FHTV's current annual operating budget is $200,000, which includes two full-time staff, three part-time staff, and all FHTV programming—but operating costs are rising.

5.4   Private and community organizations serving vulnerable populations

The Town and CTC met with and/or sent questionnaires to the representatives from M.O.L.I.F.E., Community Connections, and People Acting in Community Endeavors (PACE). Following is a list of participants or recipients:

- Diane Sylvia, Program Coordinator, M.O.L.I.F.E.
- Charles Murphy, Chief Executive Officer, M.O.L.I.F.E.

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[45] "About Us," Fairhaven TV, https://www.fairhaventv.com/aboutus.

- Kathy Ferreira, Service Director, Community Connections
- Pam Kuechler, Executive Director, People Acting in Community Endeavors (PACE)

5.4.1 M.O.L.I.F.E.

Murphy and Others, Living Interdependently for Future Endeavors, Inc. (M.O.L.I.F.E.) is a non-profit organization assisting people with disabilities by providing the supports necessary for individuals to receive supported employment, independent living and educational opportunities, and community building through encouraging and fostering social connections.[46] M.O.L.I.F.E. clients utilize the internet to access online programs and resources, and to conduct job searches. The organization's leadership expressed the importance of 1:1 work with its community. They currently serve 160 individuals with a staff of 70 in greater Fairhaven, with some residing in the City of New Bedford.

While M.O.L.I.F.E. does not currently have programming to address their clients' digital equity concerns they recognize the need for technical support classes for its population, who are particularly susceptible to online scams and fraud. Clients who own devices (laptops, tablets, and cell phones) use on-site Wi-Fi, however those without devices currently share a single desktop computer. A representative at M.O.L.I.F.E. suggested that establishing a computer lab with four new laptops would meet current demand for device and internet use among participants of the day program.

To support the availability of public devices, hiring a part-time staff member to conduct digital literacy classes on internet skills and safety, and who can also provide technical support, would adequately serve the immediate needs of its population.

5.4.2 Community Connections

Community Connections is a nonprofit organization that offers services to adults with disabilities, through eight locations across Southeastern Massachusetts and Cape Cod, one of which is in Fairhaven. Community Connections aims to promote and grow an individual's self-sufficiency by supporting workforce goals, offering supported living services, and promoting participation in civic and community activities.[47]

Workforce training: Community Connections offers a Workplace Readiness Training curriculum that teaches individuals how to operate as a member of the workforce. Class topics range from basics in how to write a resume, apply for a job, and interview, to learning how to be a positive

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[46] "Who we are," M.O. L.I.F.E., INC., https://www.molifeinc.com/.
[47] "What we do," Community Connections, https://communityconnectionsinc.org/what-we-do.

and helpful employee. At the end of this training curriculum, instructors support students that are "job ready" with finding and securing a community-based job.[48]

Devices and digital literacy: Obtaining devices is a challenge for residents served by Community Connections. Each Community Connections location offers Wi-Fi and has on-site staffing to meet the technical support needs of patrons. However, the Fairhaven office only has two iPads for public use. A Community Connections representative estimates that an additional 12 iPads at a cost of $300 each would meet the current demand at its Fairhaven location.

5.4.3 People Acting in Community Endeavors (PACE)

People Acting in Community Endeavors (PACE) provides support in basic life needs for low-income residents in the Greater New Bedford area, including Fairhaven. Programs assist the region's most vulnerable residents by connecting them with food banks, housing, Head Start, childcare, and other services.[49] While PACE does not currently offer digital equity services in the Town of Fairhaven, the organization has expressed an interest in expanding its availability of devices and digital literacy offerings at their New Bedford location, which could serve as a model for expanding devices to Fairhaven residents.

5.4.4 Public meeting

On January 30, 2024, CTC and the Town of Fairhaven hosted a "Digital Equity and Broadband 101" public session. This meeting was held in person at Town Hall, virtually, and was broadcast on Fairhaven TV. The Town promoted the event through its website and advertised by stakeholders. The public session presentation consisted of a digital equity overview, a project overview which included key findings from data gathered during the initial research process, an overview of the broadband funding landscape, a brief history of broadband, and an opportunity for public comment. In total, eight individuals attended with topics focusing on stakeholder outreach, actual vs. reported speeds – including recommendations for testing - and funding opportunities. A recording of the meeting was posted on the Town's website.

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[48] "Pre-Employment Transition Services," Community Connections, https://communityconnectionsinc.org/pre-employment.

[49] People Acting in Community Endeavors, https://paceinfo.org/about-pace/ (accessed 1/12/2024).

6   Results from MBI survey completed by Fairhaven residents show access, device and skills gaps and major concerns about privacy and security

This report is based on data collected from Fairhaven residents who responded to a survey instrument created by the Massachusetts Broadband Institute (MBI) and posted online. PDFs of paper copies in nine languages were also made available to residents of the Town. Both the online and PDF versions were also shared by other means including posting on the Town's website and sharing at the Fairhaven Public Library, and by word of mouth. More broadly, the survey was made available to anyone who wished to fill it out across the state.

The results presented in this section are based on analysis of information provided in the survey by 450 residents of Fairhaven. Unless otherwise indicated, the percentages reported are based on valid responses from those who provided an answer and do not reflect individuals who said "don't know" or otherwise did not supply an answer because the question did not apply to them. Key results are noted where appropriate.

The survey sample was self-selected, and as such it is not necessarily representative of the larger population. Because lower-income residents were underrepresented, the report separately highlights answers from respondents reporting households earning less than $60,000 (the highest income category respondents could check was "$60,000 or above.")

This report focuses on data collected that is unambiguous with regard to meaning or accuracy, relevant to the topic of digital equity, and provides insights that are potentially actionable. The full survey instrument is posted in Appendix A.

6.1   Residential internet service

Respondents were asked about internet connection types and providers. This information provides valuable insight into residents' need for various internet and related communications services.

6.1.1   Internet access

Though most Fairhaven respondents (92 percent) report having either a home internet or mobile subscription, only 72 percent said they have wireline internet service in the home. Respondents with less than a four-year college education (68 percent of respondents) and those who live in affordable housing (58 percent) are less likely than more educated respondents to have a home wireline connection. Table 10 highlights the saturation of home internet subscriptions by key demographic groups.

**Table 10: Home internet subscriptions by key demographics**

	Percent having a home internet subscription	*Count*
TOTAL	**72%**	*450*
Respondent Age		
Less than 45	66%	*59*
45 to 59	90%	*78*
60 or older	72%	*210*
Income		
Less than $60,000	70%	*147*
$60,000 or more	78%	*130*
Education		
Less than a 4-year degree	68%	*180*
4-year college/university/bachelor's degree	84%	*85*
Postgraduate or professional degree	83%	*65*
Race/Ethnicity		
White, non-Hispanic	74%	*300*
Racial/ethnic minority	67%	*18*
Household Size		
One HH member	78%	*23*
Two HH members	87%	*76*
Three + HH members	70%	*246*
Children in Household		
No children in HH	72%	*207*
Children in HH	72%	*68*
Gender Identity		
Man	79%	*131*
Woman	72%	*198*
Other gender identity	100%	*2*
Other demographics		
Identify as person with disability	69%	*83*
Member of LGBTQIA+ community	82%	*11*
Serve on active duty in US Armed Forces	84%	*25*
Live in affordable housing	58%	*79*

6.1.2 Questions for those with home internet service

Respondents subscribing to home internet service were asked a series of questions about their service, including provider used and price paid.

- **Home internet service provider:** Almost all (95 percent) households with wireline internet service have Comcast/Xfinity. A small percentage of households use another provider, such as T-Mobile (2 percent) and Verizon (1 percent). (CTC combined answers in cases where the survey instrument listed the same provider twice, but under different brand or company names.)

- **How well home internet service works:** Most internet subscribers (72 percent) said their service is good enough to meet their household's needs, but 26 percent said it is not good enough and 1 percent said they do not know.

- **Internet service cost:** Respondents were asked to give the cost of their home internet service, as well as indicate whether or not they bundle internet with TV and/or phone service. Overall, 65 percent of subscribers bundle their internet service. Respondents pay an average of $136 per month for bundled internet service and an average of $99 per month for unbundled internet service (see Figure 10). Sixty-six percent of those with bundled service pay at least $100 per month, compared with 57 percent of those with internet-only service.

**Figure 10: Monthly price for internet service**
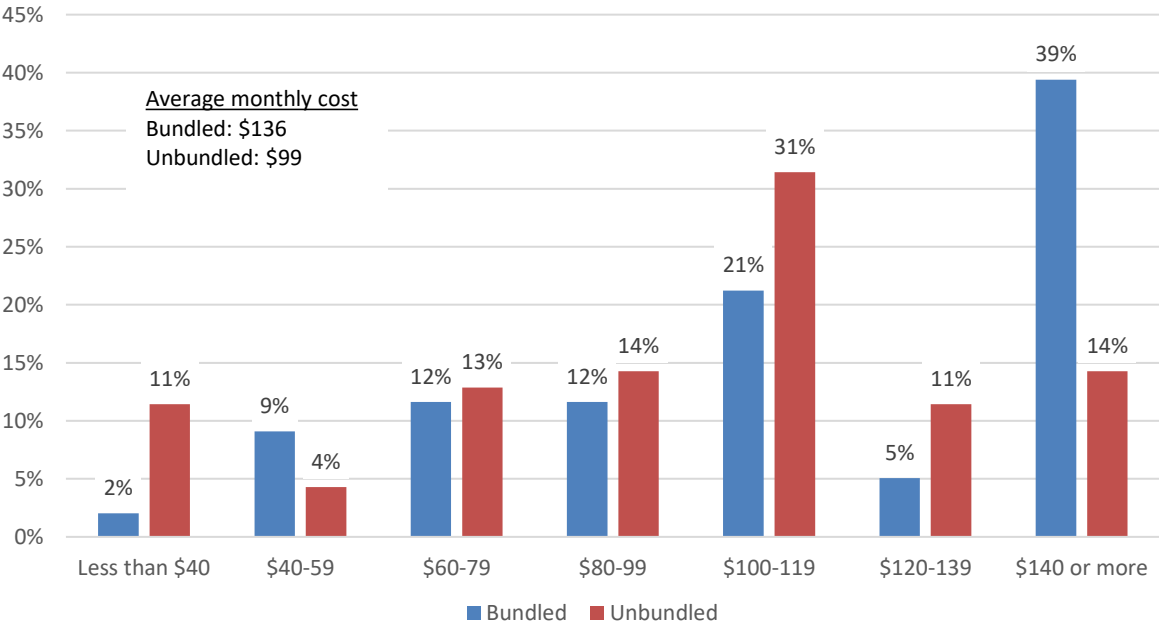
- **Service affordability:** Respondents were also asked how hard it is to pay their internet bill. Many subscribers said it is somewhat hard (38 percent) or very hard (15 percent) to

pay, as illustrated in Figure 11. One-fifth of subscribers said it is not at all hard, and 27 percent said it is not too hard.

