



**Five-Year Action Plan
Broadband Equity, Access, and Deployment
(BEAD) Program**

**Delaware Broadband Office
Department of Technology and Information
State of Delaware**

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1 Executive summary

The Delaware Broadband Office of Delaware’s Department of Technology and Information (DTI), the Eligible Entity for the State of Delaware, is pleased to present this Broadband Equity, Access, and Deployment (BEAD) Program Five-Year Action Plan, which comprises a comprehensive needs assessment (including the needs of covered populations and underrepresented communities) and establishes Delaware’s goal of ensuring universal broadband service availability and increased adoption among the residents, businesses, and institutions of Delaware.

1.1 Vision

Delaware’s goal for broadband deployment is to be the first state to deliver universal broadband—that is, to ensure a reliable, affordable high-speed internet connection to all homes and businesses in the State.¹ Delaware is already well on its way toward achieving universal service through the collaborative work and investments of State agencies and local communities. BEAD funding will be critical to help close that gap, so the State’s vision of universal service becomes reality—and within the five-year timeframe that the program envisions.

Delaware recognized early how the digital divide leaves some residents, businesses, and even entire communities behind—creating significant negative impacts on the State as a whole. The need to ensure that everyone has a reliable and affordable broadband connection (as well as the ability to adopt the technology) is paramount to achieving other shared priorities such as a strong education system, an effective healthcare network, economic development, and the provisioning of senior and youth services.

Delaware did not sit back and wait. The State has made important progress toward its goal of universal broadband service through a series of investments and partnerships over the past years. Early on, a pioneering collaboration that began in 1997 between DTI, the Delaware Department of Transportation (DelDOT), and the Delaware Department of Education (DDOE) set the groundwork for a well-connected State. Through this interagency collaboration, an extensive public fiber-optic network was constructed to serve transportation purposes. Agencies learned the skills and knowledge to support subsequent broadband deployments. Today, the State’s fiber backbone extends approximately 700 miles, running the length and width of the State.¹

Later, the State invested in fixed wireless solutions to provide a path forward for rural households and businesses that did not have access to high-speed wired broadband connections. Through the Rural Broadband Pilot Program, in 2017 the State awarded two fixed wireless pilot projects.

¹ “Delaware Broadband Initiative,” Delaware Department of Technology and Information, <https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>.

Delaware also invested approximately \$20 million of the federal Coronavirus Aid, Relief, and Economic Security Act (CARES Act) funding toward broadband. This included expanding the availability of devices and services for families facing financial challenges.² CARES also funded the development of Delaware’s Broadband Strategic Plan.

More recently, the State allocated \$33 million in American Rescue Plan Act (ARPA) funds to broadband initiatives in 2021. Through the Delaware Broadband Infrastructure Grant Program, these funds were awarded to three internet service providers (ISP) that will extend their existing coverage areas to serve more than 6,000 unserved Delaware homes and businesses by the end of 2024.

Because of Delaware’s pioneering effort to deploy broadband, robust communications capacity has been available to key community anchor institutions in Delaware ahead of those in many other states. BEAD funding will complement prior and ongoing efforts to help Delaware be the first state to achieve universal high-speed broadband service.

1.2 Current state of broadband and digital inclusion

Delaware has been a pioneer in broadband deployment for decades. The State of Delaware’s innovative efforts have positioned Delaware as one of the most connected states in the country and provide valuable best practices to be leveraged in efforts to close the remaining gaps.

Impactful interagency collaboration among DTI, the Delaware Department of Transportation (DelDOT), and the Delaware Department of Education (DOE) has led to an extensive statewide infrastructure network and meaningful partnerships to serve residents.

The State has made significant inroads in addressing the challenges of unserved and underserved residents—in part through previous well-designed grant programs that awarded funds to internet service providers that committed to serving more than 6,000 unserved locations by 2025.

During the preparation of this Plan, the State initially identified about 4,800 remaining unserved homes, businesses, and community anchor institutions; details on these locations are publicly available on DTI’s GIS Broadband Hub.³

Analysis of the FCC Broadband Data Collection system’s May 10, 2023, data release indicated a total of 3,455 unserved and 20,200 underserved locations.⁴ After accounting for areas already

² “Delaware targets underserved families with \$20 million broadband investment,” State Scoop, August 24, 2020, <https://statescoop.com/delaware-targets-underserved-families-20-million-broadband-investment/>.

³ Delaware Department of Technology and Information, “GIS Broadband Hub,” <https://gis.broadband.delaware.gov/>.

⁴ Broadband Data Collection system, National Broadband Map, FCC, <https://broadbandmap.fcc.gov/data-download/nationwide-data?version=jun2022>.

grant-funded for broadband deployment, 2,052 unserved and 12,904 underserved locations remain.

Through a comprehensive external engagement process conducted in preparation for this Plan (see Section 5.1), the State has identified the current state of digital equity—while also identifying potential partners, assets, and existing programs that will play a key role in enabling the successful implementation of this Plan. The needs assessment and gap analysis related to digital equity includes broadband adoption and affordability, as well as other digital equity issues such as device ownership and digital skills (see Section 3).

As the summary of the current state of broadband and digital inclusion in Figure 1, Figure 2, Figure 3, and Figure 4 shows, Delaware performs well relative to national averages in availability and broadband adoption.

