

Striving for Digital Equity

*A report on the challenges
and opportunities the
Digital Divide presents to
Essex County communities*



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THE CENTER FOR
STATE POLICY
ANALYSIS

Introduction

Across Essex County, **one out of every five households lacks a basic computer**. A similar number — 59,000 households, with around 160,000 people — live without fixed broadband.

With the right mix of interventions, **Essex County could level the playing field**, ensuring digital access for all residents. **Doing so would not only address the short-term needs of life under Covid-19 but would also brighten our collective future by building much-needed digital skills.**

Reliable access to digital resources helps children get the most out of remote learning, just as it helps seniors access telemedicine and improves the job prospects for lower-income residents.

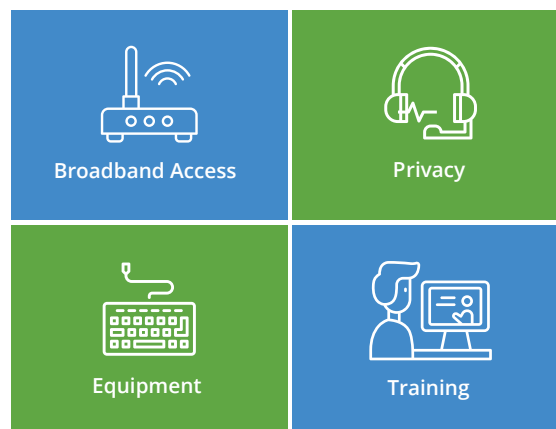
Cities, towns, nonprofits, businesses, school districts and others have already started mobilizing, working to distribute computers, subsidize broadband, and generally ensure that more residents can participate in digital life.

We at the Essex County Community Foundation have mapped the digital divide across our county as an essential step toward digital equity, a way to better understand where the true challenges and opportunities lie. With this information now in hand, **we are eager to work with community leaders on expanded initiatives and action plans.**

What follows is not a comprehensive picture of how to tackle the digital divide in Essex County. Instead, we present a series of cross-sections, showing how this issue affects people in different locales, and how it's shaped by existing racial and economic inequities.

Throughout, **we treat digital equity as a multidimensional issue**, with four core elements:

- **Access**, including secure, affordable broadband
- **Equipment**, chiefly a modern desktop or laptop with a camera for video
- **Privacy**, to ensure comfortable working and learning spaces for all
- **Training**, to build skills and comfort with computers



1 Essex County has its share of digital deserts

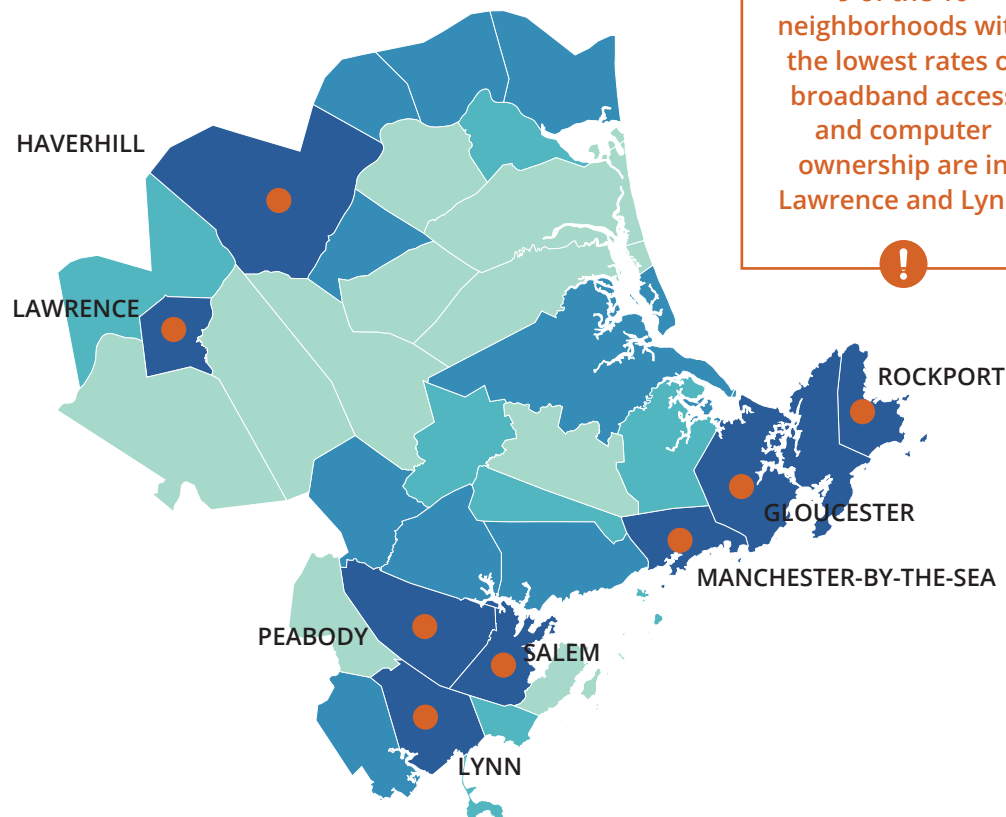
The cities that struggle most with digital access tend to be the most economically disadvantaged, including Lawrence, Lynn, and Peabody.

