# Connecting Charlton

## Digital Equity Charette

MBI
MASSACHUSETTS
BROADBAND INSTITUTE

CMRPC
Central Massachusetts Regional Planning Commission

# Introduction

The Town of Charlton is in Worcester County in Central Massachusetts. Charlton is a rural community with a population of approximately 13,000. The Connecting Charlton Charette gave the town a chance to discuss the increasingly digital society we live in, and what challenges the community may face. As the COVID-19 pandemic heightened digital inequalities, Mass Broadband Institute launched the Municipal Digital Equity Planning Program for communities like Charlton that may face digital inequity. Ensuring that communities have access to adequate internet services can help bridge the digital divide as education, economic opportunities, and community engagement have become reliant on reliable and fast internet access.

Charlton worked with the Central Massachusetts Regional Planning Commission which provides a variety of services to towns in southern Worcester County. These services include regional collaboration, community planning, resiliency planning, transportation planning, and land use planning. CMRPC's role in Charlton's Digital Equity Charette was to engage stakeholders and community members about the current state of the internet and possibilities towards advancing digital access for residents. CMRPC also collected demographic information utilizing Census data, local plans, and data sources provided by MBI to inform the existing conditions analysis that plays a role in guiding Charlton's vision.

Charlton has been able to create a vision to guide the community's commitment to digital equity: Charlton residents should have equal and adequate access to high-speed broadband, opportunities to gain digital literacy skills, and access to devices to access the Internet. Charlton will continue to support institutions that help advance digital equity for all residents while targeting vulnerable populations for digital literacy and device training programming. Charlton will promote the Affordable Connectivity Program to expand enrollment for eligible residents. Charlton will help support digital literacy and device training programs for vulnerable populations, as well as address connectivity issues in unstable areas.

# Community Outreach

Community outreach played a significant role for CMRPC staff. Understanding the successes and challenges in Charlton has guided the development of the town's vision, recommendations, and strategies.

**Meetings with Town Administration:** CMRPC staff met weekly with Town Administrator Andrew Golas. Weekly meetings included updates on the outreach process, identifying points of contact, brainstorming community events to attend, identifying stakeholders in Charlton, reviewing the timeline, and presenting promotional materials for edits. Golas helped to find the Charette space, letting CMRPC staff utilize a conference room in the Charlton Public Library.

**Survey distribution:** Andrew developed a contact list that allowed us to distribute surveys to key stakeholders and introduced the Connecting Charlton Charette, MBI, and the Digital Equity program.

**Facebook:** CMRPC used social media for community outreach. CMRPC targeted Charlton residents using Facebook advertising to promote the event.

**Other outreach:** CMRPC staff developed a contact list of residents and businesses to expand the reach of the survey and continue advertising Connecting Charlton for community involvement in the Charette.

**Blueberry Festival:** CMRPC staff attended the Blueberry Festival to promote the MBI Statewide Survey, the Charette, and the Affordable Connectivity Program. CMRPC staff connected with residents about the state of internet access, device usage, and provider concerns.

# Prior Planning

At the Charette, we highlighted action items and goals in prior plans that digital equity initiatives can help achieve. Assessing prior planning efforts helps the community understand the tangible impacts of proper infrastructure and internet access.

### Charlton's 2008 Master Plan: Town Services and Facilities
- Maintain, expand, and improve town buildings to provide quality services in accessible, safe, efficient, and well-maintained facilities.
- Improve and expand town services and government to keep pace with Charlton's growing population.
- Provide communication links throughout town departments including police, fire, town hall, highway, library, elderly services, emergency management services, and expanded cellular coverage.
- Maintain Charlton's high standards for education and provide adult education courses to meet future employment requirements.

### Charlton's 2017 Open Space and Recreation Plan Goals
- The public has a heightened awareness of and better access to open space and resources.
- Provide funding for promoting open space and recreational facilities as well as for outreach and education.
- Expanded opportunities for passive and active recreation.
- Preserve agriculture and forestry land which are important components of the Town's character.