Figure 11: How hard is it to pay internet bill
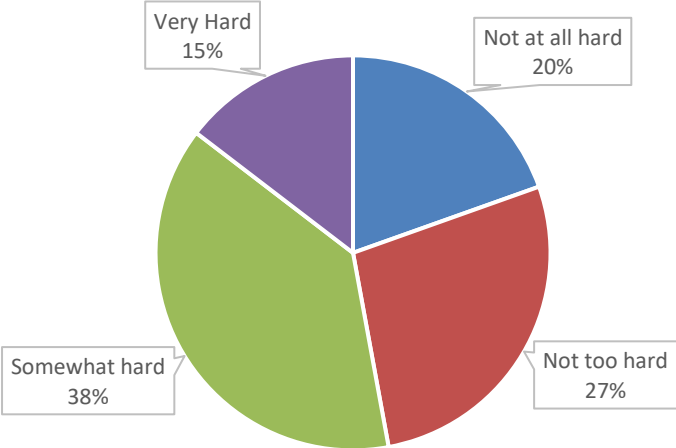
As may be expected, respondents in lower income households were more likely than those in higher income households to say it is somewhat or very hard to pay their internet bill (see Figure 12). Specifically, 74 percent of those earning less than $60,000 per year said paying their bill was "somewhat hard" or "very hard." This data contributes to our finding that affordability is a significant concern for lower-income residents of Fairhaven.

Figure 12: How hard is it to pay internet bill by household income
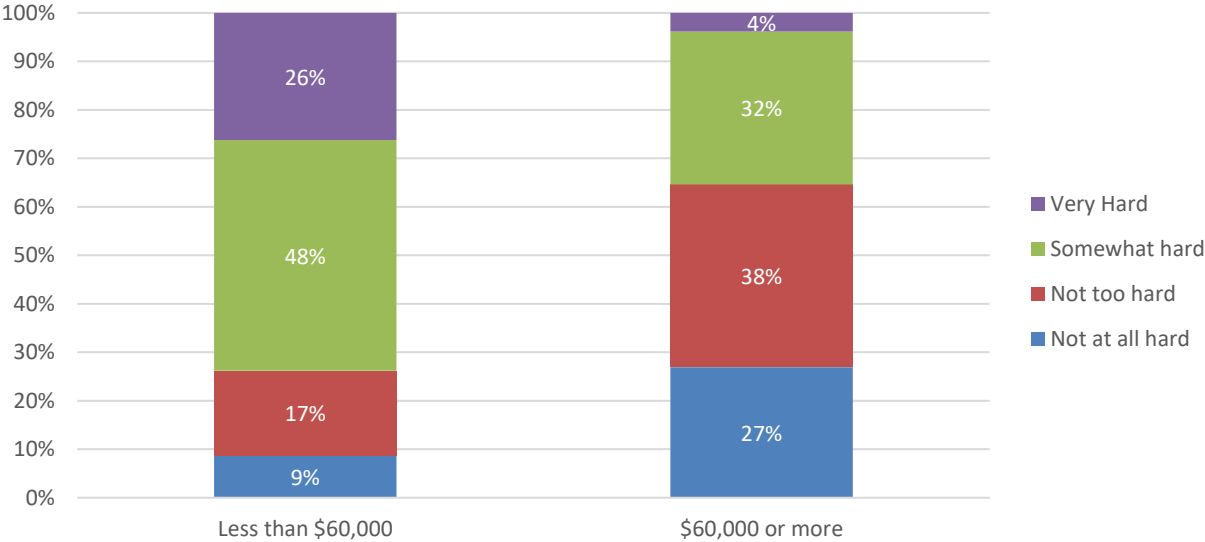
6.1.3 Questions for those without any home internet service—subscription or smartphone

Respondents without internet services were asked to indicate the reasons for not subscribing. Given that only 30 people who responded lack either a home subscription or mobile subscription, the sample is too small to analyze. Sixteen of the 30 cited not having or wanting the internet. Eight individuals cited the high expense as a barrier to having internet service. Seven out of 30 respondents without mobile or home internet service go to a friend's or family member's home. Eighteen individuals do not access the internet at any of the locations listed on the questionnaire.

Only a very small number of people (those who lack any kind of service—neither a home subscription nor a smartphone) were asked to indicate why they do not subscribe, not the larger number who, while they might have a smartphone, don't have home internet subscriptions specifically. As such, other sections of this report use American Community Survey data on this point.

6.1.4 Internet subsidy programs

All respondents were asked if they had heard of the Affordable Connectivity Program (ACP), which is available to eligible low-income households. As shown in Figure 13, about one-half of respondents with an annual household income of less than $60,000, and who thus might be in a position to take advantage of the ACP, are aware of this program. This data point informs our recommendation that enrollment support efforts be expanded in Fairhaven.

Figure 13: Aware of the Affordable Connectivity Program by household income
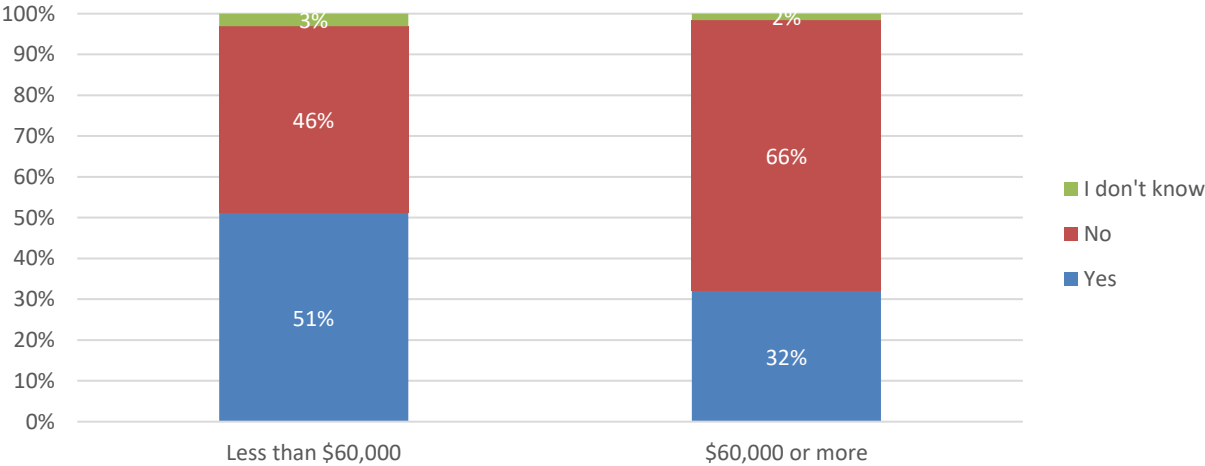
6.1.5 Computing devices used in household

Respondents were asked a series of questions about access to computing devices and types of devices used. Most respondents (87 percent) said everyone in their household has access to the

computing devices they need to meet their everyday needs for internet use. However, those with an annual household income under $60,000 are less likely than those in higher income households to use a laptop computer to connect to the internet (see Figure 14). This informs our recommendation that device access programs for low-income residents of Fairhaven be expanded.

Figure 14: Devices used most of the time to connect to the internet by household income
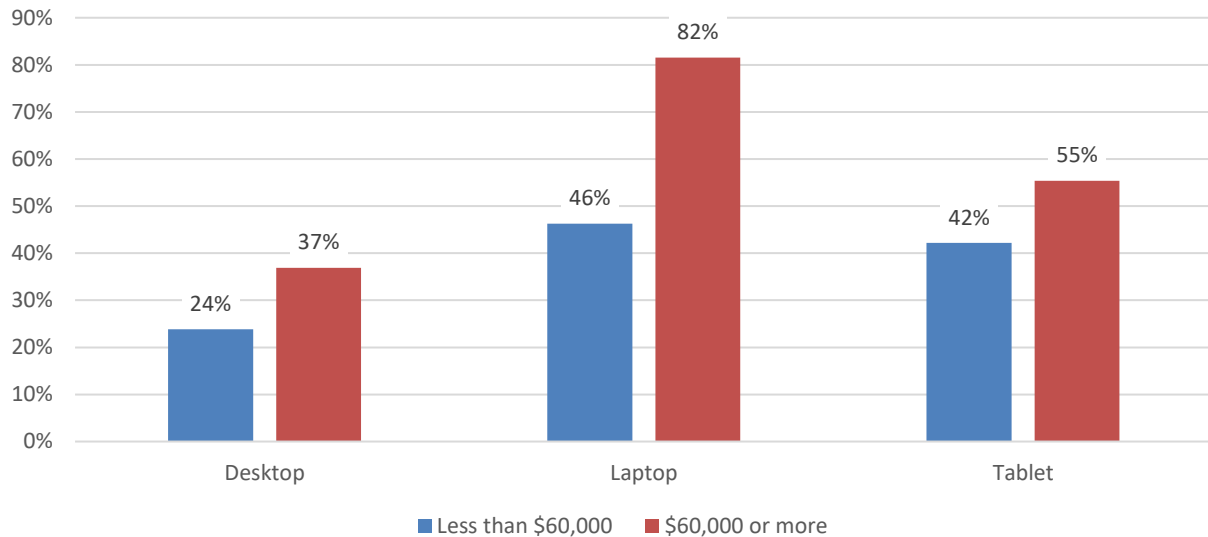
As shown in Figure 15, most respondents would be able to pay $1,000 or less (87 percent) for a laptop or desktop computer. Sixty-four percent of respondents earning under $60,000 per year could pay only $250 or less for a computer, compared with 28 percent of those earning $60,000 or more per year. Again, this informs our recommendation that device access programs for low-income residents of Fairhaven be expanded.