Jessica Andors, executive director of Lawrence Community Works, makes the connection plain: *"In all cases around the digital divide I think you're ultimately going back to these underlying causes of poverty, housing instability, and employment instability that are rooted in longstanding structural biases and inequities."*

Across Essex County, nearly 60,000 households lack secure broadband

Share of households with cable or fiber optic broadband

≥ 86% 83–86% 79–83% 62–79%



SOURCE: American Community Survey, 2014–2018

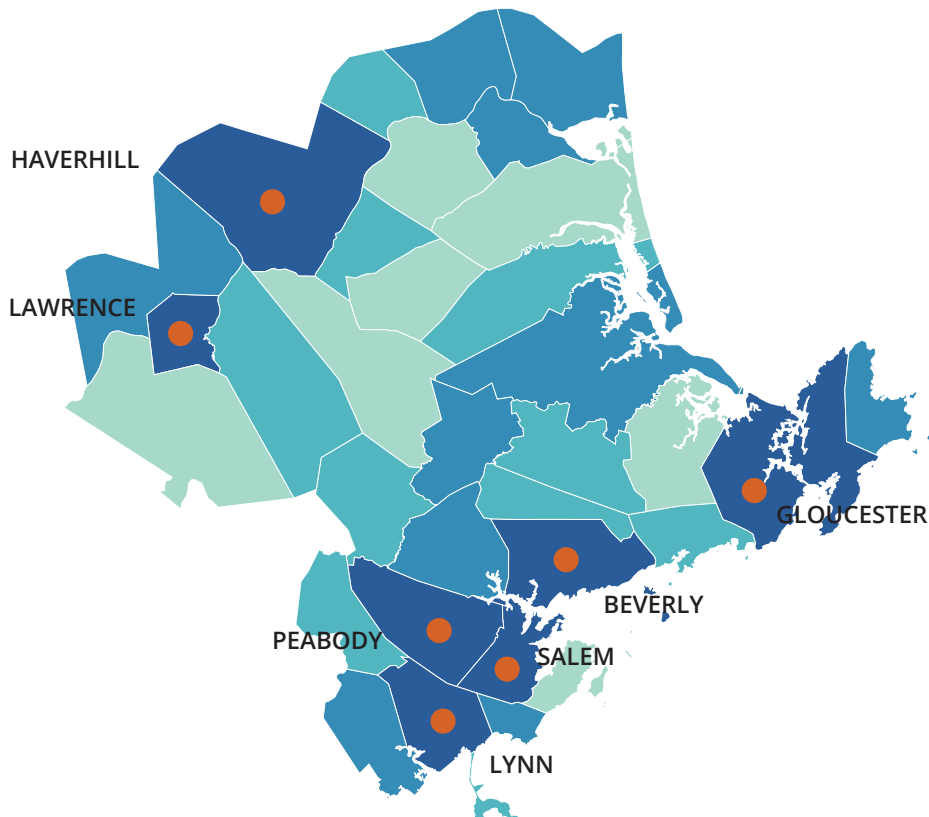
Even at a more granular level, the streets and neighborhoods where people seem most cut off from digital life lie in these same lower-income communities.

Addressing these localized challenges now can help stop them from spreading across generations. Helping parents build technical know-how opens new vistas for their children, making it easier for them to flourish in the digital world.

One of every five Essex County families lacks a basic computer

Share of households with a desktop or laptop

≥ 91% 88-91% 84-88% 61-84%



SOURCE: American Community Survey, 2014-2018

2 Every town has an opportunity to improve

While the most economically disadvantaged cities may fare worse overall, the digital divide cuts across every community in Essex County.

Groveland, for instance, is a relatively wealthy area, with a median household income well above the Essex County average. But it also has its share of low-income families earning less than \$35,000 per year—and only half of these lower-income families have reliable broadband access, one of the lowest levels in the entire county.

Dougan Sherwood, president of the Greater Haverhill Chamber, notes that Haverhill is also "a place with every layer of economic wealth—five country clubs and a large population of low-income families."

Bridging these economic worlds, he suggests, would help address this and many other challenges facing Haverhill residents.

"In Haverhill, a lot of people, particularly those who have been here for generations, have attained significant wealth. But it remains a disparate city where there isn't relationship-building across economic lines. I'm convinced we could address many of our problems if the city was better connected to itself."

Digital equity is a problem in affluent towns, too

Municipalities where families earning <\$35K have lowest rates of broadband access

Town	Broadband rate, overall	Broadband rate, families earning <\$35k
Merrimac	81%	44%
Lawrence	62%	45%
Groveland	82%	46%
Swampscott	83%	47%
Lynnfield	86%	49%
Manchester-by-the-Sea	79%	51%
Wenham	85%	51%

\$35k in household income is roughly 150% of the poverty line, a suitable cut-off for identifying lower-income families.

SOURCE: American Community Survey, 2014-2018. Adjusted to exclude cellular broadband.

3 Latino residents are disproportionately affected

Across Essex County, Latino residents are twice as likely to lack broadband access, compared to their white, non-Latino neighbors—a gap that shows how issues of racial inequality shape the digital divide.

In some cities and towns this gap is even larger. Latino residents in North Andover and Saugus have below-average rates of broadband access, despite living alongside non-Latino white families with high access rates.

But access isn't the only issue for Latino residents. Language barriers can complicate efforts to use digital resources. And Latino-run small businesses, which were hard hit by the Covid crisis, could benefit mightily from multilingual supports.

Entrepreneurship for All's Kevin Moforte notes that Latino businesses found it far more difficult to get emergency Paycheck Protection Program loans from the federal government: “All the webinars and tutorials were in English, at least at first. It took weeks to get Spanish instructions online. So that was a big hurdle.”

In some places, Latino families are much less likely to have secure broadband

Municipalities with the biggest gaps between Latino and white-non-latino broadband rates

Town	Broadband rate, white-non-latino	Broadband rate, Latino
North Andover	83%	69%
Haverhill	77%	64%
Saugus	81%	69%
Georgetown	84%	79%
Salem	80%	75%
Beverly	80%	76%

Only includes towns with at least 3% Latino population.

SOURCE: American Community Survey, 2014–2018. Adjusted to exclude cellular broadband.

4

Kids can flourish with additional support

Cities and towns have worked hard to ensure that all kids have the computers and broadband necessary for remote learning.

Salem Mayor Kim Driscoll thanked the "school folks who identified the hundreds of students that lacked internet access and worked with Comcast to get a starter program set up." State Representative Christina Minicucci said the Lawrence public schools *"...did the best they could with the resources they had to ensure each household received one device. Despite this proactive approach, there was, and still is, a great need and the digital divide is wide."*

In addressing these issues, however, other problems arose. Basic broadband sometimes faltered when everyone in the family needed to be online at the same time. And privacy proved challenging, too, as students with tighter living arrangements struggled to find comfortable spaces where they could focus and work.