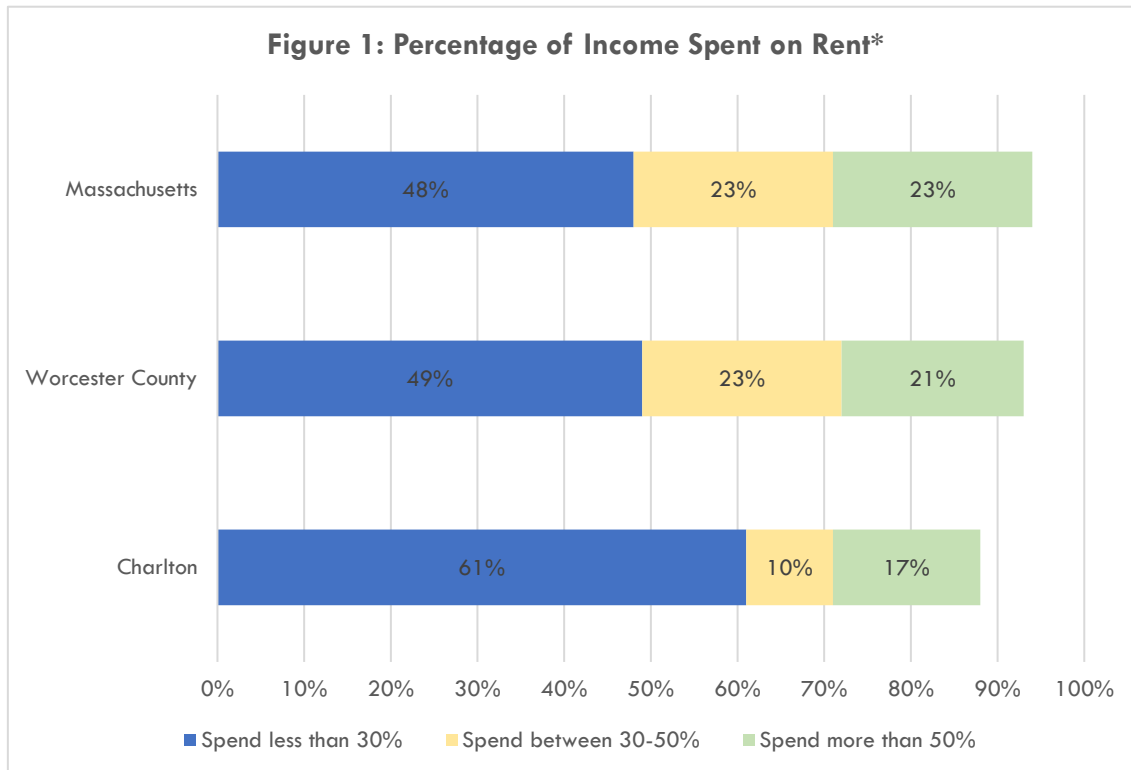### Charlton's Community Resilience Building Workshop
- Flooding
- Storm events such as wind, snow, and ice
- Drought
- Extreme temperatures

Climate change concerns were discussed as there is a connection between internet access and disaster resiliency. Without access to technology, communities can be at risk of missing crucial warnings and other disaster-related information.

We gathered climate data from Charlton's Municipal Vulnerability Plan, participants were asked to identify the top four natural hazards of concern for the Town. Flooding, storm events, droughts, and extreme temperatures were highlighted. We are touching on climate impacts because there is a connection between internet access and disaster resiliency. Without access to technology, communities can be at risk of missing crucial warnings and other disaster-related information, such as: evacuating, aid offerings, and media reports. Severe weather conditions can affect internet access and connection.

# Existing Conditions

The Existing Conditions provide demographic information and the town's current climate in digital equity. This information helped CMRPC as consultants understand Charlton's potential needs, as well as giving residents insight into the current life cycle groups, Affordable Connectivity enrollment, and device usage. Analyzing such data can inform goals, actions, and strategies.

**Figure 1: Percentage of Income Spent on Rent***

| | Spend less than 30% | Spend between 30-50% | Spend more than 50% |
|---|---|---|---|
| Massachusetts | 48% | 23% | 23% |
| Worcester County | 49% | 23% | 21% |
| Charlton | 61% | 10% | 17% |

According to US Census data, nearly 30% of Charlton residents are rent burdened, which is the condition of spending over 30% of one's monthly income on rent. 17% of Charlton residents spend more than 51%, while 61% of Charlton residents are reported as spending less than 31% of their income on rent. (Fig. 1, U.S. Census Bureau, 2021) [1]. Rent burden can affect whether an individual or a household can afford internet access, afford to purchase devices, or pay for data plans to support mobile device usage. Fortunately, compared to both Worcester County and the Commonwealth as a whole, Charlton residents are less likely to be burdened by rent and thus may have a lower potential to be at risk of digital inequities. However, it is important to note that while Charlton is in a better position than some other communities, approximately 1/3 of residents may struggle to afford necessary services including internet. *According to the Department for Housing and Urban Development, households spending more than 30% of their income on housing are considered rent-burdened.* (U.S Department of Housing and Urban Development) [2].

## Figure 2: Lifecycle Groups as Percents of the Total Population, 2021 Charlton
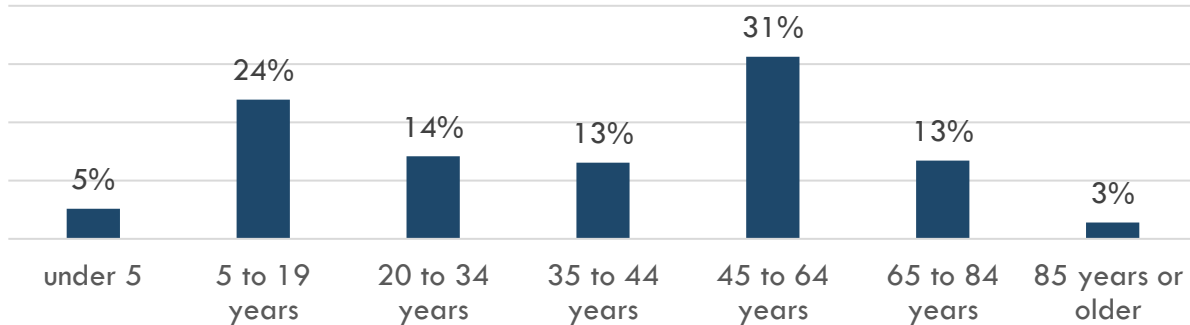