Figure 15: Amount able to pay for laptop or desktop computer

	Less than $60,000	$60,000 or more	All Respondents
■ More than $1,000	3%	25%	13%
■ $500-1000	8%	23%	13%
■ $250-500	13%	23%	17%
■ $0-250	64%	28%	49%
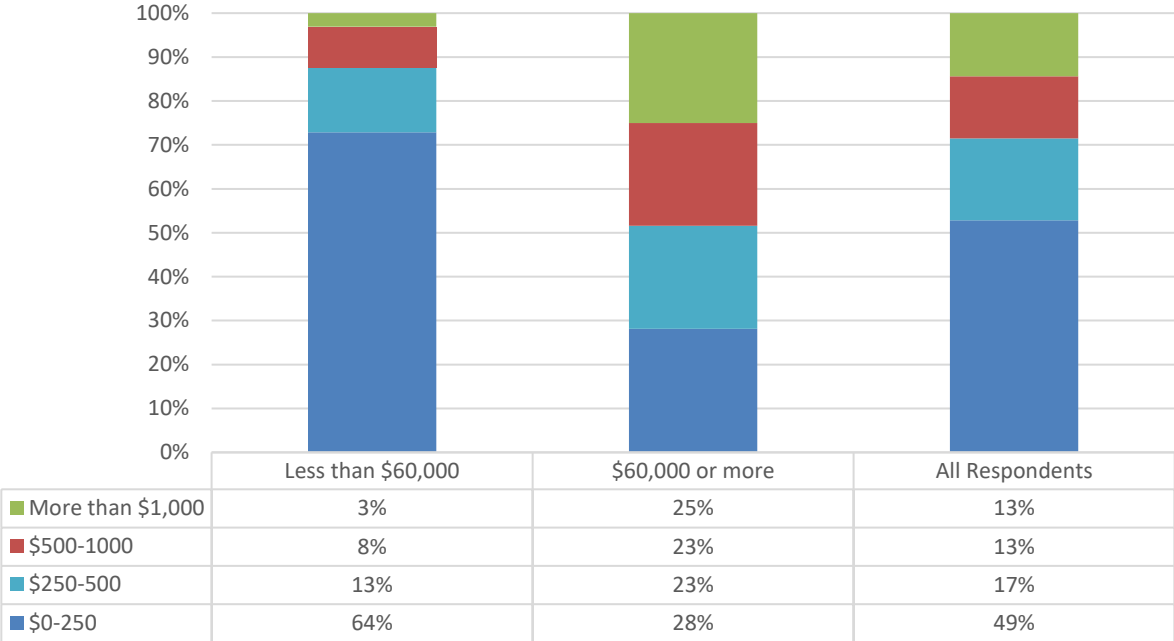
6.2 Digital skills

Respondents were asked a series of questions on how skilled they are using the internet in general and for specific activities. This information provides valuable insight into where there may be gaps in abilities and opportunities to educate residents. Most respondents (85 percent) said using the internet for general searching is easy, as shown in Figure 16. 80 percent of respondents said it is easy to use the internet for searching and applying for a job and for transportation information. Three-fourths of respondents said it is easy to use the internet for participating in their local community, and 72 percent said it is easy to use the internet for health care or telehealth services. Two-thirds of respondents said it is easy to use the internet for searching and applying for benefits or resources.

Figure 16: Difficulty in using the internet for various tasks
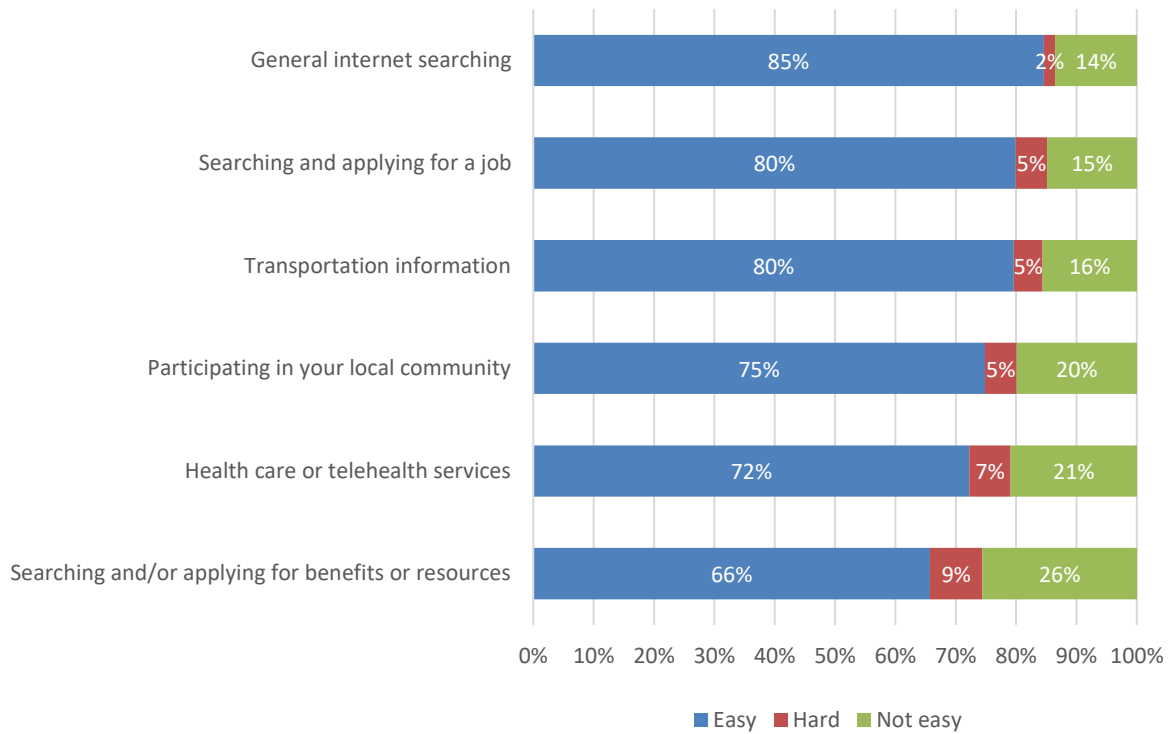
However, as shown in Figure 17, respondents with a household income of less than $60,000 were less likely than those in higher-income households to say using the internet for various tasks is easy, demonstrating that lower-income residents are most in need of skills programs. This informs our recommendation that skills programs for low-income residents of Fairhaven be expanded.

Figure 17: Ease in using the internet for various tasks by household income
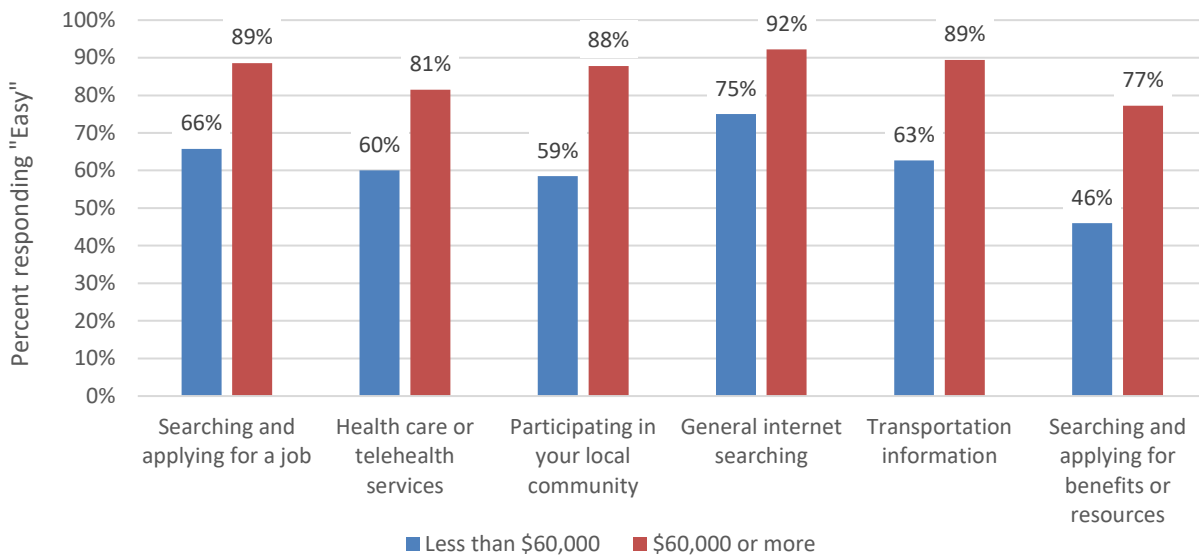
Sixty-four percent of respondents were able to indicate the type of digital skills support they would be most interested in. Among this segment of respondents, 50 percent said they would be most interested in a do-it-yourself training module (see Figure 18).

The question did not provide respondents with the opportunity to say they were not interested in taking any kind of class. In other jurisdictions, CTC has found that significant numbers of people, even those lacking skills, are not interested in attending classes. As such, these results should not be taken to mean that Fairhaven needs to expand skills-training programs at the levels indicated here.

Figure 18: Digital skills support most interested in

6.3 Internet safety

Fairhaven residents across the income and other demographic categories have significant concerns about online safety and privacy. Respondents were asked a series of questions pertaining to individual awareness of, and the use of, measures to secure online privacy and internet safety. Most respondents are either somewhat concerned (39 percent) or very concerned (50 percent) about online safety (see Figure 19). Concern is high across all demographic groups.

Figure 19: Concern about online safety
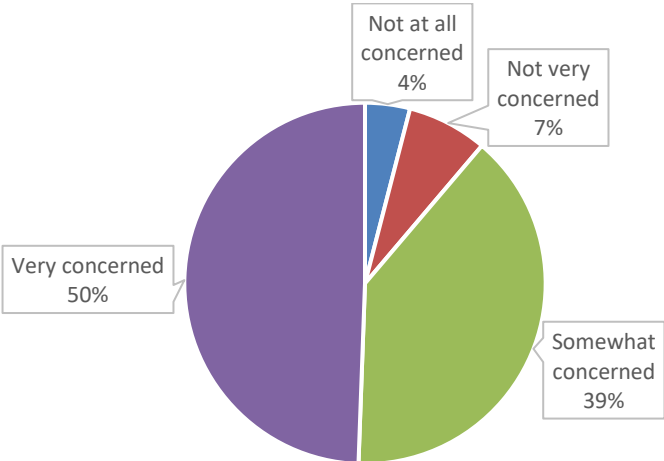
Respondents are most concerned about their data being stolen or used without their consent, cited by 91 percent of respondents (see Figure 20). Nearly two-thirds (66 percent) are most concerned they or a loved one could get scammed or tricked, and 58 percent are most concerned they could be tracked or surveilled. They are somewhat less likely to be most concerned about being harassed or abused online (36 percent).