Caleb Dolan, outgoing executive director of the KIPP Massachusetts charter school system, noted: "Privacy is a particular challenge for adolescents. Many kids feel anxious if they're on video because they want to control the image they present of their lives. And this anxiety can be magnified for kids whose housing conditions are particularly strained."

5

Seniors will benefit from online learning and telehealth

School-age children aren't the only ones who could benefit from better equipment and expanded digital support. Many older residents would, too.

Part of the issue is generational, as older residents didn't grow up in a world of personal computers. But there's also a stigma that can limit efforts to help seniors get online. According to Jennifer Raymond from Elder Services of the Merrimack Valley and North Shore: "There's a widespread bias that the older you get, the less able you are to understand technology. And so they get overlooked."

New efforts are underway. The Lawrence Senior Center is working on a plan to loan tablets and hotspots to older residents interested in online learning. And the Lynn Community Health Center is making telehealth easier to access and use, building on its experience that small interventions can make a big difference. "We know that whenever we sign up for a new electronic project, there are going to be technical issues," according to CEO Kiame Mahaniah. "Yet, for most people, once you've made the steps simpler and walk them through the process, they get it and use it!"

Peabody stands out as a city where people over 65 have especially-limited broadband access and where their internet usage is among the lowest in Essex County.

Telehealth could be one of the great benefits to expanded internet access among seniors. By making it easier to ask medical questions, check in with physicians, and get certain kinds of low-intensity medical care via video, telehealth can help alleviate the mobility challenges that come with visiting the doctor's office.

Internet use among seniors varies across Essex County

Share of 60+ population who report using the internet in the last month, a selection

Town	Recent internet use among 60+ (%)
Peabody	62%
Haverhill	63%
Methuen	63%
Groveland	75%
Rowley	75%
North Andover	78%

SOURCE: CDC, Behavioral Risk Factor Surveillance System

6 The digital divide poses some unique challenges

To enhance digital equity in Essex County, advocates and thought-leaders need to resolve some complex issues.

- **Catch-22s.** You can't run an online survey to see who's struggling with digital access—or use a mass email to inform constituents about opportunities and trainings. By its very nature, the digital divide resists certain kinds of familiar, digital-first approaches and solutions.

On this front, the telephone can be an important bridge, because it's comfortable for a much larger universe of folks, particularly among the aging population.

- **Genuine efficiencies can also produce heightened exclusion.** Online resources can be tremendous equalizers when it comes to helping people access health, work, school, and civic life. Families who never joined in-person school events might be able to participate in virtual platforms.

However, shifting to all-virtual would create a severe exclusion for those lacking stable broadband.

Mary Sarris of the North Shore Workforce Investment Board found a similar issue with government programs. “The unemployment insurance system in the state has grown more and more reliant on online access for the services they provide, reducing resources for in-person support.” This shift may have smoothed the process for many, but it places a special burden on workers with limited digital resources.

7 There are real opportunities for change

Given the urgency of remote learning and growing evidence for telehealth, now may be our best opportunity to redress the digital divide in Essex County.

What’s needed is the right mix of bold, long-term initiatives and sharp, near-term interventions—all working together to improve broadband access, distribute equipment, expand training, and open up safe spaces for virtual activities.

Broadband access

- **Municipal broadband.** There are various ways for cities and towns to provide universal broadband, everything from city-owned fiber-optic lines to regulated public-private partnerships. Already, cities including Haverhill, Salem, and Lawrence are testing the feasibility of these approaches.
- **Public WI-FI.** Even without running physical lines to every home, [it may be possible](#) to provide universal access via vastly expanded public WI-FI hotspots and mesh networks.
- **Subsidized accounts.** In areas where reliable broadband is relatively expensive, [subsidies could prove a major boon](#) to lower-income families. And with a clear target in mind—for example, providing access to 30,000 Essex County families—it should be possible to set a firm funding goal and negotiate clear terms with internet providers. Cable franchise agreements could provide additional leverage for negotiating with service providers.

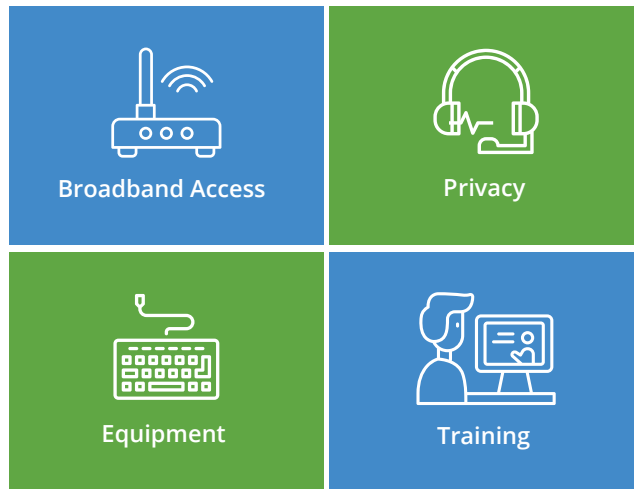
Equipment

- **A laptop/desktop for every family.** Giving families the hardware needed to access the internet may not be a cure-all, but it is an effective approach that can help many families.
- **Corporate partnerships.** Tech companies enjoying record growth may be eager to collaborate on high-profile equipment donations and other approaches that meet community needs while demonstrating corporate commitment to the social good.

- **Digital equity fund.** The city of Boston runs a digital equity fund, distributing grants that help young people, seniors, and immigrant communities gain access to digital resources. Essex County could do something similar, perhaps through a mix of public dollars and private philanthropy.

- **Non-digital alternatives.**

Knowing that some families will continue to struggle with digital access, it's vital to maintain alternatives, including telephone-based options and e-learning via public access television.