The largest life cycle group in Charlton is those between 45 and 64 years old and the next largest is those between 5 and 19 years old (Fig. 2, U.S. Census Bureau, 2021) [3]. Highlighted in the Community Findings and Needs Assessment, individuals ages 65 and older tend to face more digital equity disparities, and 16% of Charlton residents fall into the 65+ category. With this significant population of aging residents and noting that a large percentage of residents are nearing this life cycle group in coming years, it will be important to support the needs of Charlton's aging population in planning and implementation of digital equity practices while also engaging with the Town's younger age groups. Additionally, research shows that internet usage by the 65+ population has increased by over 30% since the year 2000, so it will be necessary to ensure this population receives the support it needs. (Faverio, Michelle, 2022) [4].

| Figure 3: Affordable Connectivity, Charlton | |
|---|---|
| Total Households | **4,776** |
| Eligible Households | **1,055** |
| Predicted vs. Actual ACP Enrollment | **378 / 401** |
| % Households with Cellular Data Only | **8%** |
| % Households without a computer | **4%** |
| % Households with annual income under $15,000 | **4%** |
| % Rent Burdened | **31%** |
| % Population 65+ | **15%** |
| % Foreign Born | **3%** |
| Total Support (in dollars) | **$11,905** |

1,055 households are eligible for the Affordable Connectivity Program in Charlton, with approximately 400 households enrolled in ACP (Fig. 3, Benton Institute) [5]. The ACP provides a discount of up to $30 per month for internet service to eligible households and can also offer up to $100 discount on the purchase of a tablet, laptop, or desktop computer. To be eligible, a household's income must be no more than 200% of the Federal Poverty guidelines, or if a member of the household meets certain other criteria. This includes receiving a Pell Grant, receiving federal housing assistance, or being enrolled in Medicaid.

Charlton's community is currently exceeding ACP enrollment expectations, with enrollment 6% higher than predicted, based on research from the Benton Institute (Ibid) [6]. These predictions are based on several
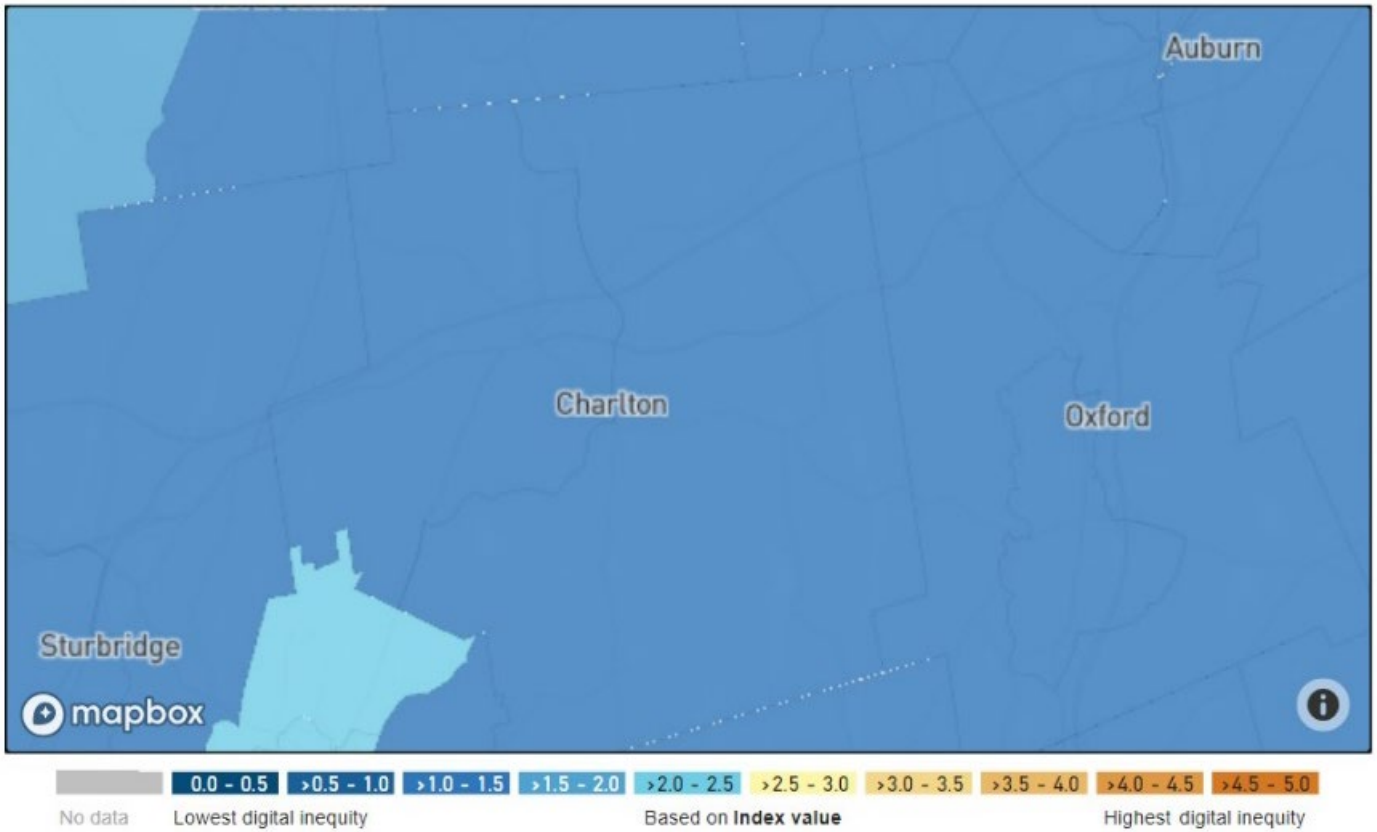
factors, including demographics, housing costs, and the presence of local institutions. Based on the program's guidelines, however, more than 650 households are still eligible for this program and would benefit from additional outreach or education. 83% of households in Charlton use Wireline Broadband. Wireline broadband is the typical method of internet connection delivery over physical cables, as opposed to wireless methods. This leaves a significant portion – 17% - using either wireless service or having no service at all. With assistance from ACP, additional households in Charlton may be able to afford home internet service and help bridge Charlton's digital divide. *Note: ACP enrollment figures reflect data collected in August 2023.*