Figure 20: Most concerned about internet safety
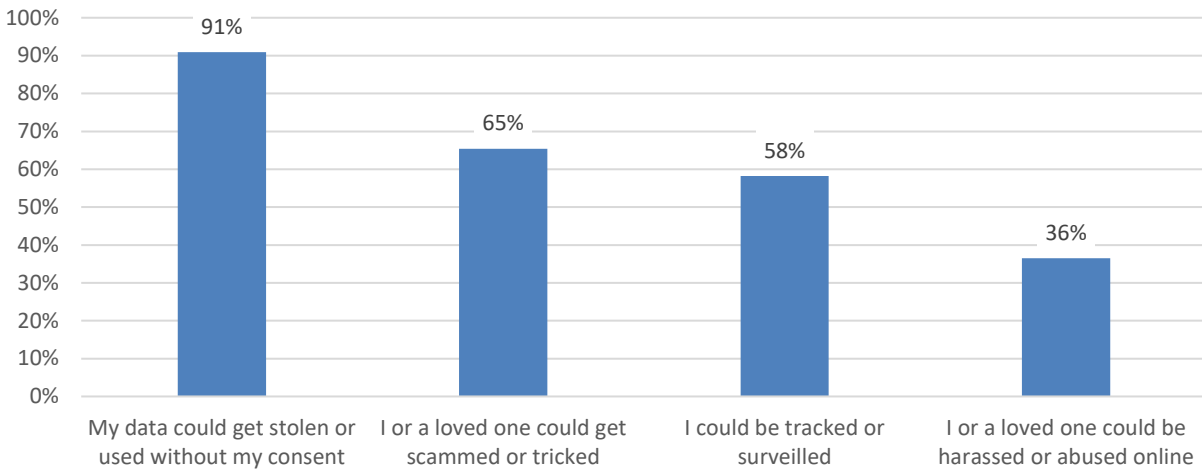
About two-thirds of respondents who answered said they have the tools and resources they need to stay safe online (see Figure 21). (195, or 43 percent, respondents answered this question.) Another 21 respondents said they do not know of any tools or resources to stay safe online, while 9 percent said they know of tools or resources, but they do not work.

Figure 21: Aware of tools or resources respondents can use to stay safe online

No, I don't know of any tools or resources to stay safe online
21%

Other
4%

I know of tools or resources to stay safe online, but they don't work for me
9%

Yes, I have tools and resources I use stay safe online
66%
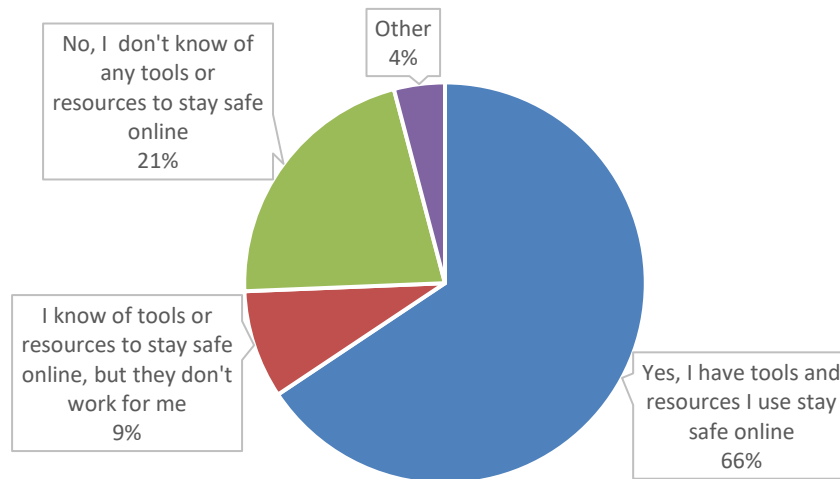
6.4   Online accessibility and inclusivity

Respondents were asked questions related to online accessibility and inclusivity of public resources and services. Most respondents said online government services are somewhat accessible (34 percent) or very accessible (48 percent), as shown in Figure 22.

Figure 22: Accessibility of online government services

Not at all accessible
12%

Not very accessible
6%

Very accessible
48%

Somewhat accessible
34%
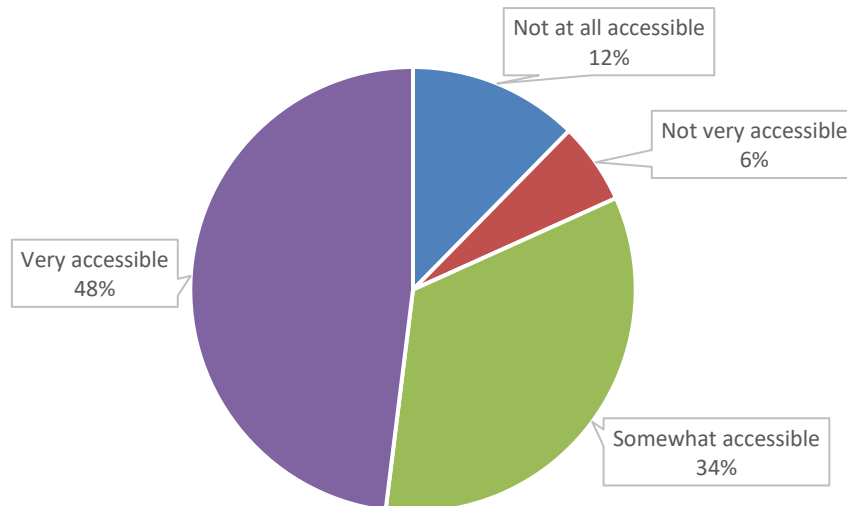
More than eight in 10 respondents said online government services have worked somewhat well (42 percent) or very well (41 percent), as shown in Figure 23. Online government services are assessed highly across demographic groups.

Figure 23: How well online government services have worked
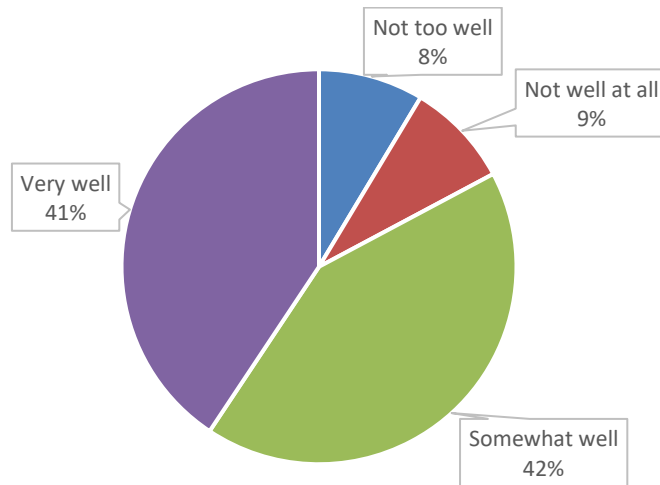
6.5   Respondent information

Basic demographic information was gathered from survey respondents and is summarized in this section. Several comparisons of respondent demographic information and other survey questions were provided previously in this report. As shown in Figure 24, 17 percent of respondents are under age 45, 22 percent are ages 45 to 59 years, and 61 percent are ages 60 or older.

Figure 24: Age of respondents
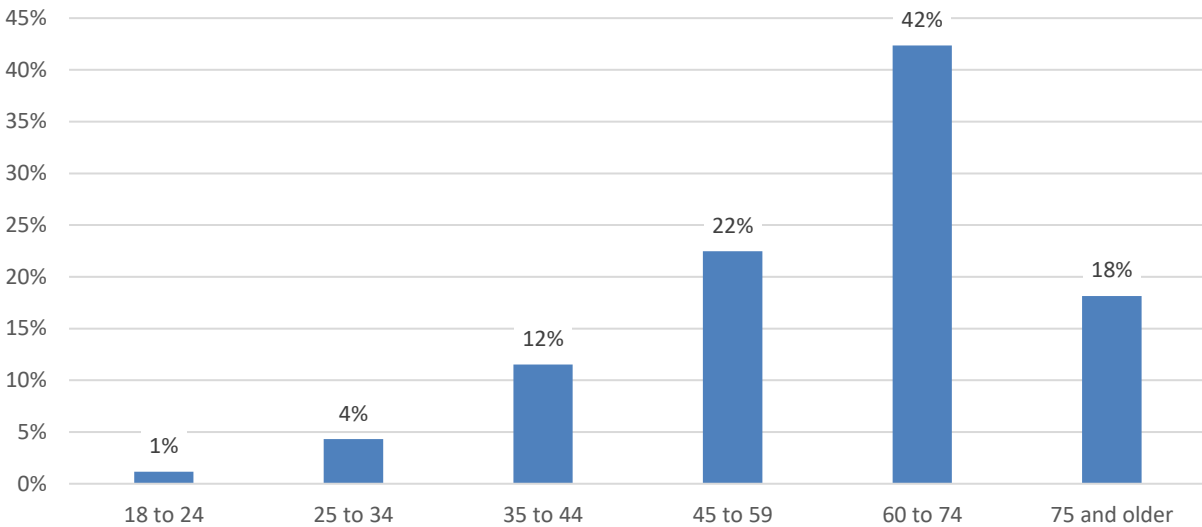
Six in 10 respondents identify as a woman, and nearly four in 10 identify as a man (see Figure 25). Fewer than 1 percent of respondents have another gender identity.

Figure 25: Gender identity
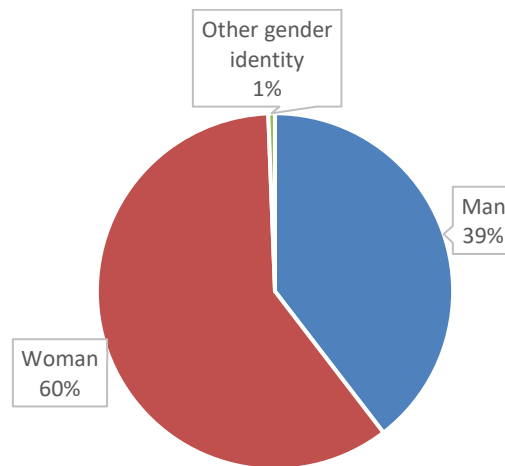
Respondents were asked to indicate the number of adults and children in their household. More than one-fifth of households have two members, and more than seven in 10 have three or more members. Just 7 percent of respondents live alone (see Figure 26). Three-fourths of respondents have children living in the household (see Figure 27).