Privacy

- **Internet access centers.** Large community spaces may provide a comfortable environment for internet use. Gyms, parks, sports fields, community centers, and vacant storefronts could be turned into internet centers, where people would get a square of socially distanced space and free internet access.
- **Headphones and mics.** Headsets provide a sense of privacy, even in relatively crowded spaces. They are also relatively inexpensive, which makes this approach very cost-effective.
- **In-person meetings to determine at-home needs.** Even if schools aren't prepared for in-person learning, some kind of direct contact (in-person, via phone) with families at the beginning of the year could help districts better understand the full range of digital needs, including any privacy constraints. This would also afford an opportunity for educators to establish stronger partnerships with families and inquire about needs that people may not feel comfortable sharing online.

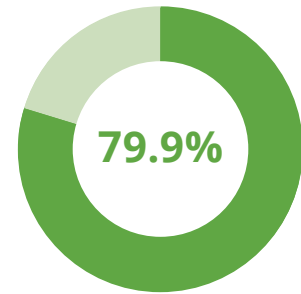
Training

- **Digital service corps.** Recruiting young, digitally savvy people to help provide digital training for seniors could prove a great opportunity for inter-generational connection.
- **Training for educators.** While districts are helping educators with the technical aspects of online and hybrid learning, there's room for additional training around effective approaches to remote teaching, including for a diverse student population with varying digital challenges.
- **Short-term interventions for long-term gains.** Covid may provide the immediate impulse, but better digital training would have substantial long-term benefits for individuals and businesses, including cost-savings from telehealth and more marketable skills for workers. Businesses that are increasingly reliant on remote workforces may be newly eager to contribute to digital training programs.

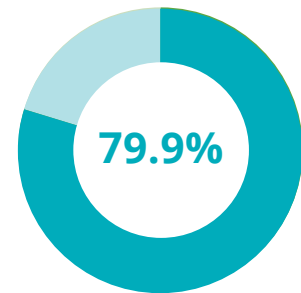
The Digital Divide, a Town-by-Town Analysis

This dashboard shows both wired broadband access and computer ownership for each municipality. It also highlights underperforming subgroups and neighborhoods by noting where low-income residents, Latino families, children, and seniors have below-average rates of wired broadband access (i.e. lower than the countywide average for that same group). Countywide broadband rates for these subgroups are: low-income 54.7%; Latino 70.2%; children 80.5%; seniors 65.5%. We focus on subgroups comprising at least 10% of the town population. Notes about Latino underperformance sometimes involve smaller populations, particularly in Gloucester, Rockport, and Rowley.

Essex County



Desktop-Laptop
Ownership
Countywide



Wired Broadband
(cable/fiber)
Countywide

County Population
790,638

County Median Household Income
\$75,878

Amesbury



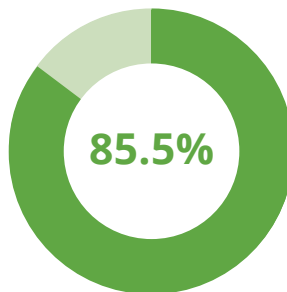
Broadband access is below county average among children (79.9%)

Population

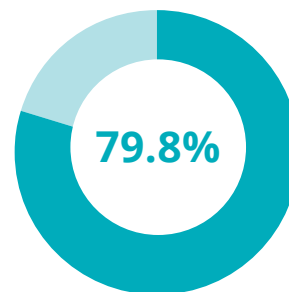
17,378

Median Household Income

\$80,721



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Andover



2 neighborhoods with below-average broadband penetration

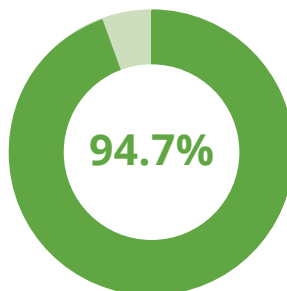
[View Neighborhood Map](#)

Population

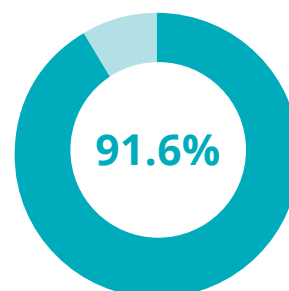
35,609

Median Household Income

\$148,125



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Beverly



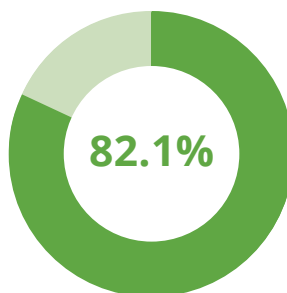
Broadband access is below county average among seniors (63.4%) and low-income (52.9%) residents

Population

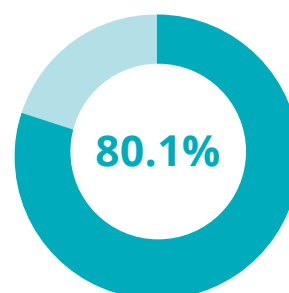
41,731

Median Household Income

\$79,483



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Boxford



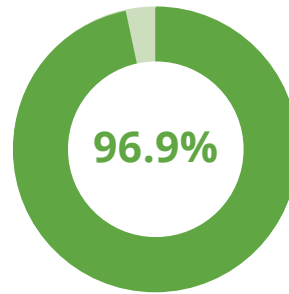
Boxford stands out as the one town performing above average across all measured subgroups and neighborhoods

Population

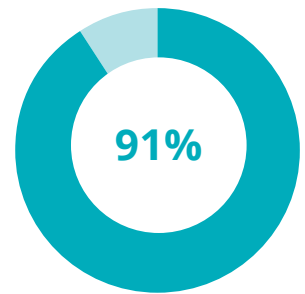
8,270

Median Household Income

\$174,340



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Danvers



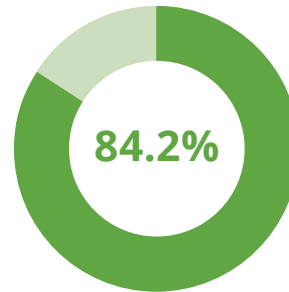
Broadband access is below county average among seniors (64.1%)