| Figure 4: Town of Charlton Household Device Usage | | | |
|---|---|---|---|
| | **Total** | **Percent** | **Margin of Error** |
| Total households | 4,776 | (X) | (X) |
| **TYPES OF COMPUTER** | | | |
| Has one or more types of computing devices: | 4,601 | 96.3% | ±1.8 |
| Desktop or laptop | 4,230 | 88.6% | ±3.1 |
| Desktop or laptop with no other type of computing device | 190 | 4.0% | ±1.7 |
| Smartphone | 4,238 | 88.7% | ±3.8 |
| Smartphone with no other type of computing device | 210 | 4.4% | ±2.4 |
| Tablet or other portable wireless computer | 3,497 | 73.2% | ±5.1 |
| Tablet or other portable wireless computer with no other type of computing device | 15 | 0.3% | ±0.3 |
| Other computer | 74 | 1.5% | ±1.1 |
| Other computer with no other type of computing device | 0 | 0.0% | ±0.8 |
| No computer | 175 | 3.7% | ±1.8 |
| **TYPE OF INTERNET SUBSCRIPTIONS** | | | |
| With an Internet subscription: | 4,444 | 93.0% | ±2.6 |
| Dial-up with no other type of Internet subscription | 13 | 0.3% | ±0.4 |
| Broadband of any type | 4,431 | 92.8% | ±2.6 |
| Cellular data plan | 4,031 | 84.4% | ±3.6 |
| Cellular data plan with no other type of Internet subscription | 377 | 7.9% | ±3.1 |
| Broadband such as cable, fiber optic, or DSL | 3,979 | 83.3% | ±4.3 |
| Satellite Internet service | 180 | 3.8% | ±2.2 |
| Without an Internet subscription | 332 | 7.0% | ±2.6 |

Charlton has a little over 4,700 households, and 4,600 have one or more types of computing devices (Fig. 4, U.S Census Bureau, 2021) [7]. Desktops, laptops, phones, and tablets lead the way in terms of devices in Charlton households. 3.7% of households have no computer. Ninety-three percent of households do have an internet subscription, and 84% of households also use cellular data. This data shows Charlton to be well positioned in terms of broadband access and digital equity and puts the town into the 1.0 to 1.5 index in terms of digital inequity, discussed below in Figure 5.

**Figure 5: Digital Equity by Census Tract**



| No data | 0.0 - 0.5 | >0.5 - 1.0 | >1.0 - 1.5 | >1.5 - 2.0 | >2.0 - 2.5 | >2.5 - 3.0 | >3.0 - 3.5 | >3.5 - 4.0 | >4.0 - 4.5 | >4.5 - 5.0 |

Lowest digital inequity — Based on **Index value** — Highest digital inequity

Compared to surrounding towns and to Worcester County as a whole, Charlton fares well on the digital equity index, and the existing conditions show that the Town has a large majority of its residents connected and active on the internet. There is room for improvement, however, and attention should be paid to those demographic groups that fall in areas with lower rates of access and usage. With increased needs for broadband to access healthcare, education, and other essential services, it will be important for Charlton to support these residents in accessing and receiving internet service and education which allows them to fully engage in their lives in the future. This index uses data from several sources to look at factors that can impact inequity and creates a score that can be used to compare against other areas (Fig. 5, Microsoft Power BI, 2019) [8]. *Note: The digital equity index is supported by Microsoft Power BI. The tool is intended to allow policymakers to explore data that can help policymakers target funding, investments, and maximize resource attainment to vulnerable communities facing digital inequities.*