Figure 26: Total household size
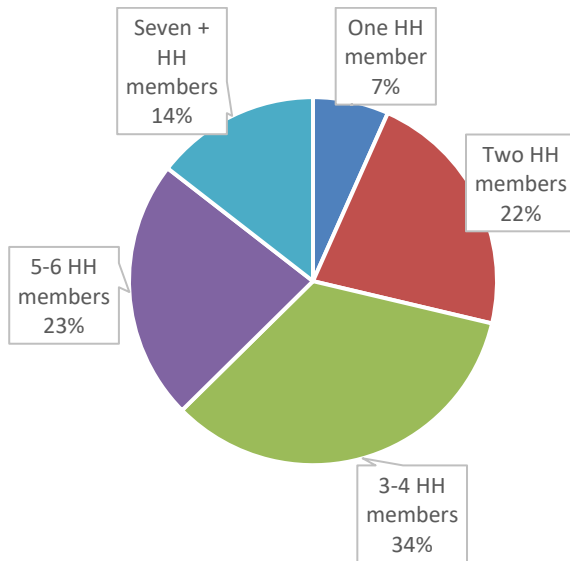
Figure 27: Number of children in household

Seven + HH members 14%

One HH member 7%

Two HH members 22%

5-6 HH members 23%

3-4 HH members 34%

No children in HH 25%

Children in HH 75%
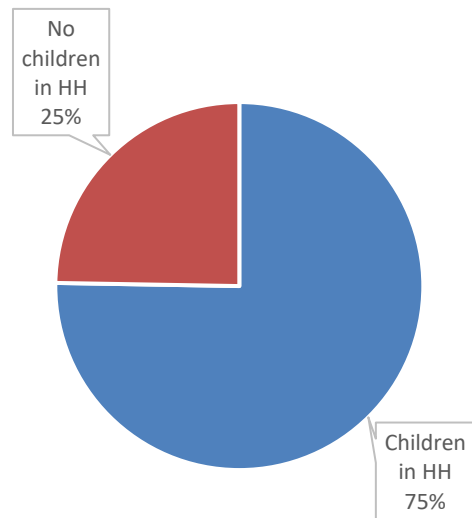
The respondents' highest level of education attained is summarized in Figure 28. Four in 10 respondents have a high school education or less, and 15 percent have a two-year associate degree. Another 26 percent of respondents have a four-year college degree, and one-fifth have a postgraduate or professional degree.

Figure 28: Education of respondent

Category	Percentage
Less than high school, or high school incomplete (Up to grades 9-11 or Grade 12 with NO diploma)	6%
High school graduate (Grade 12 with diploma or GED certificate)	34%
Two-year associate degree from a college or university	15%
Four-year college or university degree/Bachelor's degree (e.g., BS, BA, AB)	26%
Postgraduate or professional degree, including master's, doctorate, medical or law degree (e.g., MA, MS, PhD, MD, JD)	20%

Respondents were asked to indicate what categories best describe their race (see Figure 29). Two-thirds of all respondents are White or Caucasian, while 1 percent are Black or African American (1 percent), Native American/American Indian/Alaska Native (1 percent), and Pacific Islander/Native Hawaiian (1 percent). Less than 1 percent is Asian or Asian American. About three in 10 respondents did not indicate their race or ethnicity.

Figure 29: Race/ethnicity grouped
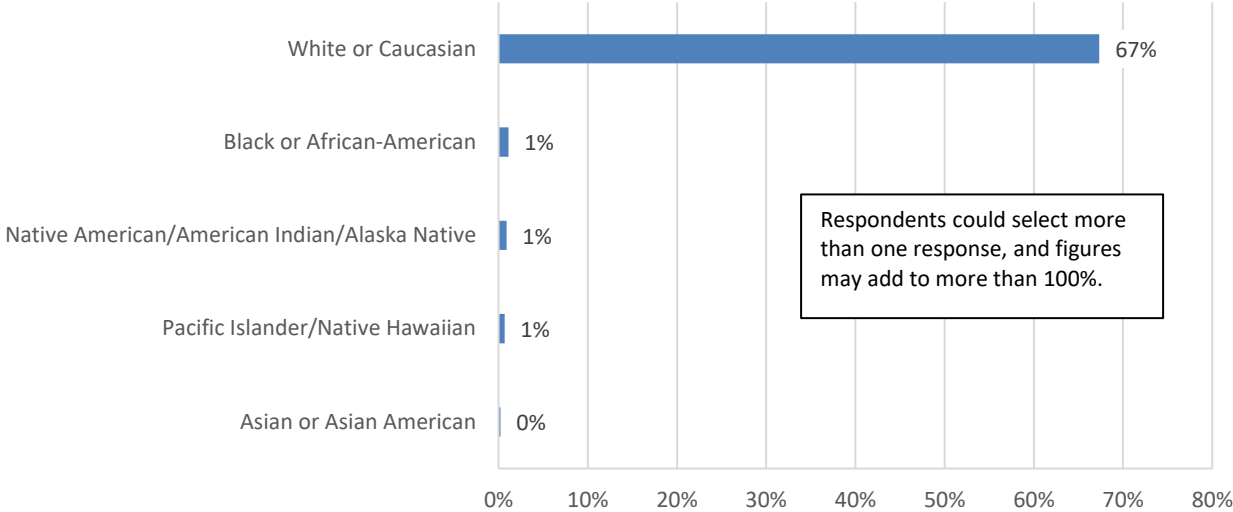
Respondents were also asked to indicate their ethnicity and if they belonged to a North American Indigenous, Native, or Tribal Group. About 1 percent of respondents said they are of Hispanic, Latino, or Spanish origin. One percent belong to a North American Indigenous, Native, or Tribal Group. Two-thirds of all respondents are White, non-Hispanic. Among those who responded to both the race and ethnicity questions, 94 percent are White, non-Hispanic, and 6 percent belong to a racial or ethnic minority group (see Figure 30). Keep in mind that 29 percent of respondents cannot be classified (i.e., did not respond to race and/or ethnicity questions).

Figure 30: Race and ethnicity

Racial/ethnic
minority
6%

White, non-
Hispanic
94%
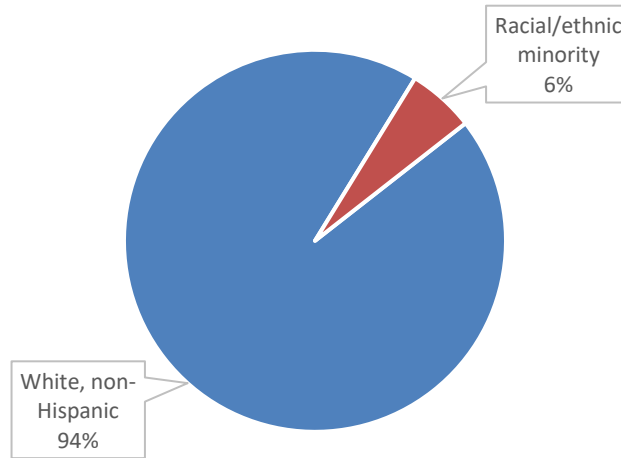
As illustrated in Figure 31, 53 percent of respondents have an annual household income of less than $60,000, and 47 percent earn $60,000 or more per year.

Figure 31: Annual household income
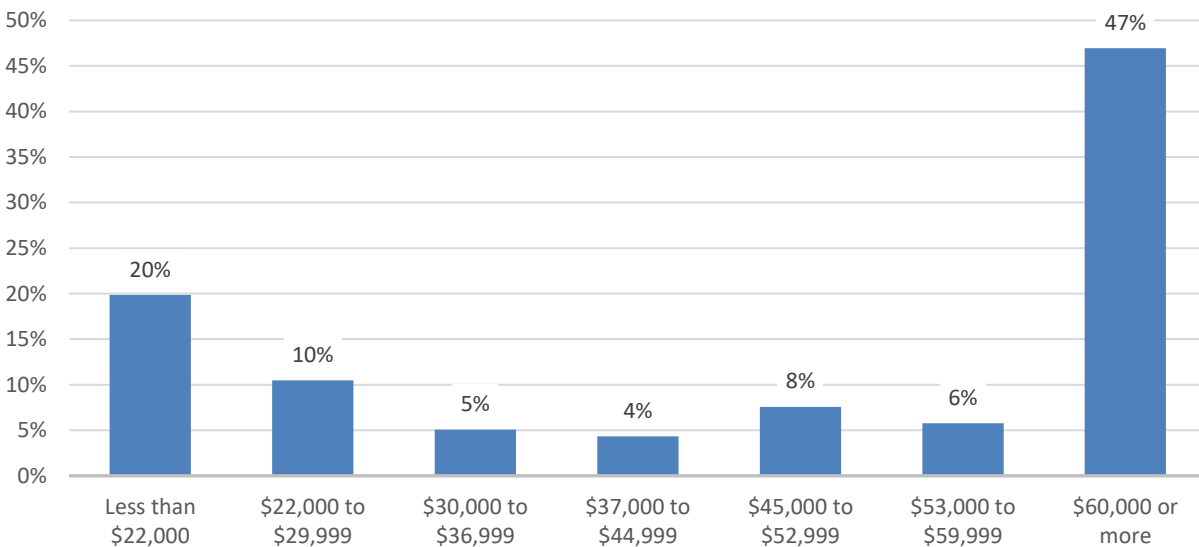
Respondents were asked if they belonged to certain other demographic groups. Twenty-six percent of those who responded said they identify as a person with a disability, and 18 percent of respondents reside in affordable housing (see Figure 32). Additionally, 7 percent serve on active duty in the U.S. Armed Forces, and 3 percent identify as a member of the LGBTQIA community.

Figure 32: Respondent belongs to particular demographic groups
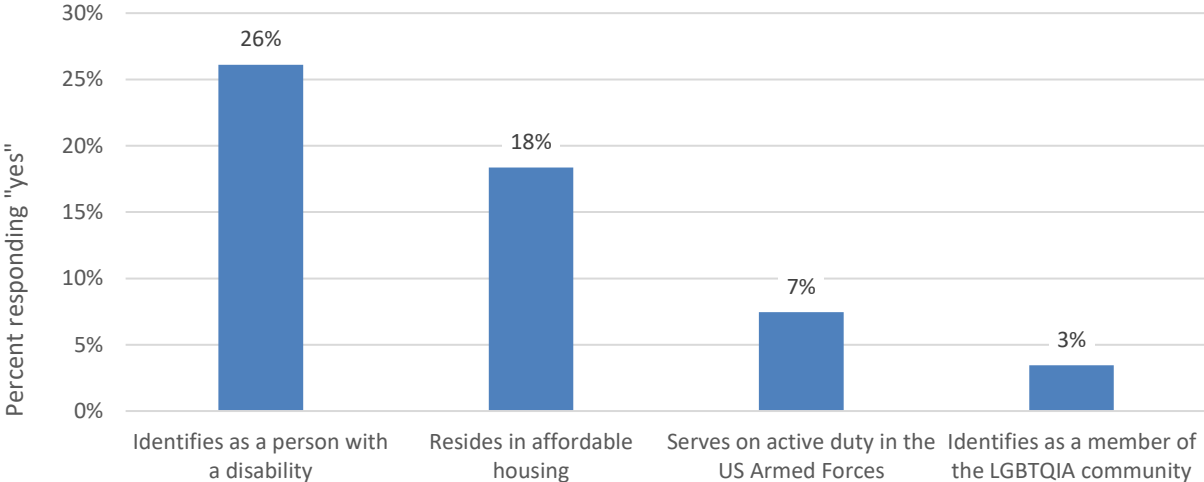
Additionally, respondents were asked if they faced difficulty in a variety of areas, as shown in Figure 33. Eight in 10 respondents did not indicate any areas of difficulty. A small segment of respondents does face difficulties, such as with walking or climbing steps (14 percent), remembering or concentrating (7 percent), and seeing even if wearing glasses (6 percent).