Population

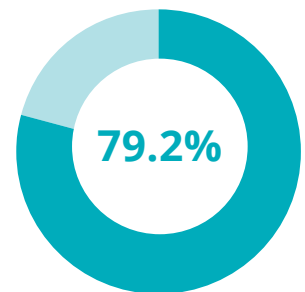
27,631

Median Household Income

\$84,842



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Essex



1 neighborhood with below-average broadband penetration

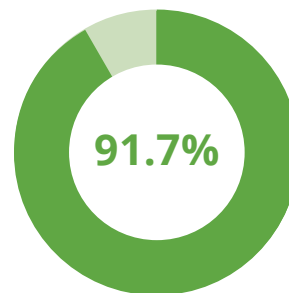
[View Neighborhood Map](#)

Population

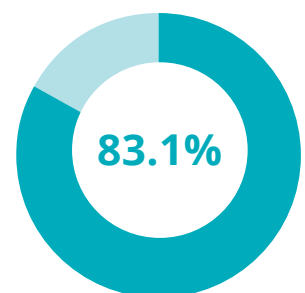
3,713

Median Household Income

\$113,469



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Georgetown



1 neighborhood with below-average broadband penetration

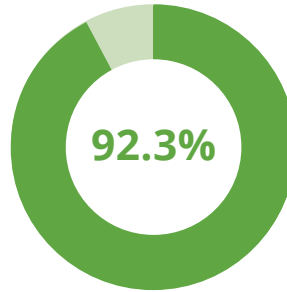
[View Neighborhood Map](#)

Population

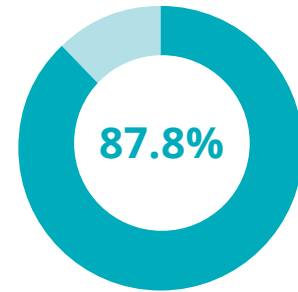
8,649

Median Household Income

\$128,885



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Gloucester



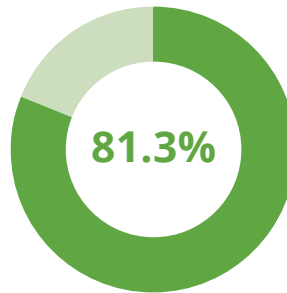
Broadband access is below county average among Latino (51.4%) and low-income (54.2%) residents

Population

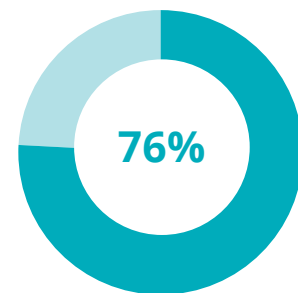
30,049

Median Household Income

\$65,377



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Groveland



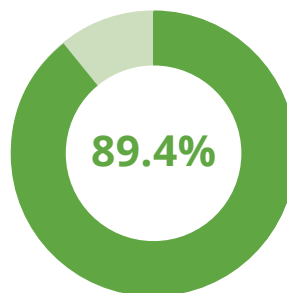
Broadband access is below county average among low-income (46.2%) residents

Population

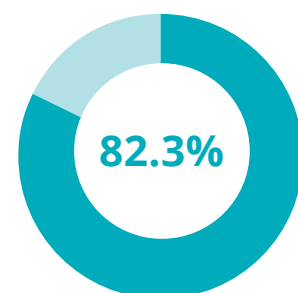
6,749

Median Household Income

\$97,109



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Hamilton



3 neighborhoods with below-average broadband penetration

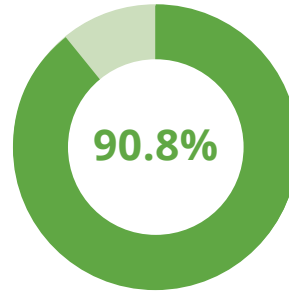
[View Neighborhood Map](#)

Population

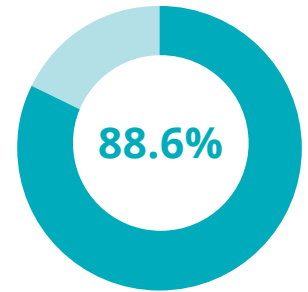
8,020

Median Household Income

\$133,333



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Haverhill



Broadband access is below county average among

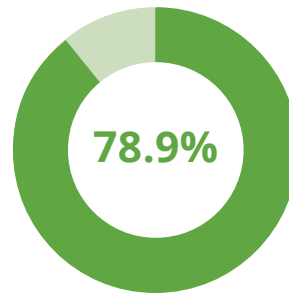
- low-income residents (54.1%)
- Latino residents (64.5%)
- children (74.2%)
- seniors (61.4%)

Population

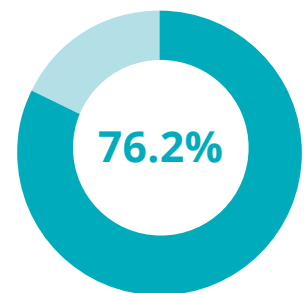
63,280

Median Household Income

\$67,579



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Ipswich



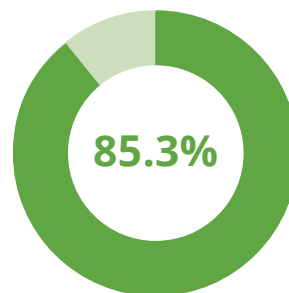
Broadband access is below county average among seniors (65.3%) and low-income (51.1%) residents