Figure 1: Summary of findings on broadband availability

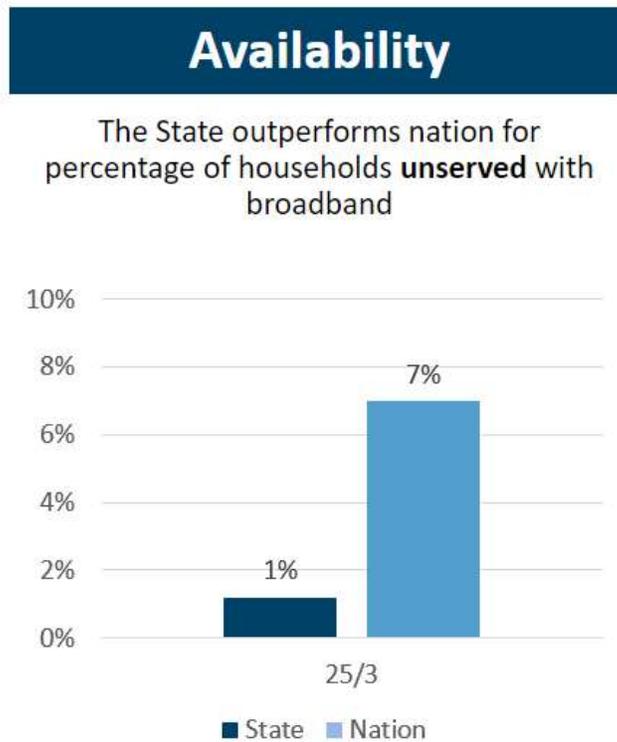


Figure 2: Summary of findings on federal subsidy use

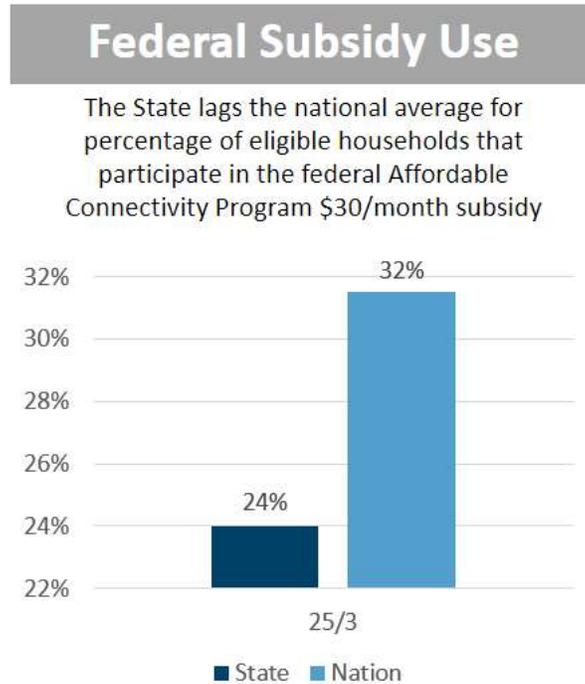


Figure 3: Summary of findings on broadband adoption

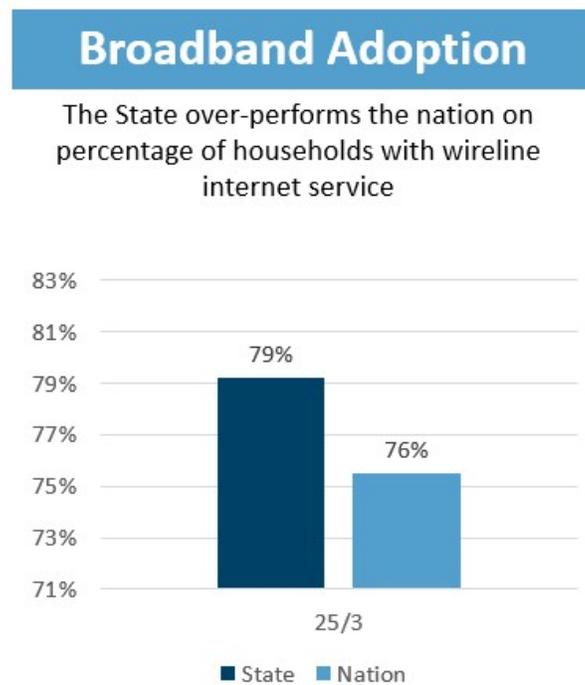
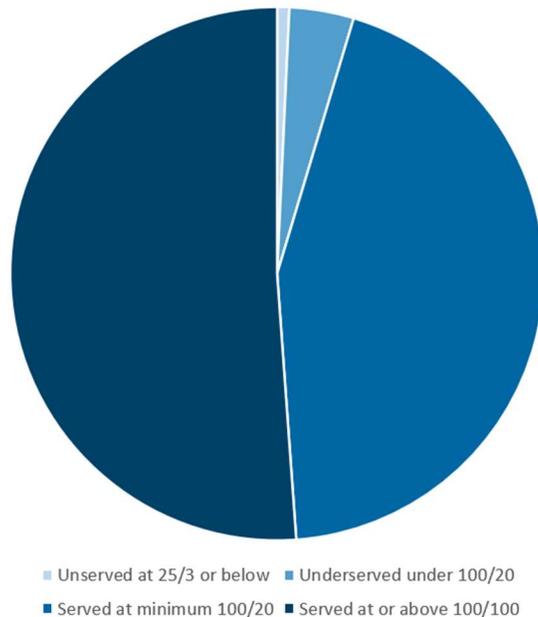


Figure 4: Delaware addresses by served status



1.3 Obstacles or barriers

DTI has identified a range of potential obstacles or barriers that it will seek to mitigate. As discussed in Section 4, these include:

- **How to deal with “newly discovered” Broadband Serviceable Locations during deployment.** During implementation of another deployment program, funded by the American Rescue Plan Act, it was routine for the ISPs to find homes and businesses that lacked qualifying broadband access, but were not on existing address lists or the FCC Broadband Map. BEAD lacks the flexibility to allow us to efficiently add these “newly discovered” homes to our deployment list of addresses, and as a result we anticipate very upset constituents who see their neighbors getting subsidized broadband access but will not be receiving it themselves. We will be seeking a waiver to be able to deploy to these BSLs as they are found.
- **How to resolve conflict between the FCC’s Broadband Map and Delaware’s map** – both in terms of availability and fabric, the State seeks guidance on which data sources the NTIA will accept.
- **How to effectively run the State Challenge Process** – related to the discrepancies between the FCC’s broadband map and the State’s location and service data, the State will need to develop guidelines for an effective challenge process.