Figure 33: Respondent has difficulty in various areas
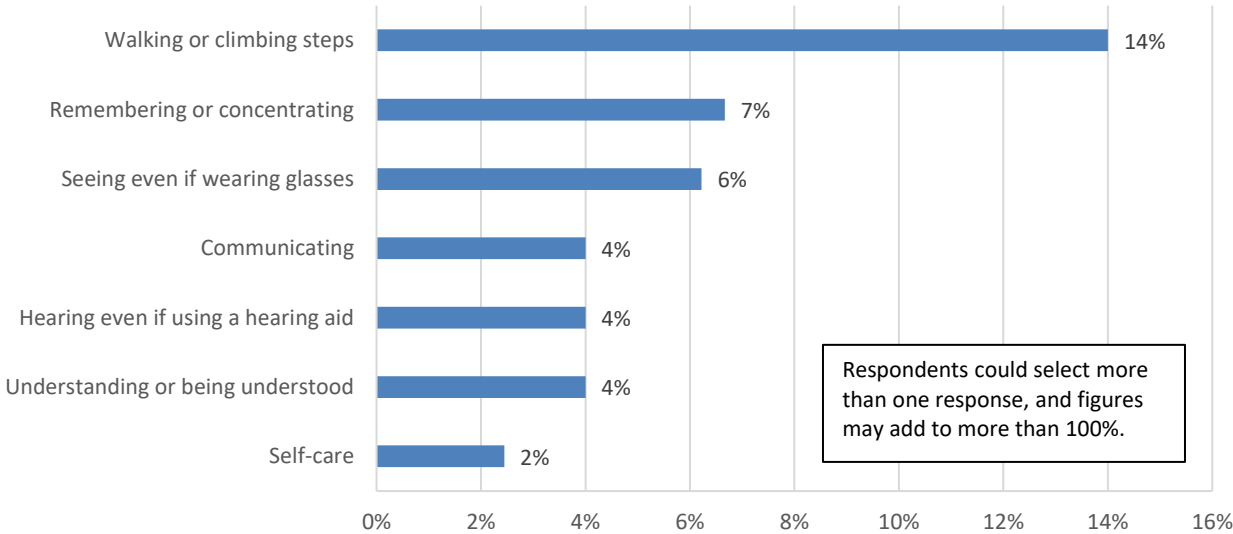
Respondents learned about the survey through a variety of sources, including 27 percent who heard about it from a government website, email list, flyer, or other outreach and 16 percent wo heard about it from an organization's website, email list, flyer, or other outreach (see Figure 34).

Figure 34: Where respondents heard about survey

Source	Percentage
Government website, email list, flyer, or other outreach	27%
Organization's website, email list, flyer, or other outreach	16%
Community meeting, community anchor institution, or other local institution	8%
Friend, colleague, or acquaintance	3%
Other	15%

Respondents could select more than one response, and figures may add to more than 100%.
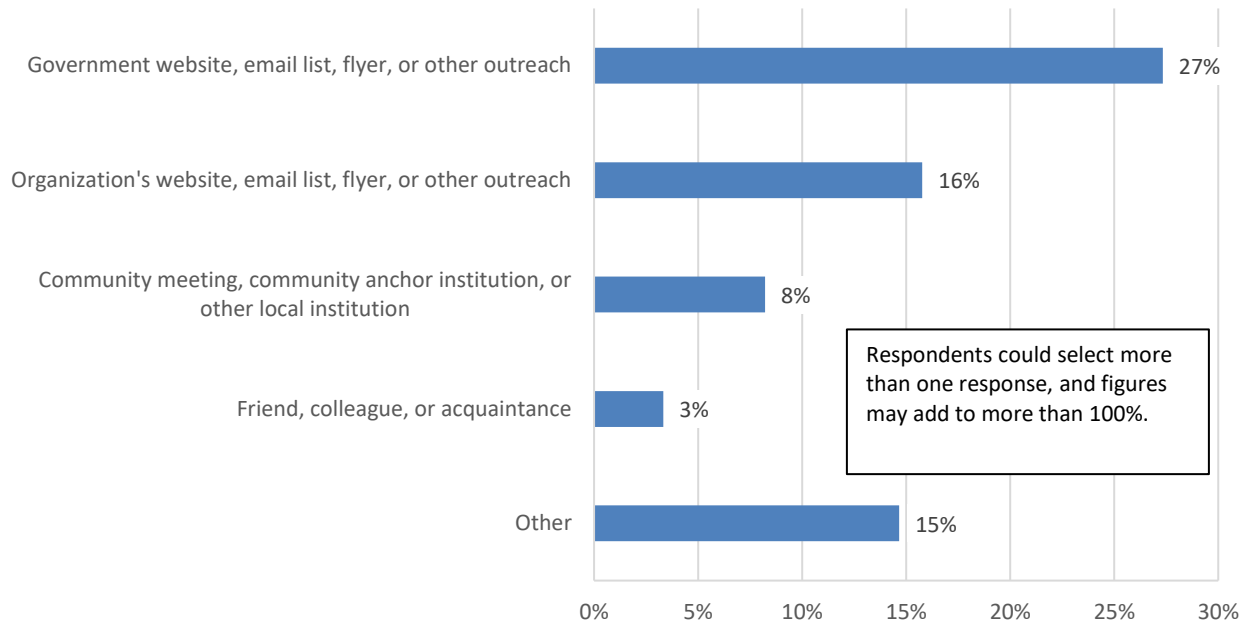
7 Federal funding will be a long-term resource to advance digital equity goals in Fairhaven

The Town's digital equity and inclusion priorities will be supported by the federal funding and programs stemming from the Infrastructure Investment and Jobs Act and its Digital Equity Act. The Digital Equity Act allocates $2.75 billion in federal funding to support three national programs intended to create opportunities for state and local entities to strengthen digital equity and inclusion within their communities.

7.1 The Digital Equity Act and the state plan

The Digital Equity Act allocates $60 million for planning grants for states, territories, and Tribal governments to develop State Digital Equity Plans. MBI is the lead agency for Massachusetts and is responsible for conducting the planning process and drafting the state Plan with a $1 million federal grant under this program. The Plan was submitted to NTIA at the end of 2023, and was approved by NTIA in March 2024.

These state plans incorporate extensive outreach, partnerships, data collection and needs assessments to identify solutions to expand digital inclusion and promote the adoption and use of high-speed broadband services. The state plans will also analyze and incorporate any digital equity plans developed by local or regional jurisdictions in the state as a source of local information and input to develop larger state goals.

Each state's planning and recommendations will be directed especially toward ensuring that underrepresented and high needs "covered populations" have the skills, capacity, and tools to connect, including the aging, formerly incarcerated, veterans, racial and ethnic minorities, people with disabilities, low-income households and those living in rural areas. MBI conducted a grant program using a portion of these planning funds to distribute targeted funding to nonprofits across the state to support outreach and planning for the state's digital equity plan.

The state digital equity plans set the stage for the $1.44 billion Digital Equity Capacity Building Grant program. NTIA has not finalized the rules or timeline for the Capacity Grant program; however, it is expected to open in early 2024 and allocate funding over the course of several years. Under this program, states will apply for funding to support the implementation of their digital equity plans. States will receive funding based on a legislatively mandated allocation formula. Once received, states will have five years to use this federal funding to develop their own digital inclusion projects, including competitive grant programs for activities by state agencies, local governments, non-profits, and others.

Following the Capacity Grant program, NTIA will implement the $1.25 billion Digital Equity Competitive Grant program in 2025. This direct funding program will award individual grants to

eligible entities, including state and local governments and agencies, Tribal entities, nonprofits, and community anchor institutions. Rules and funding priorities are still being developed, but these grants will likely focus almost exclusively on the needs of underrepresented "covered populations" to connect through digital equity and inclusion programs. Funding likely will support programs that address affordability of services and devices, provide education and tools to increase privacy and cybersecurity while on-line, develop digital literacy and technical skills for personal and professional growth, and provide technical support and training for repair and updates to devices.

7.2 MBI also administers several programs funded by the American Rescue Plan Act (ARPA).

The ARPA State and Local Fiscal Recovery funds went to both the State of Massachusetts and directly to local jurisdictions. Through MBI, the state has allocated $75 million in state ARPA funding to digital equity and directed $50 million to grants through its Broadband Innovation Fund (Digital Equity Partnership & Municipal Digital Equity Planning). In addition to MBI's implementation program (see section 0), the Town should monitor other state and local opportunities for future ARPA grant programs. [50]

These opportunities could support the recommendations above, including digital literacy training, device distribution programs, and subsidies for low-income households for services. The Town could consider taking advantage of future opportunities through a direct application for funding, or, as part of it convening activities, work with local organizations and EDIC to encourage them to apply for projects that will benefit Fairhaven residents.

The state also has $175 million in Capital Projects Fund resources from ARPA. The state will continue to focus this funding on broadband infrastructure construction and deployment, with one newly opened program (Residential Retrofit Program)[51] as of March 2024, and one program pending second round applications (Gap Networks Program).[52]

MBI's Municipal Digital Equity Implementation Program has launched and is available to municipalities for amounts up to $100,000

MBI launched its direct grant program—the Municipal Digital Equity Implementation Program (MDEIP)—for municipalities to access implementation funds to carry out the efforts proposed through this and similar reports and other local digital equity programming activities.

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[50] The Municipal Digital Equity Planning Program is still open and accepting applications for additional cities and towns in Massachusetts.
[51] "Residential Retrofit Program," MBI, https://broadband.masstech.org/retrofit.
[52] "Gap Networks Grant Program," MBI, https://broadband.masstech.org/gap-networks-grant-program.

Municipalities interested in applying for this digital equity implementation opportunity must complete a two-step application process by May 31, 2024.[53] Applications will be reviewed by MBI on a rolling basis. The purpose of this funding is to enable municipalities to access direct grants to implement digital equity strategies identified through ongoing planning activities. This money—a one-time grant of up to $100,000—is intended to help municipalities make local digital equity investments and execute projects that will increase access, adoption, and usage of the internet for populations most impacted by the COVID-19 pandemic.[54]

Any municipality that has participated in the Municipal Digital Equity Planning Program or has a pre-existing local digital equity plan or related document can apply for this implementation funding. The Town of Fairhaven should start its application for these funds immediately, using this report and ongoing conversations with local organizations as a guide.

7.3 The U.S. Economic Development Agency has opportunities for distressed communities

The Economic Development Administration (EDA) of the U.S. Department of Commerce administers Local Planning and Technical Assistance Programs as well as federal Public Works and Economic Adjustment Assistance Program funding opportunities for a wide variety of projects with a current allocation of $161 million nationwide.[55] These programs are designed to address needs in economically distressed areas, and projects must meet specific criteria to show the project area is economically distressed. While this federal agency does not receive many broadband applications, communities that can show broadband is needed as an element of their economic development plan may have a strategic advantage.