Population

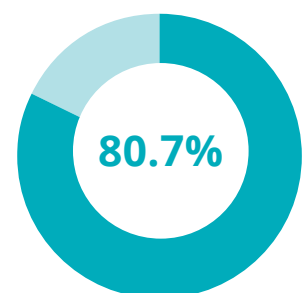
13,901

Median Household Income

\$90,557



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Lawrence

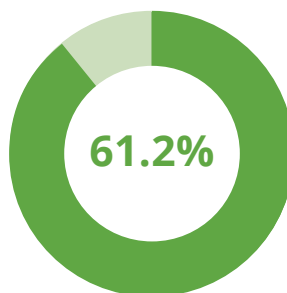


Broadband access is below county average among

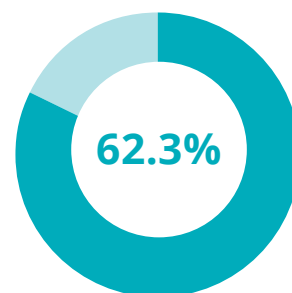
- low-income residents (45.0%)
- Latino residents (64.9%)
- children (68.8%)
- seniors (50.9%)

Population
79,841

Median Household Income
\$41,583



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Lynn



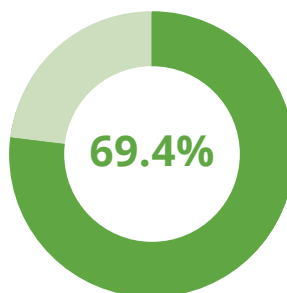
Broadband access is below county average among children (76.1%) and seniors (56.6%)



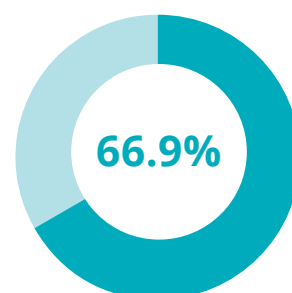
Above-average broadband rates for low-income, Latino residents

Population
93,617

Median Household Income
\$54,598



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

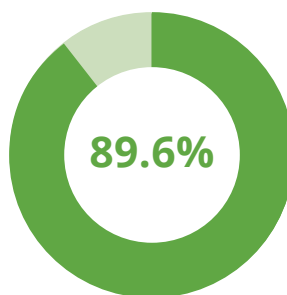
Lynnfield



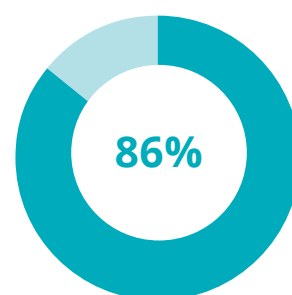
Broadband access is below county average among low-income (48.7%) residents

Population
12,847

Median Household Income
\$132,632



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Manchester-by-the-Sea

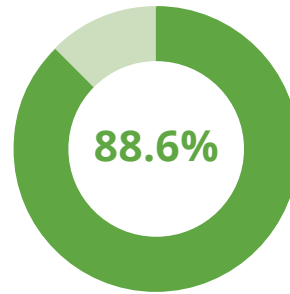
! Broadband access is below county average among low-income (50.6%) residents

Population

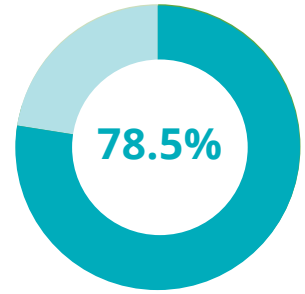
5,370

Median Household Income

\$124,025



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Marblehead

! 2 neighborhoods with below-average broadband penetration

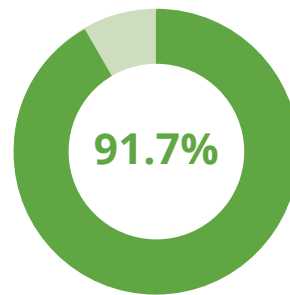
[View Neighborhood Map](#)

Population

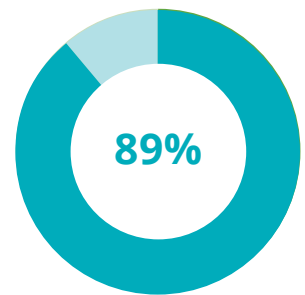
20,488

Median Household Income

\$115,511



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Merrimac

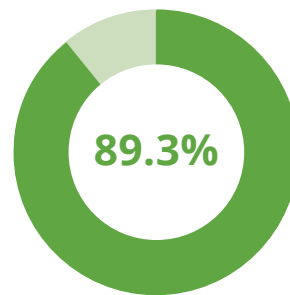
! Broadband access is below county average among children (72.9%) and low-income (44.1%) residents

Population

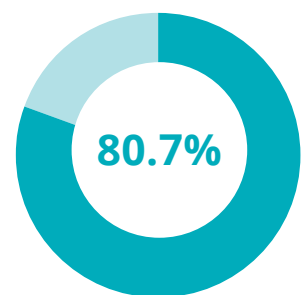
6,839

Median Household Income

\$83,508



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

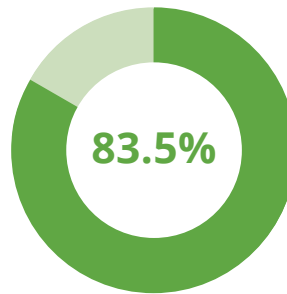
Methuen

! Several neighborhoods are far below-average on broadband penetration and computer ownership

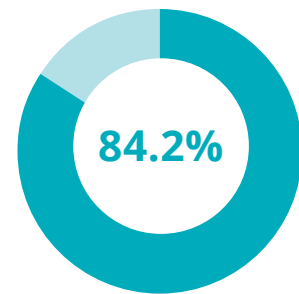
[View Neighborhood Map](#)

Population
50,019

Median Household Income
\$74,912



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

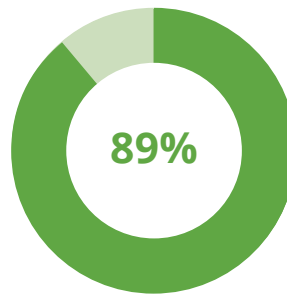
Middleton

! 1 neighborhood with below-average broadband penetration

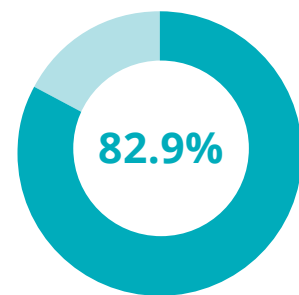
[View Neighborhood Map](#)