- **How to define Extremely High-Cost locations** – for example, can Delaware include very long driveways (over 1,000 feet) or use satellite or fixed wireless to serve those locations? Can the State identify those long driveways before its subgrantee is on site?
- **How to identify Community Anchor Institutions that lack 1 Gbps service** – identifying all qualifying anchor institutions likely will require more extensive research than can be completed prior to the State’s submittal of this Plan.
- **How to address potential noncompliance with the enforceable buildout commitments of Rural Digital Opportunity Fund (RDOF) awards** – the BEAD rules prohibit the State from allocating funds to areas that will be served by RDOF-funded projects. Delaware’s 2021 Broadband Strategic Plan questioned whether an awardee in the State—Talkie—would deliver on its obligations.

1.4 Implementation plan

This Plan presents the State’s estimated costs, timeline, and strategies for achieving universal service—and to be the first state in the nation to do so—along with strategies related to remedying inequities in digital inclusion (see Section 5).

1.4.1 Priorities

The State’s primary objectives for broadband deployment are aligned with the principal focus of the BEAD Program:⁵

1. Serving 100 percent of unserved locations (i.e., below 25/3 Mbps) within five years
2. Serving 100 percent of underserved locations (i.e., between 25/3 and 100/20) within five years
3. Delivering gigabit connections to certain community anchor institutions that do not have that level of service within five years

Should BEAD funds remain after the first three objectives are fulfilled, the State will then focus on the next set of priorities:

4. Constructing line extensions to unserved and underserved residences that are determined to be extremely high-cost locations (i.e., replacing fixed wireless or satellite connections to those locations)

⁵ “NOFO: BEAD Program,” NTIA, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>, at p. 7.

5. Upgrading internal wiring in multiple-dwelling-unit buildings to ensure the availability of reliable broadband access in low-income and affordable housing

Other digital equity initiatives, developed through ongoing community engagement and development of the Digital Equity Act Plan. These initiatives may be prioritized above items 4 and 5 above as needs as assessed and refined, and may include—by way of example and not limitation:

- Providing free or low-cost internet service to low-income residents, including those living in affordable housing (e.g., through a monthly subsidy)
- Expanding training and development of the State’s broadband workforce, including for cybersecurity jobs
- Supporting digital navigator programs in public libraries
- Purchasing additional devices to enable broadband adoption by covered populations and low-income residents
- Delivering training to support the use of telehealth services

1.4.2 Estimated timeline and cost for universal service

The State estimates that universal service can be achieved by deploying fiber over an estimated 18 to 30 months upon selecting subgrant recipients (based on previous experience with State-grant-funded buildouts completed by ISPs). The model excludes areas funded by other federal broadband grants and awards.

A preliminary analysis of the FCC data (May 10, 2023) indicates that the total capital cost for extending high-speed, end-to-end fiber broadband to both unserved and underserved locations is approximately \$239.5 million. The State recognizes that cost is dependent on a variety of factors and conditions, including but not limited to materials and labor costs, take-rates by participating ISPs, and built in assumptions such as Internal Rates of Returns for providers. Specific buildout scenarios and options will be developed in the forthcoming Initial Proposal.

These unserved and underserved addresses represent the last, hardest-to-build locations. These locations also represent a lower population density with longer distances between locations and current providers, which increases the costs to extend high-speed, end-to-end fiber. In addition, this estimate accounts for all of the funding that the State may need to incentivize providers to build fiber to those location. Other factors such as defining extremely high-cost locations will also impact the actual amount of BEAD funding (and match) that will be required to deliver universal service.

Delaware will adjust the proposed technology mix underpinning its cost modeling estimates as development of the Initial Proposal continues and in accordance with the BEAD allocation of \$107,748,384.66 announced by NTIA on June 26, 2023.⁶

1.5 Confirmation that this BEAD Five-Year Action Plan meets minimum requirements

This Five-Year Action Plan meets minimum requirements as outlined in the NOFO and summarized in Section 7.1 of the NTIA’s “Five-Year Action Plan: Guidance” document:

| Requirement | Section in this Plan |
|---|---|
| 1. Details of existing broadband program of office within the Eligible Entity | Section 3 |
| 2. Funding the Eligible Entity has available | Section 3 |
| 3. Existing efforts funded by the federal government | Section 3 |
| 4. Employees and contract support | Section 3 |
| 5. Obstacles or barriers | Section 4 |
| 6. Asset inventories | Section 3 Appendices |
| 7. Description of external engagement process | Section 3 Section 5.1 Appendices |
| 8. Broadband availability and adoption data | Section 3 Section 5 |
| 9. Broadband service needs and gaps | Section 3 Section 5 Appendices |
| 10. Comprehensive, high-level plan, including timeline and cost for universal service | Section 5 |
| 11. Digital equity and inclusion needs, goals, and implementation strategies | Section 2 Section 3 Section 5 Appendices |
| 12. Alignment of the Plan with other State efforts and priorities | Section 5 |
| 13. Technical assistance and capacity needed for successful implementation | Section 5 |

⁶ “Biden-Harris Administration Announces State Allocations for \$42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda,” Internet for All, News Release, June 26, 2023, <https://internetforall.gov/news-media/biden-harris-administration-announces-state-allocations-4245-billion-high-speed-internet>.

2 Overview of the Five-Year Action Plan

2.1 Vision

This Five-Year Action Plan establishes Delaware’s broadband goals and priorities—and presents a comprehensive needs assessment that will inform the State’s Initial Proposal.

2.1.1 Broadband deployment vision

In recent decades, access to the internet has played a critical and growing role in the ways in which Americans work, learn, receive health care, and participate in democracy. Communities without access to reliable, high-speed broadband will fall further behind others, impacting the State as a whole.