**Figure 6: Population Lacking Computer or Broadband**
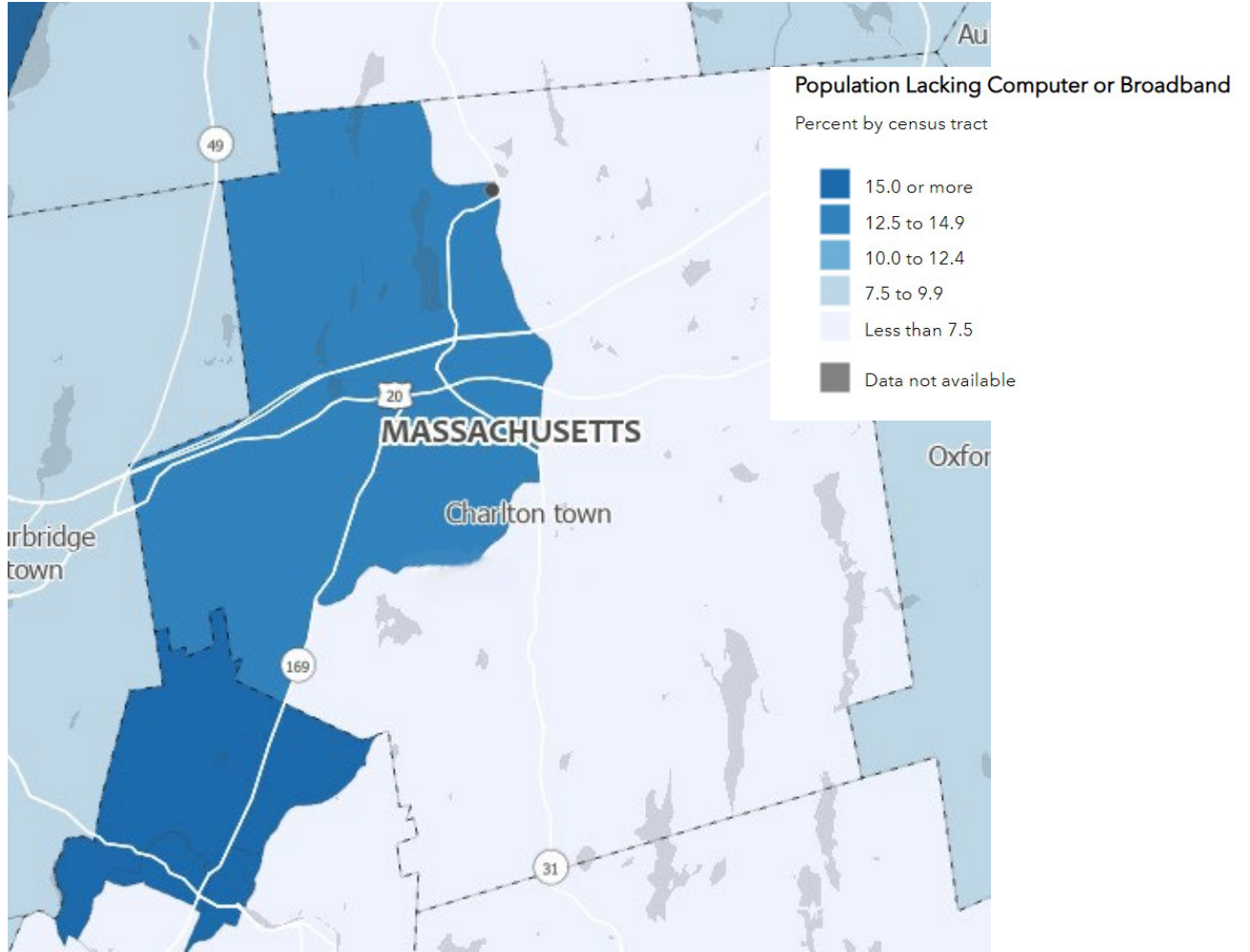


Charlton is at the lower end of the inequality index but in the Western area of Charlton nearly 15% of residents still lack a computer or broadband (Fig. 6, Digital Equity Population Viewer, 2015 - 2019) [9]. This Western region of Charlton is home to a higher percentage of residents aged 60 or over (27.6% vs.18.8%), those with a language barrier (18.2% vs. 15.8%), and those with disabilities (16.7% vs. 10.3%). It would be prudent for the Town to increase outreach and assistance to those populations in this area to reduce hardships and decrease inequities.

| Figure 7: Charlton Internet Service Providers | | |
|---|---|---|
| **Provider** | **Average Cost** | **Type of Service** |
| Charter Communications (Spectrum) | $50.00 - $90.00 | Cable |
| T-Mobile USA, Inc | $50.00 | Fixed Wireless |

Charlton is currently supporting two internet service providers, Spectrum and T-Mobile (Fig. 7). It is common in the Commonwealth for communities to have limited broadband provider options, and Charlton is no exception. As residents have few choices, affordability and infrastructure access become important factors in the equitable availability of digital services. (T-Mobile USA, Inc., 2023) [10]. (Charter Communications, 2023) [11].

# Community Findings & Needs Assessment

CMRPC staff used three sources of community engagement to guide the Recommendations and Actions for Charlton's future planning efforts in digital equity. The Blueberry Festival, the Digital Equity Survey, and the Connecting Charlton Charette.

## Blueberry Festival
Residents identified major takeaways while attending the festival, and CMRPC staff engaged with approximately 28 residents.
- Charlton residents are not satisfied with only having one internet provider available, having no competition or options is frustrating.
- Residents receive money-saving promotions from Spectrum. When these promotions conclude, their bills are too high. One resident explained that their internet cost $150 once promotions ended, making it very unaffordable.
- An open-access network is of interest to residents. A feasibility study could be conducted to determine its feasibility.
- Verizon is an expensive phone carrier, many switched to T-Mobile.
- Miscommunication with Spectrum happens often. "I drove to Worcester to go see a Spectrum representative. When I arrived, they told me I could have resolved the issue at home. That is not the advice I received when I initially called about the issue I was having."

## Survey Analysis
In conjunction with community engagement efforts, CMRPC staff use survey findings from the Mass Broadband Institutes Digital Equity Survey. A total of 38 survey Charlton residents engaged with the survey.

### How well does your internet service work?
- 18 respondents: Not good enough to meet my household's needs.
- 20 respondents: Good enough to meet my household's needs.