Population
9,779

Median Household Income
\$102,604



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

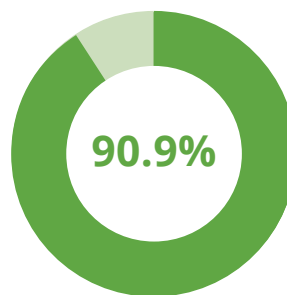
Nahant

! 1 neighborhood with below-average broadband penetration

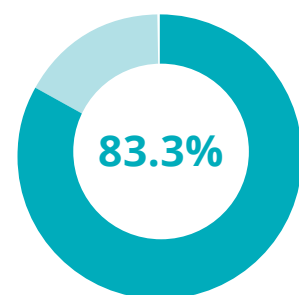
[View Neighborhood Map](#)

Population
3,495

Median Household Income
\$90,741



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Newbury

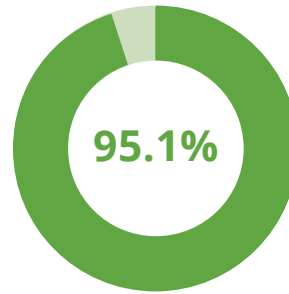


1 neighborhood with below-average broadband penetration

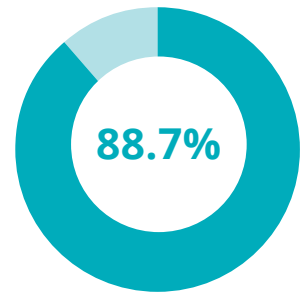
[View Neighborhood Map](#)

Population
7,031

Median Household Income
\$93,000



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

Newburyport

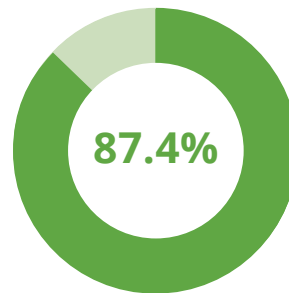


Several neighborhoods are far below-average on broadband penetration and computer ownership

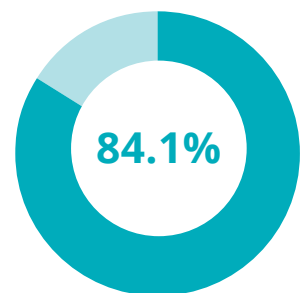
[View Neighborhood Map](#)

Population
17,990

Median Household Income
\$103,220



Desktop-Laptop
Ownership



Wired Broadband
(cable/fiber)

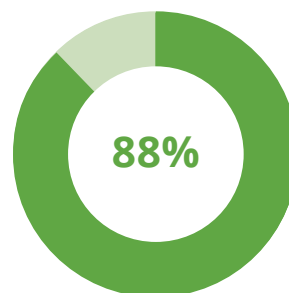
North Andover



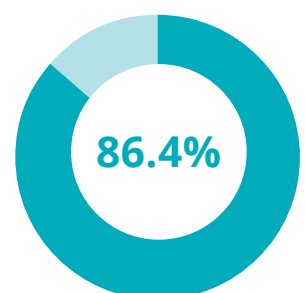
Broadband access is below county average among Latino residents (69.0%)

Population
30,589

Median Household Income
\$109,371



Desktop-Laptop
Ownership

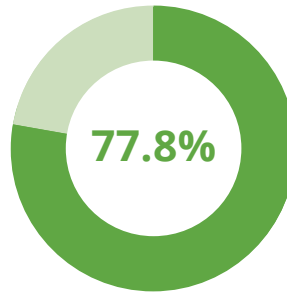


Wired Broadband
(cable/fiber)

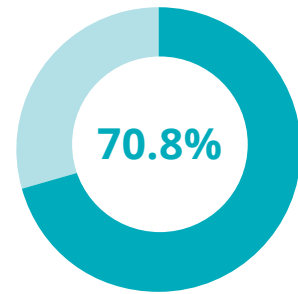
Peabody

! Broadband access is below county average among seniors (58.2%) and low-income (50.9%) residents

Population
52,865
Median Household Income
\$68,387



Desktop-Laptop Ownership

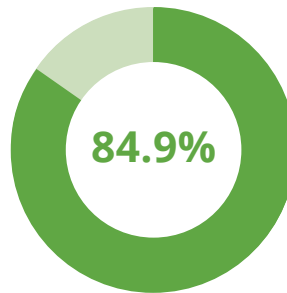


Wired Broadband (cable/fiber)

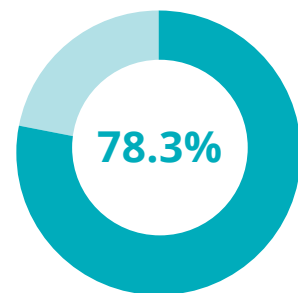
Rockport

! Broadband access is below county average among Latino (38.2%) and low-income (51.7%) residents

Population
7,212
Median Household Income
\$81,681



Desktop-Laptop Ownership

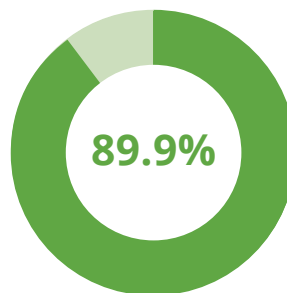


Wired Broadband (cable/fiber)

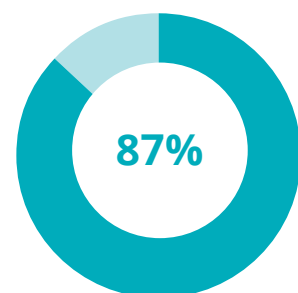
Rowley

! Broadband access is below county average among Latino residents (58.2%)