The State’s broadband deployment vision is to ensure that every Delawarean has access to a reliable, affordable, high-speed internet connection

Recognizing the fundamental role of high-speed Internet in today’s economy and society, the Delaware Broadband Initiative will work to **ensure that every Delawarean has access to a reliable, affordable, high-speed internet connection and the tools and understanding to use the internet safely and responsibly**. Full participation in our 21st century economy requires no less, and we aim to be the first state in the nation to achieve universal service.

Delaware Governor John Carney has said, “A stable, high-speed internet connection is important for all Delaware families, students, and businesses. Now, with the availability of federal funds, we are on our way to giving Delawareans across the State access to connect to school, work, health care, and more. Thank you to the Department of Technology and Information working toward our goal of being the first state to connect every residence and business to broadband internet.”

Chief Information Officer of the Delaware Department of Technology and Information Jason Clarke has added, “Expanding access to reliable broadband service has long been a priority for Delaware. Thanks to our ability to leverage funding made available from Congress and the President and with the support of Governor Carney, we are excited to execute on the strategy of our stakeholders and our well-positioned vendor community to close the digital divide in Delaware.”

2.1.2 Digital equity vision

Digital equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services. Yet affordable, reliable, high-speed internet access has remained elusive to many for too long, because they live in a location where no service is available, the speed or quality of the service available is unreliable, or the offering available is unaffordable. Internet connectivity itself is a necessary, but not sufficient, condition for eradicating the digital divide.

Many on the wrong side of that divide require equipment, digital skills, financial resources, and more to realize the internet’s full potential. Those who lack these resources face substantial barriers to digital equity, even in places where fast broadband connections are physically available.

*The State’s digital equity vision recognizes that high-speed internet access is not a luxury, but a necessity, for **all Delawareans, regardless of their age, race, or income***

The State’s digital equity vision recognizes that high-speed internet access is not a luxury, but a necessity, for **all Delawareans, regardless of their age, race, or income, irrespective of where they live, what languages they speak, what resources they have at their disposal, and what specific challenges they may face in their daily lives.**

For the purposes of this Plan, the term “digital equity” means the condition in which individuals and communities have the information technology capacity that is needed for full participation in the society and economy in Delaware.

The term “digital inclusion” means “the activities that are necessary to ensure that all individuals in Delaware have access to, and the use of, affordable information and communication technologies, such as—reliable fixed and wireless broadband internet service; internet enabled devices that meet the needs of the user; and applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration; and includes—obtaining access to digital literacy training; the provision of quality technical support; and obtaining basic awareness of measures to ensure online privacy and cybersecurity.”

The term “digital literacy” means “the skills associated with using technology to enable users to find, evaluate, organize, create, and communicate information.”

2.2 Goals and objectives

Delaware’s goal for broadband deployment is to be the first state to deliver universal broadband—that is, to ensure a high-speed, wired internet connection to all homes and businesses in the State.⁷

The State’s primary objectives for broadband deployment are aligned with the principal focus of the BEAD Program:⁸

1. Serving 100 percent of unserved locations (i.e., below 25/3 Mbps) within five years

⁷ “Delaware Broadband Initiative,” Delaware Department of Technology and Information, <https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>.

⁸ “NOFO: BEAD Program,” NTIA, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>, at p. 7.

2. Serving 100 percent of underserved locations (i.e., between 25/3 and 100/20) within five years
3. Delivering gigabit connections to certain community anchor institutions that do not have that level of service within five years

Should BEAD funds remain after the first three objectives are fulfilled, the State will then focus on the next set of priorities:

4. Constructing line extensions to unserved and underserved residences that are determined to be extremely high-cost locations (i.e., replacing fixed wireless or satellite connections to those locations)
5. Upgrading internal wiring in multiple-dwelling-unit buildings to ensure the availability of reliable broadband access in low-income and affordable housing

Other digital equity initiatives, developed through ongoing community engagement and development of the Digital Equity Act Plan. These initiatives may be prioritized above items 4 and 5 above as needs as assessed and refined, and may include—by way of example and not limitation:

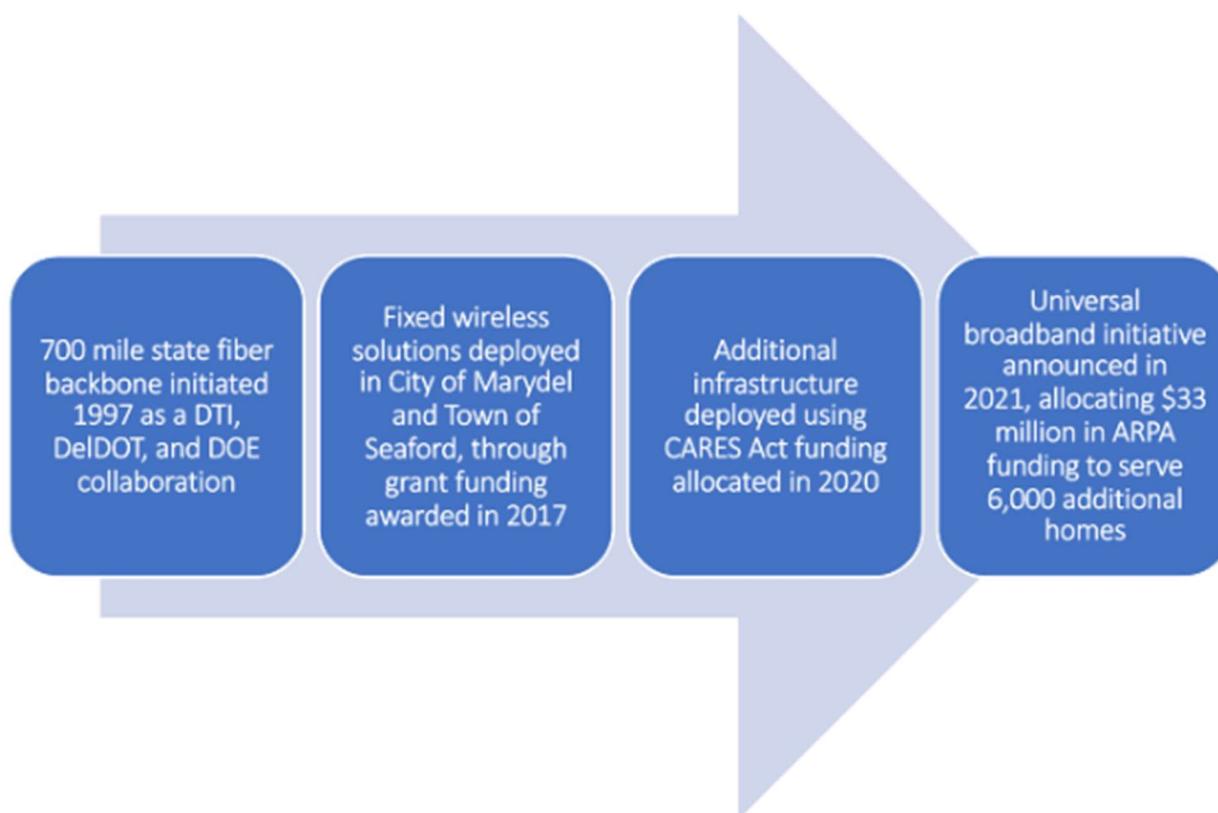
- Providing free or low-cost internet service to low-income residents, including those living in affordable housing (e.g., through a monthly subsidy)
- Expanding training and development of the State’s broadband workforce, including for cybersecurity jobs
- Supporting digital navigator programs in public libraries
- Purchasing additional devices to enable broadband adoption by covered populations and low-income residents
- Delivering training to support the use of telehealth services