### How hard is it for you to pay your internet bill?
- 12 respondents: not at all hard
- 12 respondents: not too hard
- 11 respondents: somewhat hard
- 3 respondents: very hard

## What kind of digital skills support would you be most interested in?

- 17 respondents: a do-it-yourself training module
- 8 respondents: no responses
- 5 respondents: in-person support from a friend or instructor
- 4 respondents: in-person classes
- 4 respondents: online classes

## How concerned are you about internet safety?

- 18 respondents: very concerned
- 10 respondents: somewhat concerned.
- 4 respondents: not very concerned
- 1 respondent: Not at all concerned
- 5 respondents: no response

**Figure 8: "How much would you be able to pay for a laptop or desktop computer?"**
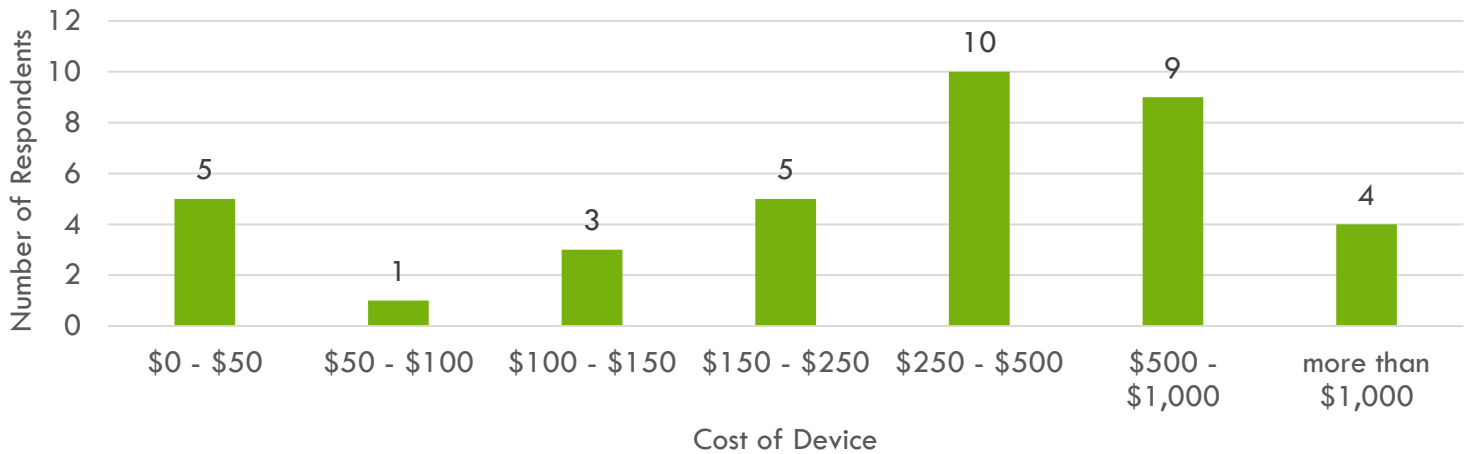


The cost of internet-accessible devices plays a role in digital equity. The ability to pay for a laptop or desktop computer may be influenced by household income and rent burden.

**Figure 9: Age Range of Survey Respondents**



- preferred not to answer 16%
- 75 or older 3%
- 60 - 74 26%
- 45 - 59 26%
- 35 - 44 29%
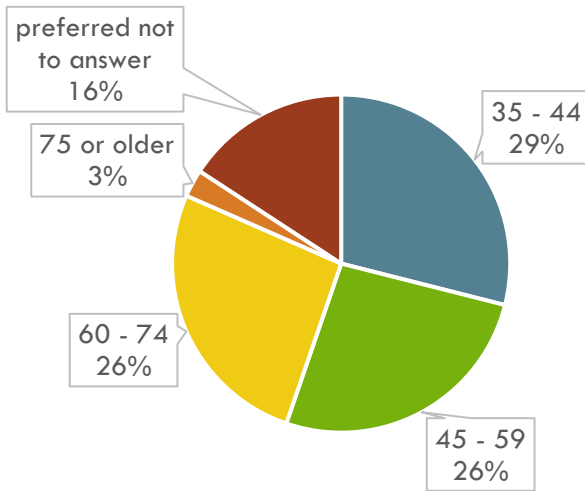
Internet affordability influences someone's ability to access adequate internet services. Highlighted in the Existing Conditions section in Figure 3, household eligibility for the ACP in Charlton is at 1,055. The actual enrollment is 401 households. A large group of residents do not take advantage of the ACP, and this could be due to a lack of awareness of the program. Alongside this data, fourteen survey respondents find it "somewhat hard, or very hard" to pay their internet bill. More residents should be able to pay for the internet. *Note: ACP enrollment figures reflect data collected in August 2023.*

More than half of the respondents have indicated an interest in developing their internet skills. Community Engagement in Connecting Charlton has highlighted the need for more education regarding digital literacy, and the current efforts that exist in Town. Not only is digital literacy important to Charlton's community, but it can help inform online safety for vulnerable populations that can be at risk, or targets for scams and spam. Building upon current resources and finding new ways to educate residents such as a do-it-yourself training module can make Charlton's community feel safer utilizing the internet.

Developing digital literacy skills is key to aiding the older population in feeling equipped to connect digitally. Twenty-six percent of respondents are 60-74 in age. Ages 65-84 are considered the most vulnerable population and are the fourth largest life cycle group in Charlton. A common theme through the Charette was the need to expand support for this population in digital equity programs.