Grants made under these programs will help communities plan, build, innovate, and put people back to work through infrastructure construction or non-construction projects designed to meet local needs. EDA encourages applicants to present "new ideas and creative approaches to advance economic prosperity in distressed communities" [56] and will consider projects that

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[53] Municipal Digital Equity Implementation Program, MBI Massachusetts Broadband Institute, https://broadband.masstech.org/digital-equity-implementation

[54] "Municipal Digital Equity Implementation Program", MBI, https://broadband.masstech.org/digital-equity-implementation.

[55] U.S. Economic Development Administration, Public Works and Economic Adjustment Assistance Programs, Notice of Funding Opportunity, at p. 10 (EDA was appropriated $121.5 million for the Public Works funding program), https://www.grants.gov/search-results-detail/346815; U.S. Economic Development Association, Planning and Local Technical Assistance Programs, Notice of Funding Opportunity, pg. 7 (U.S. EDA was appropriated $43.5 million for these programs), https://www.eda.gov/sites/default/files/filebase/files/programs/eda-programs/FY21-23-Planning-and-LTA-NOFO_FINAL.pdf.

[56] U.S. EDA Planning and Local Technical Assistance NOFO. at p. 5 and U.S. EDA Public Works and Economic Adjustment Assistance Programs NOFO at p. 4.

incorporate priorities related to equity, entrepreneurship, and workforce development. Several of the recommendations and projects discussed above could be eligible for funding under the program.

Fairhaven must apply the "distress criteria"—high unemployment rates or low per capita income relative to the national average—to identify areas and neighborhoods that can take advantage of this opportunity. [57] It is also helpful to consider that projects with a significant showing of "distress" through extremely high unemployment or low per-capita income will generally have the lowest match requirements, and thus more flexibility in how it designs its projects. Fairhaven should further review the requirements for this program to determine if it will be an applicable source of funding, but it also may encourage other partners to apply.

7.4 The Federal Communications Commission's E-Rate program can bring discounted services to schools and libraries in the area

The Federal Communications Commission's E-Rate program was created in 1996 to enhance access to advanced telecommunications and information services for all public and nonprofit elementary and secondary school classrooms and libraries.[58] E-Rate is one of four programs comprising the Universal Service Fund (USF) and is funded by fees paid by telecommunications companies to fulfill the Congressional goals of universal service.

Currently, E-Rate is a $4.27 billion federal funding program managed by the Universal Service Administrative Company (USAC) that approves and provides subsidy discounts for telecommunications and information services for schools and libraries. In late 2023, the FCC made the latest addition to the list of eligible services by approving subsidies for Wi-Fi services on school buses as an eligible program expense to help close the "homework gap" for students with limited broadband access at home.

Eligible schools and libraries identify goods or services they need and submit a request for competitive bids to USAC, which then posts these requests on its website for vendors to bid on. After reviewing the vendors' bids, the school or library selects the most cost-effective eligible products and services using price as the primary factor. It then applies to USAC for approval for the desired purchases.

Funds are awarded as discounts ranging from 20 to 90 percent of the eligible costs and discount levels are based on the poverty level of the schools. Rural schools and libraries may also receive a higher discount. Recipients must pay a portion of the service costs. Often, schools and libraries

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[57] U.S. EDA Planning and Local Technical Assistance NOFO. at p. 11.

[58] Universal Service Administrative Co., E-Rate, https://www.usac.org/e-rate/

will form consortia to centralize and manage the E-Rate application, reporting, and budgeting processes within a central point of contact.[59]

Eligible schools and libraries in Massachusetts received $10.1 million in E-rate disbursements in 2023.[60] The Massachusetts Board of Library Commissioners[61] tracks E-Rate participation by libraries and library networks and provides information and resources about the program. The Department of Elementary and Secondary Education's Office of Digital Learning provides similar outreach and education for schools.[62] While Massachusetts does not manage a state-wide consortium, several of the State's library networks and school districts participate in E-Rate, including the Fairhaven School District.

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[59] Universal Service Administrative Co., E-Rate, Consortia, https://www.usac.org/e-rate/applicant-process/before-you-begin/consortia/

[60] Universal Service Administrative Co., E-Rate FRN Status Tool FY2016+, https://opendata.usac.org/E-Rate/E-Rate-FRN-Status-Tool-FY2016-/8xzh-ytkh.

[61] E-rate in Massachusetts Libraries, https://mblc.state.ma.us/programs-and-support/e-rate/index.php.

[62] Technology Planning and Sustainability, E-Rate, https://www.doe.mass.edu/odl/planning-funding/E-rate/.

Appendix A: MBI survey

MBI | MASSACHUSETTS BROADBAND INSTITUTE | at the MassTech Collaborative

Massachusetts Statewide Digital Equity Survey

The Massachusetts Broadband Institute (MBI) wants to hear from you about your experiences with getting and using internet service! This survey is completely anonymous and should be completed by one individual per household. **Your feedback is vital to understand barriers to internet access, affordability, and adoption to help close the digital divide.** Thank you for your time and participation.

Section 1: Please answer the following questions.

1. What is your zip code? _____
2. Which Massachusetts municipality do you live in? _____

Do you have internet service in your home?

☐ **YES** – Please proceed to Section 2 below

☐ **NO** – Please skip to Section 3 (flip this page over)

Section 2: Please answer the following questions only if you CAN connect to the internet from home.

3. Who is your internet service provider? _____
4. What kind of internet service do you have at home? Please check all that apply.

☐ A data plan for a smartphone, hotspot, or tablet   ☐ Dial-up internet

☐ Home wireline connection (cable, fiber, DSL, etc.)   ☐ Satellite internet

5. How well does your home internet service work?

☐ Good enough to meet my household's needs   ☐ I don't know

☐ Not good enough to meet my household's needs

6. Is your home internet service bundled with other services such as telephone or TV?

☐ Yes

☐ No

7. How much do you pay for the internet every month? $_____

8. How hard is it for you to pay your internet bill?

☐ Very hard   ☐ Not too hard

☐ Somewhat hard   ☐ Not at all hard

9. Have you heard about the Affordable Connectivity Program (ACP) that provides discounted internet service for low-income households?

☐ Yes   ☐ I don't know

☐ No

For more information and to find out if you qualify for ACP, call the Federal Communication Commission's ACP Support Center: 877-384-2575.

When complete, skip to section 4 below.

Section 3: Please answer the following questions only if you CANNOT connect to the internet at home.

10. If you do not have internet service in your home, what is the reason?

☐ Service is not available in my area

☐ Service is too expensive

☐ I am concerned about online privacy or safety

☐ I don't feel confident navigating the internet or using online tools

☐ I can't afford or access a device to use the internet

☐ I don't want / don't use the internet.

☐ Other (please specify): _____

11. If you do not have internet at home, where do you go to use the internet? Please check all that apply.

☐ A workplace

☐ A friend or family member's home

☐ School, college, or university

☐ A library or community center

☐ A business such as a restaurant, cafe, or bookstore (e.g., McDonald's, Taco Bell, Starbucks, etc.)

☐ A public space such as a park or government building

☐ On public transit

☐ I do not regularly access internet in these or any other spaces

☐ Other (please specify): _____

When complete, proceed to section 4 below.

Section 4: All respondents should answer these questions.

12. Does everyone in your household have access to the computer devices they need to meet their everyday needs for internet use? (Computers, smartphones, tablets, or other internet enabled devices)?

☐ Yes

☐ No

13. Which of the following devices do you use most of the time to connect to the internet? (Check all that apply)

☐ Cellphone

☐ Desktop computer

☐ Laptop computer

☐ Tablet (or similar device)

☐ Other (please specify): _____

14. How much would you be able to pay for a laptop or desktop computer?

☐ $0-50

☐ $50-100

☐ $100-150

☐ $150-250

☐ $250-500

☐ More than $1,000

15. Are you able to regularly use the internet for online activities?

☐ Yes

☐ No

16. Please rank the level of difficulty for what you use the internet for. (Easy, Not easy, Hard)

	Easy	Not easy	Hard
Searching and applying for a job	☐	☐	☐
Health care or telehealth services	☐	☐	☐
Participating in your local community	☐	☐	☐
General internet searching	☐	☐	☐
Transportation information	☐	☐	☐
Searching and/or applying for benefits or resources for you or your family	☐	☐	☐

17. If you do not have regular access to the internet, what would most like to use it for if you could?
    - ☐ Searching and applying for a job
    - ☐ Health care or telehealth services
    - ☐ Participating in your local community
    - ☐ General internet searching
    - ☐ Transportation information
    - ☐ Searching and/or applying for benefits or resources for you and your family
    - ☐ Something else
    - ☐ I don't want to use the internet regularly

18. What kind of digital skills support would you be most interested in?
    - ☐ In person classes
    - ☐ Online classes
    - ☐ In person support from a friend or instructor
    - ☐ A do-it-yourself training module

19. How concerned are you, if at all, about internet safety?
    - ☐ Very concerned
    - ☐ Somewhat concerned
    - ☐ Not very concerned
    - ☐ Not at all concerned

20. What are you most concerned about? (Select all that apply)
    - ☐ That my data could get stolen or used without my consent
    - ☐ That I or a loved one could get scammed or tricked
    - ☐ That I could be tracked or surveilled
    - ☐ That I or a loved one could be harassed or abused online

21. Are you aware of tools or resources you can use to stay safe online?
    - ☐ Yes, I have tools and resources I use stay safe online
    - ☐ No, I don't know of any tools or resources to stay safe online
    - ☐ I know of tools or resources to stay safe online, but they don't work for me
    - ☐ Other (please specify) : _____

22. How accessible are online government services like benefits portals, RMV services, or paying for permits or tickets to you?
    - ☐ Very accessible
    - ☐ Somewhat accessible
    - ☐ Not very accessible
    - ☐ Not at all accessible

23. When you have used online government services like benefits portals, RMV services, or paying for permits or tickets, how well did they work for you?
    - ☐ Very well
    - ☐ Somewhat well
    - ☐ Not too well
    - ☐ Not well at all

When complete, proceed to section 5 below.