3 Current state of broadband and digital inclusion

This section describes the current state of broadband and digital inclusion in Delaware, as documented through rigorous and comprehensive data collection and stakeholder outreach efforts. It begins with an overview of the State’s past and current efforts to promote broadband deployment and digital equity; describes the resources and relationships available to the Department of Technology and Information (DTI, the Eligible Entity); presents detailed asset inventories related to broadband deployment, adoption, affordability, and access, and digital equity activities; and presents a needs and gaps assessment (including a needs assessment for underrepresented communities).

The State of Delaware’s innovative broadband deployment efforts to date have positioned Delaware as one of the most connected states in the country and provide valuable best practices and strategies to be leveraged in efforts to close the remaining gaps. The current state of broadband and digital inclusion reflects the State’s demonstrated commitment to universal broadband service—and that BEAD funding will enable the State to achieve this goal.

Figure 5: Delaware's path toward universal service



A pioneering collaboration that began in 1997 between DTI, the Delaware Department of Transportation (DelDOT), and the Delaware Department of Education (DOE) set the groundwork

for a well-connected State. Through this inter-agency collaboration, DeIDOT constructed extensive fiber for transportation purposes, quickly placing Delaware at the cutting edge of intelligent state transportation systems and ensuring that Delaware’s agencies possess the skills and knowledge to support ongoing broadband deployments.

Today, the State’s fiber backbone extends approximately 700 miles, running the length of the State.⁹ A fiber line running from Middletown to Georgetown was completed in 2014, with an investment made in 2015 to expand the backbone from Seaford to Lewes.¹⁰ This backbone has improved internet reliability for consumers and has increased internet access speeds by as much as 10 times since 2009.¹¹

The State has also invested in fixed wireless solutions to provide a path forward for rural households and businesses that do not have access to high-speed wired broadband connections.¹² Through the Rural Broadband Pilot Program, in 2017 the State awarded two fixed wireless pilot projects in the City of Marydel and the Town of Seaford to Bloosurf, and a municipal Wi-Fi pilot project in the City of Rehoboth Beach to WHYFLY.¹³

Following this pilot program, the State issued an RFP focused on enabling service to homes and businesses where broadband service is not readily available—particularly in rural Kent and Sussex Counties. DTI partnered with Bloosurf in 2019¹⁴ on the Rural Wireless Broadband Initiative, in which Bloosurf would design, build, operate, and commercialize a wireless network to cover the underserved and unserved communities in these two counties.

In 2020, the State utilized a portion of its CARES Act allocation toward broadband initiatives to fund additional infrastructure deployment and develop a Broadband Strategic Plan.¹⁵ The State

⁹ “Delaware Broadband Initiative: Fiber Broadband,” State of Delaware Department of Technology and Information, <https://broadband.delaware.gov/pages/index.shtml?dc=fiber>.

¹⁰ “Delaware Broadband Initiative,” State of Delaware Department of Technology and Information, <https://broadband.delaware.gov/>.

¹¹ “Delaware Broadband Initiative: Fiber Broadband,” State of Delaware Department of Technology and Information, <https://broadband.delaware.gov/pages/index.shtml?dc=fiber>.

¹² “Delaware Broadband Initiative: Wireless,” State of Delaware Department of Technology and Information, <https://broadband.delaware.gov/pages/index.shtml?dc=wireless>.

¹³ “Delaware Broadband Grant Opportunity Awarded Vendors,” State of Delaware Department of Technology and Information, May 23, 2017, <https://webfiles.dti.delaware.gov/pdfs/broadband/Delaware%20Broadband%20Awarded%20Vendors.pdf>.

¹⁴ “Delaware Broadband Initiative: Timeline,” State of Delaware Department of Technology and Information, <https://broadband.delaware.gov/>.

¹⁵ Available at <https://broadband.delaware.gov/contentFolder/pdf/strategicplan.pdf>.

executed contracts with three ISPs; funding dispersed through the infrastructure program could only be used for capital costs for the ISP to purchase or construct communication facilities.¹⁶

Bloosurf added LTE base stations to five existing sites to bolster network capacity for up to 350 customers. Comcast built 1.2 miles of line extensions to connect new premises. BridgeMAXX expanded seven new sites in largely unserved areas to provide service to up to 500 homes and small businesses; it also added additional capacity at six of its existing transmission sites by adding 3.5 GHz equipment to provide a faster option to approximately 9,500 unserved homes.