## Connecting Charlton

CMRPC hosted charettes on August 16th and August 17th at the Charlton Public Library. CMRPC staff guided two attendees through the process while leading a conversation to gain more perspective on internet accessibility for Charlton residents.

### Key takeaways:

- The most vulnerable age group is 65 years and older.
- Digital safety is a concern among the aging population, as scams and spam target this group.
- Library staff have become a resource for help with device usage for older residents.
- Residents use the Charlton Public Library when they experience internet issues or lack access.
- The library has hotspots for people to use, and the library could be used more.
- The library plans to lend out Chromebooks, which would make the library a major asset for digital equity in town.
- Charlton lack's locations besides the library that provide free public internet access.
- Charlton residents are concerned about the lack of provider options besides Spectrum.
- Device usage could be boosted for residents with eyesight issues using digital assistant applications like Siri and Alexa.

- The Overlook Senior Center hosts regular talks about the dangers of Internet scams and spam.
- Spectrum can be a difficult provider to work with or troubleshoot issues with.
- The aging population is motivated by the limitations and has adopted new technology to overcome barriers.
- Perhaps utilizing a comment box in the Public Library or another key location can be a method to gain more insight into what residents are facing.
- Cellular coverage around schools in Charlton needs to be addressed as it is an issue for crisis management. Dead spots are considered a safety issue. "If something happens to the student, how can they reach their parents?" Fiber is needed around these areas.
- Digital Equity initiatives like the Affordable Connectivity Program need more exposure in town.

## Strengths, Weaknesses, and Vulnerabilities

Safety Vulnerabilities:
- Making sure people are not scammed on the internet.
- Residents lack basic training in device usage and digital literacy.

Safety Strengths:
- Employees help vulnerable residents with device training.

Connection Strengths:
- Municipal fiber, Charlton Public Library, and Hotspots provided by the Public Library.

Connection Vulnerabilities:
- Lack of options, basic digital literacy, and infrastructure limitations.

Device Strengths:
- Most residents have phones, and the Public Library has public computers.

Device Vulnerabilities:
- Lack of provider options.

# Limitations

Limitations in the process have been identified and are important to address potential weaknesses of the study. Connecting Charlton's charette featured two community members. One being Charlton's library director and the other being the Chief of Information and Security Officer of the Overlook. Although both attendees contributed to an insightful conversation, two attendees are not representative of Charlton's current population. This is important to note as it can contribute to a potential bias in the information and analysis gathered on community needs.

Challenges in securing broader engagement were present in the community engagement process. Although outreach was conducted, responses from stakeholders were limited and contributed to the lack of a representative working group. Securing community events to attend and discuss the initiative was limited as well. While engaging with community members during the Blueberry Festival, many residents expressed they did not find digital equity a topical discussion of interest.

# Strategic Recommendations and Action

**Vision:** Charlton residents should have equal and adequate access to high-speed broadband, opportunities to gain digital literacy skills, and access to devices to access the Internet. Charlton will continue to support institutions that help advance digital equity for all residents while targeting vulnerable populations for digital literacy and device training programming. Charlton will promote the Affordable Connectivity Program to expand enrollment for eligible residents. Charlton will help support digital literacy and device training programs for vulnerable populations, as well as address connectivity issues in unstable areas.

1. **Explore opportunities to expand providers in Charlton.**
   - Locate funding utilizing the Coronavirus State and Local Fiscal Recovery Funds (SLFRF) established by the American Rescue Plan (ARPA), for the town to complete a feasibility study and determine the cost of an open–access network.

2. **Ensure that Charlton addresses hazardous dead zones throughout the town.**
   - Locate funding through the Broadband Infrastructure Gap Networks Grant Program, or the E-Rate Program to address dead zones located in Charlton's Middle School area.

3. **Support institutions in Charlton that work towards achieving digital equity.**
   - Utilize the Digital Equity Partnership Program to aid in additional devices and portable hotspot lending through the Charlton Public Library.
   - Connect local non-profits with the Overlook Senior Center to provide training for the staff on digital safety, and digital devices to encourage digital literacy.
   - Establish ongoing digital literacy courses for seniors to participate in that meet 1-2 times a week.
   - Connect with the Council on Aging in Charlton to ensure eligible individuals are enrolled in the Affordable Connectivity Program.
   - Connect high school students with aging populations to focus on digital literacy learning.
   - Increase assistance in Charlton's Public Library for individuals seeking digital literacy aid.

4. **Find new modes of advertising the Affordable Connectivity Program to residents.**
   - Conduct outreach to local stakeholders, organizations, and community groups to share the Affordable Connectivity Program with networks.
   - Utilizing school networks to send quarterly newsletters to parents about the Affordable Connectivity Program.
   - Advertise the Affordable Connectivity Program at anchor institutions (schools, medical centers, local government entities) throughout town.
   - Extend the Affordable Connectivity Program to housing developments such as the Overlook Senior Center.

5. **Develop a transparent relationship with Spectrum representatives.**
   - Use contracts to hold Spectrum services accountable for communication, and transparency on the costs of service.

6. **Consider continuing outreach in Charlton to various age demographics.**
   - Engage with youth groups to understand broadband needs and expand the reach of Internet services in spaces they frequent.
   - Connect teens and youth in Charlton with the Commonwealth Corporation's YouthWorks Program, helping youth develop skills needed for employment opportunities, and create capacity in programs focused on digital equity.