Population
6,298
Median Household Income
\$114,063




Desktop-Laptop Ownership

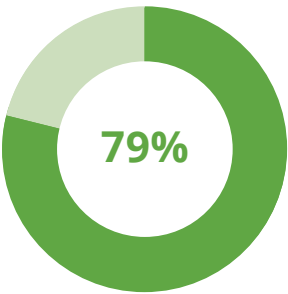


Wired Broadband (cable/fiber)

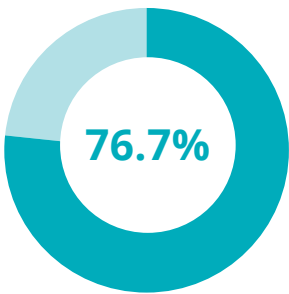
Salem

 Broadband access is below county average among children (80.2%) and seniors (65.0%)

Population
43,302
Median Household Income
\$65,565



Desktop-Laptop Ownership



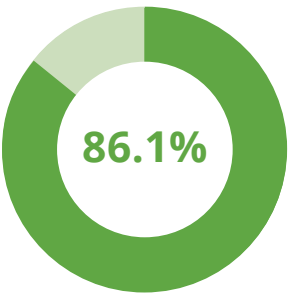
Wired Broadband (cable/fiber)

Salisbury

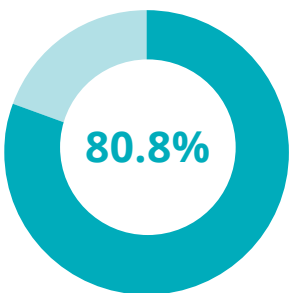
 2 neighborhoods with below-average broadband penetration

[View Neighborhood Map](#)

Population
9,209
Median Household Income
\$78,112



Desktop-Laptop Ownership

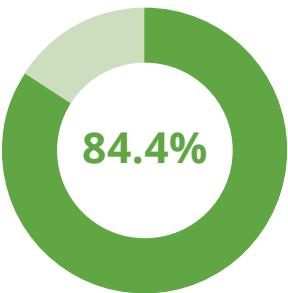


Wired Broadband (cable/fiber)

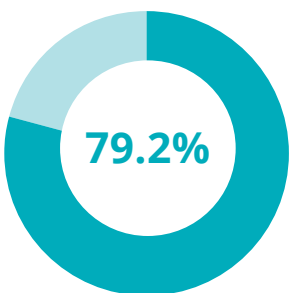
Saugus

 Broadband access is below county average among Latino residents (69.2%)

Population
28,158
Median Household Income
\$80,341



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Swampscott

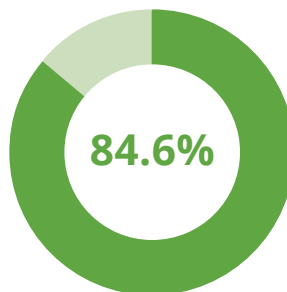
! Broadband access is below county average among seniors (62.6%) and low-income (46.8%) residents

Population

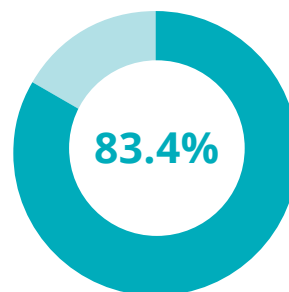
14,755

Median Household Income

\$113,442



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Topsfield

! 1 neighborhood with below-average broadband penetration

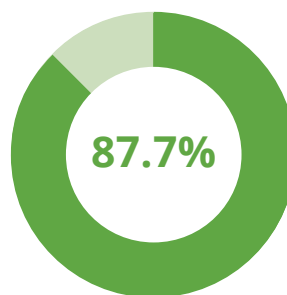
[View Neighborhood Map](#)

Population

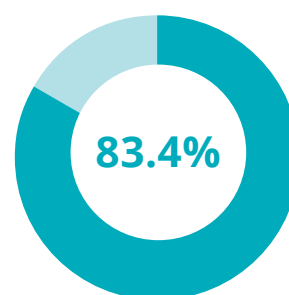
6,551

Median Household Income

\$136,812



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

Wenham

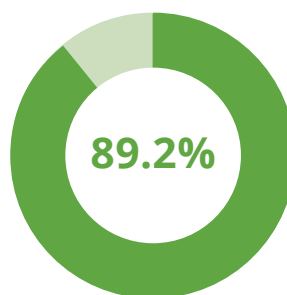
! Broadband access is below county average among seniors (59.8%) and low-income (50.6%) residents

Population

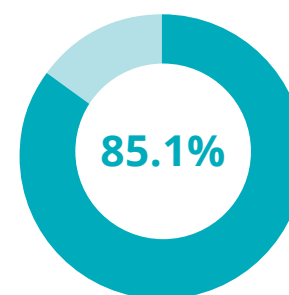
5,208

Median Household Income

\$109,712



Desktop-Laptop Ownership



Wired Broadband (cable/fiber)

West Newbury



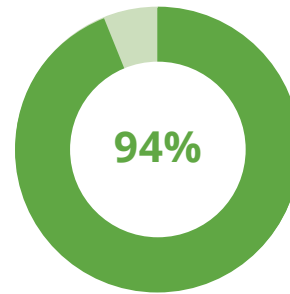
While West Newbury performs well on most measures, low-income residents have broadband access that is barely average.

Population

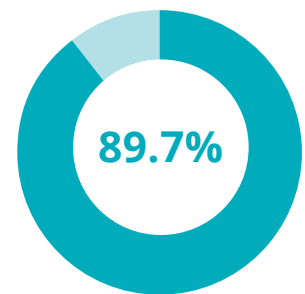
4,581

Median Household Income

\$138,403



**Desktop-Laptop
Ownership**



**Wired Broadband
(cable/fiber)**

NOTE ON DATA Data for this analysis comes from the Census Bureau's American Community Survey, using 5-year estimates covering 2014–2018. Broadband access numbers for low-income families, children, seniors, and Latino residents are adjusted to exclude cell-phone data plans.



Essex County Community Foundation
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