Building on the State's previous investments, the State allocated \$33 million in ARPA funding in 2021 to an initiative to become the first state to deliver universal broadband—i.e., a high-speed wired internet connection to every residence and business in the State.¹⁷ A portion of this allocation was dedicated to the Delaware Broadband Infrastructure Grant Program, which provided State funding to existing private providers in Delaware that committed to building, expanding, and sustaining new fixed, terrestrial broadband service to deliver 100/20 speeds to unserved rural areas (as identified in the State's Broadband Strategic Plan).

In March 2022, the State awarded funds under this program to three providers—Comcast, Verizon, and Mediacom—to extend their existing coverage areas to serve more than 6,000 Delaware homes and businesses that were known to lack access to high-speed, wired broadband service.¹⁸

In addition to the State-funded broadband infrastructure deployment, Talkie, Inc. was awarded funding through the FCC's RDOF auction in 2020 to deliver broadband to certain areas in Delaware and has until 2028 to make the connections.¹⁹ While Talkie's deployment has not yet begun as of the writing of this Plan, the company has represented that it will begin work in Delaware in summer 2023 and is on track to complete its buildout in line with RDOF requirements.

Overall, Delaware is well-positioned to effectively use BEAD funding effectively and efficiently. To date, Delaware has worked to narrow the broadband availability gap; however, the State still

¹⁶ Participating providers were required to warrant the following minimum technical performance requirements for the facilities that would be provided using program funds: for a wireline service, at least 50 Mbps download throughput and >3 Mbps upload throughput; for a wireless service, at least 25 Mbps download throughput and >3 Mbps upload throughput; latency <50 ms for both wireline and wireless service; for a wireless service, backhaul capacity per base station of at least 1 Gbps.

¹⁷ "Federal Broadband Programs: ARPA," Delaware Broadband Initiative, <https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>.

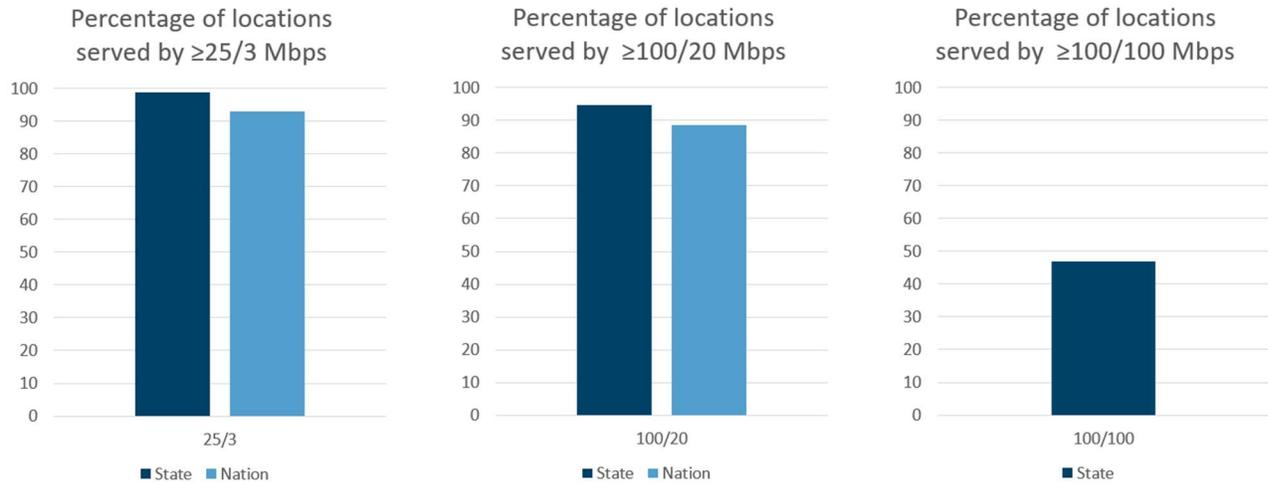
¹⁸ "Delaware Announces Start of Universal Broadband Construction," State of Delaware, News Release, March 17, 2022, <https://news.delaware.gov/2022/03/17/delaware-announces-start-of-universal-broadband-construction/>.

¹⁹ "Delaware Broadband Strategy: Federal Broadband Programs," State of Delaware Department of Technology and Information, <https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>.

requires BEAD funding to close that gap for remaining unserved and underserved locations. Although Delaware exceeds national averages in broadband availability, there is more work to do to reach universal broadband service.

Figure 6: Summary of current state of broadband availability in Delaware

DELAWARE EXCEEDS NATIONAL AVERAGES IN BROADBAND AVAILABILITY



Source: Federal Communications Commission, *National Broadband Map, Broadband Data Collection* (2023).

3.1 Existing programs

The table below identifies DTI’s current and recent activities and programs (including stakeholder engagement conducted for purposes of the BEAD Five-Year Plan); its previous statewide plans comprising goals for the availability of broadband; and its prior experience awarding broadband deployment grants.