7. **Connect Charlton's community to programs and partnerships dedicated to closing the digital divide and removing barriers to digital equity.**

- Support local public housing authorities and affordable housing initiatives through the MAPC Apartment Wifi Program to build networks for residents at no cost. MAPC's program supports funding, procurement support, and project management to deliver internet service.
- Connect institutions and stakeholders within Charlton with Lead For America to create a network of local leadership dedicated to advancing economic opportunities, with a focus on bridging the digital divide.
- Partner with the Vinfen/Human Services Alliance for Digital Equity to foster digital inclusion among residents who may be low-income, suffer from mental health issues, or have physical, intellectual, and developmental disabilities.

# Funding Opportunities and Resources

**Enhancing Digital Literacy for Older Adults Grant**
The Executive Office of Elder Affairs (EOEA) announced a $1.5 million grant program to aid Councils on Aging (COAs) to aid digital literacy for aging populations. Grants up to $100,000 per COA are available for the purchasing of devices, software, and broadband; and or provide training to the aging population to enhance digital literacy skills. Charlton is eligible, as rural communities are encouraged to apply, and supports a COA in town.

**Municipal Fiber Grant Program**
The Municipal Fiber Grant Program is a competitive grant that assists municipalities in the Commonwealth with the construction and completion of a municipal fiber network. This grant focuses on connecting municipality-owned facilities in achieving goals oriented with municipal fiber. This can assist in the centralized management of IT infrastructure, network monitoring, cyber security, records management as well as backup and recovery.

**Tech Goes Home**
Tech Goes Home is a nonprofit that supports a plethora of programs to support people of all ages by bringing devices, internet, and training to households and individuals throughout Massachusetts. Tech Goes Home has aided in education, jobs, managing finances, and connecting seniors to loved ones. The nonprofit seeks to expand its networks throughout Central Massachusetts as they have received a $4.5 million grant in 2023. The town of Charlton would benefit from initiating a partnership with the nonprofit to expand resources in digital equity for residents.

**Education Superhighway: Data Exchange**
The Massachusetts Department of Elementary and Secondary Education, in Partnership with the Education Superhighway, established the K-12 Bridge to Broadband. Teaming with internet service providers, Education Superhighway is helping to identify households with students lacking broadband access. Utilizing secure data exchange, the state and school districts can identify households that are unconnected and use data to procure internet services. Charlton's school district can use the data exchange to keep households connected as well as make households aware they may be eligible for federal grant programs, such as the Affordable Connectivity Program.

**National Digital Inclusion Alliance: Digital Navigators**
Digital Navigators are committed to addressing the digital inclusion process through connectivity, device access, and digital literacy skills with community members through ongoing programs. Navigators may be cross-trained staff, volunteers, or new hires who assist in digital equity guidance. Digital Navigators are trusted guides involved in community-based organizations to ensure familiarity with a community's resources. Charlton may seek to identify community organizations or members that are applicable to support its community as a Digital Navigator and maintain ongoing support in the digital arena.

# Conclusion

Connecting Charlton helped us learn what the state of internet access is in Charlton, and connecting to the internet is only one part of the challenge. Vulnerable populations can benefit from device training that improves device usage, and comfortability as well as learn about the risks of participating in digital spaces, which is crucial to safety and confidence. Safety coincides with infrastructure and mitigating hazards that can make it difficult for the community to stay connected. Present in the Existing Conditions, populations such as aging residents, rent-burdened and ACP-eligible households, and the most western parts of town (refer to Fig. 7), are still vulnerable to inequities. With the help of community stakeholders and community-based organizations, Charlton's community can further bridge the divide for equity.

_____

**Citations**

1. U.S. Census Bureau; 2021 American Community Survey 5-Year Estimates, Table B25070; generated using data.census.gov; https://data.census.gov/cedsci/ (November 2023)

2. U.S. Department of Housing and Urban Development; https://www.hud.gov/ (November 2023)

3. U.S. Census Bureau; 2021 American Community Survey 5-Year Estimates, Table S0101; generated using data.census.gov; https://data.census.gov/cedsci/ (October 2023)

4. Faverio, Michelle; 2022 Share of those 65 and older who are tech users has grown in the past decade. Pewresearch.org/ (November 2023)

5. Benton Institute for Broadband & Society; The Affordable Connectivity Program Enrollment Performance Tool. https://www.benton.org/acp_tool?zip=01507  (November 2023)

6. Benton Institute for Broadband & Society; The Affordable Connectivity Program Enrollment Performance Tool Method. https://www.benton.org/acp_tool?zip=01507 (November 2023)

7. U.S. Census Bureau; 2021 American Community Survey 5-Year Estimates, Table S2801; generated using data.census.gov; https://data.census.gov/cedsci/ (October 2023)

8. Microsoft Power BI; Digital Equity/Massachusetts; generated using data from 2019 American Community Survey, BroadbandNow, FCC, Broadband Usage Data Microsoft Corporation, https://app.powerbi.com/ (October 2023)

9. Digital Equity Act Population Viewer / Massachusetts; generated using data from 2015-2019 American Community Survey, https://mtgis-portal.geo.census.gov/arcgis/home/ (October 2023)

10. T-Mobile USA, Inc.; 2023; **https://www.t-mobile.com/home-internet** (November 2023)

11. Charter Communications; 2023; **https://www.spectrum.com/internet** (November 2023)