3

Section 5: All respondents should answer these questions. *We collect demographic information so that we can make sure we are representing all neighborhoods, towns, cities and groups across the Commonwealth.*

24. What is your age?
- [ ] 18 to 24
- [ ] 25 to 34
- [ ] 35 to 44
- [ ] 45 to 59
- [ ] 60 to 74
- [ ] 75 and older
- [ ] Prefer not to answer

25. What is your gender identity?
- [ ] Woman
- [ ] Man
- [ ] Non-binary
- [ ] Gender fluid
- [ ] Other
- [ ] Prefer not to answer

26. How many people, including yourself, currently live in your household? *(Note: A household is defined as all the people who currently occupy the housing unit where you live).*
- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6
- [ ] 7
- [ ] 8 or more
- [ ] Prefer not to answer

27. How many children under age 18, currently live in your household? *(Note: A household is defined as all the people who currently occupy the housing unit where you live).*
- [ ] 0
- [ ] 1
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5 or more
- [ ] Prefer not to answer

28. What is the highest level of school you have completed or the highest degree you have received?
- [ ] Less than high school, or high school incomplete (Up to grades 9-11 or Grade 12 with NO diploma)
- [ ] High school graduate (Grade 12 with diploma or GED certificate)
- [ ] Two-year associate degree from a college or university
- [ ] Four-year college or university degree/Bachelor's degree (e.g., BS, BA, AB)
- [ ] Postgraduate or professional degree, including master's, doctorate, medical or law degree (e.g., MA, MS, PhD, MD, JD)
- [ ] Prefer not to answer

29. Are you of Hispanic, Latino, or Spanish origin, such as Mexican, Puerto Rican, or Cuban?
- [ ] Yes
- [ ] No
- [ ] Prefer not to answer

30. Which of the following best describes your race? (Select all that apply)
- [ ] White or Caucasian
- [ ] Black or African-American
- [ ] Asian or Asian-American
- [ ] Native American/American Indian/Alaska Native
- [ ] Pacific Islander/Native Hawaiian
- [ ] Some other race (please specify) _____
- [ ] Prefer not to answer

31. Do you belong to a North American Indigenous, Native, or Tribal group?
    ☐ Yes
    ☐ No
    ☐ Prefer not to answer

32. What is your total annual household income from all sources, and before taxes?
    ☐ Less than $22,000
    ☐ $22,000 to $29,999
    ☐ $30,000 to $36,999
    ☐ $37,000 to $44,999
    ☐ $45,000 to $52,999
    ☐ $53,000 to $59,999
    ☐ $60,000 or more
    ☐ Prefer not to answer

33. Do you identify as a person with a disability? *(Note: Disability is defined as physical, emotional, or mental health conditions that result in limitations of activities or restrictions to full participation at school, at work, at home, or in the community).*
    ☐ Yes
    ☐ No
    ☐ Prefer not to answer

34. If you identify as a person with a disability, do you have difficulty in any of the following areas? Please check all that apply.
    ☐ Seeing even if wearing glasses
    ☐ Hearing even if using a hearing aid
    ☐ Walking or climbing steps
    ☐ Remembering or concentrating
    ☐ Self-care
    ☐ Communicating, for example understanding or being understood
    ☐ Prefer not to answer
    ☐ I do not identify as a person with a disability

35. Do you identify as a member of the LGBTQIA+ community?
    ☐ Yes
    ☐ No
    ☐ Prefer not to answer

36. Did you serve on active duty in the U.S. Armed Forces?
    ☐ Yes
    ☐ No
    ☐ Prefer not to answer

37. Do you live in affordable housing? *(Note: Affordable housing is defined as housing subsidized by a housing authority, paid for through a voucher, or in a building run by a private developer.)*
    ☐ Yes
    ☐ No
    ☐ Prefer not to answer

38. Where did you hear about this survey? Please check all that apply.
    ☐ From a government website, email list, flyer, or other outreach
    ☐ From a friend, colleague, or acquaintance
    ☐ From a community meeting, community anchor such as a library or school, or other local institution
    ☐ From an organization's website, email list, flyer, or other outreach
    ☐ Other (Please specify) _____

Thank you for taking the survey!

Your response will help shape Massachusetts's policies and future funding allocations to close the digital divide for all its residents. If you would like to learn more, please visit **https://broadband.masstech.org/.**

5

Appendix B: Stakeholder Questionnaire

Town of Fairhaven Digital Equity Program Questionnaire

The Town of Fairhaven is undertaking a study of local broadband needs under the Massachusetts Broadband Institute's Municipal Digital Equity Program, in collaboration CTC Technology & Energy, a consulting firm with offices in Massachusetts.

Digital equity programs promote computer skills, internet access, and access to computing devices. Please fill out this questionnaire to the best of your ability. The goal of this questionnaire is to understand the active programs and initiatives currently facilitated by organizations located in or that serve Fairhaven, and to understand capacity for expanding existing efforts or starting new ones.

1. Which category best describes your organization? Please select all that apply.

☐ Public School

☐ Community colleges and other institutions of higher education

☐ Library

☐ Medical and health care providers

☐ Municipal government

☐ Public housing authority

☐ Community organization

☐ Workforce development organization

☐ Adult literacy organization

☐ Internet Service Provider (ISP)

☐ Non-profit organization that represents individuals with disabilities

☐ Non-profit organization that represents veterans

☐ Non-profit organization that represents aging individuals

☐ Non-profit organization that represents incarcerated individuals

☐ Non-profit organization that represents English learners

☐ Other (please specify)

2. Has your organization created a broadband and/or digital equity plan?

○ Yes

○ No

3. Please provide the information for a point of contact in your organization.

Name	
Organization name	
Email address	
Phone number	

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Town of Fairhaven Digital Equity Program Questionnaire
Digital Equity Programs Introduction

Digital equity programs aim to ensure that communities, our residents and visitors to Fairhaven have the skills, technology, and capacity to use broadband to its fullest extent. Examples of digital equity programs include those that promote computer skills, internet access, and computing device access.

4. What do you believe are the most pressing challenges associated with digital equity and access in Fairhaven, and for whom?

* 5. Does your organization offer digital equity programs?

○ Yes

○ No

Town of Fairhaven Digital Equity Program Questionnaire

Program Details

We want to collect data on all digital equity **programs you currently provide**. Please record as many details as you can about the program you offer. If your organization has more than one active digital equity program, there is an opportunity for you to answer the same questions for a second program.

6. What is the name of the project?

Project name [   ]

7. What aspects of digital equity does the program address? Check all that apply.

☐ Availability and affordability of internet

☐ Digital literacy

☐ Cybersecurity

☐ Devices and technical support

☐ Online accessibility and inclusivity

8. Please describe the program in a few sentences:

[   ]

9. Does the program focus on certain populations? Check all that apply.

☐ Individuals with disabilities

☐ Veterans

☐ Aging individuals (60 and above)

☐ Incarcerated individuals

☐ Individuals with a language barrier, including individuals who are English learners; and have low levels of literacy

☐ Individuals who are members of a racial or ethnic minority group

☐ Individuals whose household income is lower than 150% of the poverty level

☐ No particular focus on a population

☐ Other (please specify)

[   ]

10. What is the annual project budget?

Cost in dollars [   ]

11. How much does the program cost to each participant?

Cost in dollars [   ]

12. What is the cost per participant served?

Cost in dollars [   ]

13. Please give us a sense of the geography you serve.

○ Municipal-wide

○ Neighborhood-wide

○ Other (please specify)

[   ]

14. How long has the program been active, in months?

Program length
in months

15. How many people were served by the program in the last fiscal year?

○ Under 25 people

○ 26 to 50 people

○ 51 to 100 people

○ More than 100 people

○ Other (please specify)

16. How many participants do you expect to serve over the life of the program?

○ 1 to 50

○ 51 to 100 people

○ 101 to 250 people

○ 251 to 500 people

○ More than 500 people

17. If you had the resources, would you want to scale the project to serve more people?

○ Yes

○ No

* 18. Does your organization have another digital equity program?

○ Yes

○ No

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Town of Fairhaven Digital Equity Program Questionnaire
Digital Equity Program #2

19. What is the name of the project?

Project name [   ]

20. What aspects of digital equity does the program address? Check all that apply.

☐ Availability and affordability of internet

☐ Digital literacy

☐ Cybersecurity

☐ Devices and technical support

☐ Online accessibility and inclusivity

21. Please describe the program in a few sentences:

[   ]

22. Does the program focus on certain populations? Check all that apply.

☐ Individuals with disabilities

☐ Veterans

☐ Aging individuals (60 and above)

☐ Incarcerated individuals

☐ Individuals with a language barrier, including individuals who are English learners; and have low levels of literacy

☐ Individuals who are members of a racial or ethnic minority group

☐ Individuals whose household income is lower than 150% of the poverty level

☐ No particular focus on a population

☐ Other (please specify)

[   ]

23. What is the annual project budget?

Cost in dollars [   ]

24. How much does the program cost to each participant?

Cost in dollars [   ]

25. What is the cost per participant served?

Cost in dollars [   ]

26. Please give us a sense of the geography you serve.

○ Municipal-wide

○ Neighborhood-wide

○ Other (please specify)

[   ]

27. How long has the program been active, in months?

Program length
in months

28. How many people were served by the program in the last fiscal year?

○ Under 25 people

○ 26 to 50 people

○ 51 to 100 people

○ More than 100 people

○ Other (please specify)

29. How many participants do you expect to serve over the life of the program?

○ 1 to 50

○ 51 to 100 people

○ 101 to 250 people

○ 251 to 500 people

○ More than 500 people

30. If you had the resources, would you want to scale the project to serve more people?

○ Yes

○ No

31. Does your organization have another digital equity program?

○ Yes

○ No

Town of Fairhaven Digital Equity Program Questionnaire

Planned Programs

We would like to collect information on any digital equity programs your organization is currently in the process of planning but has not yet implemented. Please record as many details about the upcoming program as possible.

* 32. Is your organization in the process of developing a digital equity program?

○ Yes

○ No

Town of Fairhaven Digital Equity Program Questionnaire
Planned Programs

33. What kind of digital equity program(s) is your organization developing? Please select the categories that best fit the program type.

○ Digital skills and literacy

○ Data privacy and cybersecurity

○ Devices (Laptops, computers, tablets)

○ Technical support

○ Digital navigators

○ Broadband access

○ Creating accessible and inclusive internet content

34. What is the annual budget need?

35. What else do you need to launch the program?

36. What work (if any) has already been completed to launch the new program?

Town of Fairhaven Digital Equity Program Questionnaire

Future Programs

We would like to hear about any interest your organization has in developing a project in the future to address current gaps in digital equity. Please fill this section out if you have interest in digital equity programming but have not yet started the process of planning for that program.

37. Does your organization want to develop a digital equity program?

○ Yes

○ No

38. What kind of digital equity program(s) is your organization interested in developing? Please select the categories that best fit the program type.

☐ Digital skills and literacy

☐ Data privacy and cybersecurity

☐ Devices (Laptops, computers, tablets)

☐ Technical support

☐ Digital navigators

☐ Broadband access

☐ Creating accessible and inclusive internet content

39. What are the most pressing needs you are trying to address?

40. What do you need to launch the program?