Table 1: Current and past activities of the Delaware Department of Technology and Information

| Activity name | Description | Intended outcome(s) |
|--|--|--|
| Stakeholder engagement – Regional, county, and local leaders | DTI hosted a series of discussions with local government stakeholders to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s comprehensive stakeholder outreach efforts are in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |

| Activity name | Description | Intended outcome(s) |
|--|---|--|
| Stakeholder engagement – internet service providers (ISP) | DTI hosted a series of discussions with ISP stakeholders to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s comprehensive stakeholder outreach efforts in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Stakeholder engagement – covered populations | DTI hosted a series of discussions with identified covered population stakeholders to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s comprehensive stakeholder outreach efforts in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Stakeholder engagement – community anchor institutions (CAI) | DTI hosted a series of discussions with CAI stakeholders to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s comprehensive stakeholder outreach efforts in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Stakeholder engagement – workforce development | DTI hosted a series of discussions with workforce development stakeholders to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s stakeholder outreach efforts in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |

| Activity name | Description | Intended outcome(s) |
|---|--|--|
| Stakeholder engagement – business and economic development | DTI hosted a series of discussions with economic development stakeholders to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s comprehensive stakeholder outreach efforts in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Stakeholder engagement – follow-up surveys | DTI sent follow-up surveys to each group in the above six stakeholder engagements to collect more information about existing assets, programs, and needs. | Feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Stakeholder engagement – public Broadband Funding Hearings | DTI hosted five discussions open to the public to identify broadband needs and challenges and solicit input for the Five-Year Plan; details on DTI’s comprehensive stakeholder outreach efforts are in Section 5.1. | Observations and feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Broadband Equity, Access, and Deployment (BEAD) Digital Equity Needs Assessment | In addition to the targeted stakeholder surveys, DTI collected high-level digital equity data through a Needs Assessment survey shared in stakeholder engagements and posted on DTI’s website for public response (see Section 5.1). | Feedback from community outreach will inform the development of DTI’s broadband deployment and digital equity plans, objectives, and implementation approach. |
| Residential broadband survey for the State’s Digital Equity | DTI conducted a statistically valid survey of residential internet access, adoption, | Data will be analyzed and compared to data gathered in a survey conducted in |

| Activity name | Description | Intended outcome(s) |
|---|---|---|
| Plan | and needs in 2023 as part of the Digital Equity planning process. | 2020 for the Delaware Strategic Plan. |
| Broadband Strategic Plan (2021) ²⁰ | DTI commissioned a broadband strategic plan based on quantitative and qualitative research, including a mail survey of residents and identification of unserved areas, to understand Delaware’s broadband availability and digital equity gaps and opportunities. | A pragmatic, actionable broadband strategic plan. |
| GIS Broadband Hub ²¹ | DTI created an interactive online tool with two maps: The Delaware Broadband Map shows internet service availability, including the progress of State-funded broadband expansion projects; the Unserved Broadband Map allows residents to search for an address and view service details. | Residents can confirm whether an address has internet service and can report locations that lack service for inclusion in the DTI’s planning for State-funded projects. |
| Delaware Broadband Fund | The State's initial financial contribution of about \$1.5 million resulted in more than \$30 million in private investment and 700 miles of fiber backbone (see below). | The Fund was established to support and enhance broadband services in the State’s public schools and public libraries and for rural broadband initiatives in unserved areas of the State; all funds were distributed by |

²⁰ Available at <https://broadband.delaware.gov/contentFolder/pdf/strategicplan.pdf>.

²¹ Available at <https://gis.broadband.delaware.gov/>.

| Activity name | Description | Intended outcome(s) |
|---|--|--|
| | | July 1, 2018. |
| Delaware’s open-access fiber backbone | Delaware's 700-mile broadband "backbone" features high-capacity fiber-optic lines that run the length of the State. | Improved internet reliability for consumers and has increased internet access speeds by as much as 10 times since 2009; ISPs can lease access from Crown Castle. |
| Delaware Broadband Infrastructure Grant Program | In 2021, the State allocated ARPA funds to existing private providers in Delaware that committed to building, expanding, and sustaining new fixed, terrestrial broadband service to deliver 100/20 speeds to unserved rural areas. | In 2022, the State awarded funds to three providers to serve more than 6,000 Delaware homes and businesses that did not have access to high-speed wired broadband (with a commitment to serve those locations by 2025). |
| Rural Wireless Broadband Initiative | After completing an open bid process, DTI selected Bloosurf to design, build, operate and commercialize a wireless network meant to cover the underserved and unserved communities in Kent and Sussex counties. | Originally slated to be completed by the end of 2020, the project received a boost through the Delaware Department of Education’s CARES Act funds to fast-track reaching more students in unserved and underserved areas in need of high-speed broadband for remote learning during the COVID-19 pandemic; ²² the partnership also prioritized low-cost services for lower income families. |
| Rural Broadband Pilot | Through an open bid process, the State selected wireless | The State awarded two fixed wireless pilot projects in the |

²² “Governor Carney Announces \$20 Million for Broadband Infrastructure,” State of Delaware, News Release, August 24, 2020, <https://news.delaware.gov/2020/08/24/governor-carney-announces-20-million-for-broadband-infrastructure/>.

| Activity name | Description | Intended outcome(s) |
|--|---|---|
| Program | pilot projects. | City of Marydel and the Town of Seaford to Bloosurf, and a municipal Wi-Fi pilot project in the City of Rehoboth Beach to WHYFLY. |
| Connect Delaware | This CARES Act-funded program was designed to support student success by providing free broadband services for low-income students in school districts and charter schools. ²³ | The State’s 19 school districts and 23 charter schools collectively requested a total of 25,789 devices through the program; as of the writing of this Plan, the program continues with support from ARPA funding, with approximately 3,481 active devices (the total number of devices fluctuates each month). |
| CyberStart America and Cyber FastTrack | This innovative online program, sponsored by the National Cyber Scholarship Foundation and the SANS Institute, allows participants to explore their potential cybersecurity talent. | Students who do well in the program can earn access to scholarships and advanced training; the 2021-22 session had 352 Delaware high school student participants in CyberStart America while 133 Delaware college students participated in Cyber FastTrack. |
| Identification of unserved and underserved locations | DTI’s Broadband Strategic Plan (2021) included a comprehensive assessment of service availability utilizing FCC Form 477 and federal funding data, corroborated by an extensive desk survey and a field survey. | Identified 11,600 unserved homes and businesses in the State in 2021. |

²³ “Connect Delaware Students,” <https://broadband.delaware.gov/pages/index.shtml?dc=caresAct>.

| Activity name | Description | Intended outcome(s) |
|---|---|--|
| Delaware Speed Survey | DTI launched an online speed test survey in August and September 2020 to capture address-specific information regarding lack of service as well as service experience, which was determined through a brief set of questions in addition to the associated speed test. | 2,366 speed surveys and tests were completed, providing quantitative data about the actual service speeds achieved by customers across different providers and technologies, as well as validation of the served and unserved areas determined by the State. |
| Affordable Connectivity Program outreach and awareness campaign ²⁴ | In 2023, Governor Carney and a coalition of municipal leaders and community partners launched a statewide initiative to increase awareness of the ACP through local outreach, supported by training and enrollment materials from EducationSuperHighway. | Build a coalition of local stakeholders and trusted institutions to overcome awareness, trust, and enrollment barriers that prevent households in under-resourced communities from enrolling. |
| Community Anchor Institution Census | DTI has contracted with the University of Delaware Biden School of Public Policy and Administration to conduct a census of community anchor institutions (CAI) in the State, determine their current internet service levels, and whether those institutions offer free access to the internet to the general public. | Gather data necessary to define the scope of the needs of CAIs and inform the development of the CAI definition to be presented in the Initial Proposal. |
| Coronavirus Aid, Relief, and Economic Security Act | With funding through CARES, Delaware was able to expand | Provide students of families of need with the resources to |

²⁴ “Governor Carney Launches Statewide Initiative to Increase Affordable Connectivity Program Adoption – State of Delaware News,” News release, March 21, 2023, <https://news.delaware.gov/2023/03/21/icymi-governor-carney-launches-statewide-initiative-to-increase-affordable-connectivity-program-adoption/>.

| Activity name | Description | Intended outcome(s) |
|---------------|---|---|
| (CARES Act) | high speed internet access; provide equipment and services for families facing financial challenges; support Delaware’s students; developed a statewide Broadband Strategic Plan; and launch a statewide speed survey to help collect pertinent data. ²⁵ | successfully engage with available educational opportunities via free broadband services; foster active engagement by the State’s residents to help identify unserved locations; create a broadband roadmap for future efforts as part of the strategic plan development. |

DTI has managed strategic studies, needs assessments, grant programs, public-private partnerships, and other efforts to identify and close the State’s digital divide for many years. The tables below identify the current and planned full- and part-time employees and contractors who will assist in implementing and administering BEAD-funded activities and programs to achieve DTI’s goals and objectives.

Table 2: Current and planned full-time and part-time employees

| Current/ planned | Full-time/ part-time | Position | Description of role |
|---------------------|-------------------------|--|---|
| Current | FT | Delaware Broadband Office Executive Director | Overall strategy and management |
| Current | FT | Broadband Program Manager | Day-to-day project activities and key BEAD deliverables |
| Current | FT | Senior Project Management Specialist | Day-to-day project management |
| Planned | FT | Digital Equity Manager | Day-to-day project activities and key deliverables regarding digital equity |
| Current | FT | Fiscal Analyst | Support the grant program, |

²⁵ “Delaware Broadband initiative: Timeline: 2020,” <https://broadband.delaware.gov/#:~:text=With%20funding%20made%20available%20through%20the%20Coronavirus%20Aid%2C,statewide%20speed%20survey%20to%20help%20collect%20pertinent%20data.>

| Current/ planned | Full-time/ part-time | Position | Description of role |
|---------------------|-------------------------|---------------|---|
| | | | supervise and coach the fiscal analyst, and provide quality assurance/quality control |
| Planned | FT | Grant Manager | Help design and run the grant program |

Table 3: Current and planned contractor support

| Current/ planned | Full-time/ part-time | Position | Description of role |
|---------------------|-------------------------|-------------------|--|
| Current | FT | Program Manager | Oversee the data collection, cost modelling, planning utilization modeling, and field testing |
| Current | FT | Project Manager 1 | Support stakeholder engagement, project planning, and grant program design |
| Planned | FT (year 2-5) | Project Manager 2 | Data requests, cost modeling and funding optimization modelling, and development of deliverables |
| Planned | FT | Fiscal Analyst | Issue POs, pay invoices, and track budget versus expenses |
| Planned | PT | Senior Engineer | Support asset mapping and grant program design and operation |
| Planned | PT | Junior Engineer | Support asset mapping and grant program design and operation |
| Planned | PT | GIS Analyst | Support asset mapping and grant program design and operation |

| Current/ planned | Full-time/ part-time | Position | Description of role |
|---------------------|-------------------------|---|--|
| Planned | PT | Senior Consultant | Support asset mapping and grant program design and operation |
| Current | PT | Call Center Supervisor | Conduct a statistically valid survey |
| Current | PT | Call Center Staff | Conduct a statistically valid survey |
| Current | PT | Strategy Consulting – Principal | Support all project deliverables and activities as needed |
| Planned | PT | Strategy Consulting – Program Manager | Support all project deliverables and activities as needed |
| Planned | PT | Strategy Consulting – Senior Consultant | Support all project deliverables and activities as needed |
| Planned | PT | Strategy Consulting – Consultant | Support all project deliverables and activities as needed |
| Planned | PT | Strategy Consulting – Analyst | Support all project deliverables and activities as needed |

The table below identifies DTI’s currently available funding for broadband deployment and other broadband-related activities.

Table 4: Broadband funding

| Source | Purpose | Total | Expended | Available |
|--|--|--------------|----------------------------|-----------|
| American Rescue Plan Act | Delaware Broadband Infrastructure Grant Program | \$43,000,000 | \$43,000,000 ²⁶ | \$0 |
| Coronavirus Aid, Relief, and Economic Security Act | Connect Delaware Program – construct broadband infrastructure (437 installations) and acquire broadband equipment and services for low-income students ²⁷ | \$20,000,000 | \$20,000,000 | \$0 |

3.2 Partnerships

The table below identifies DTI’s current and potential future partners in the development and implementation of this Plan. These partners include organizations already engaged in broadband deployment and digital inclusion efforts (e.g., local governments, K-12 schools, higher education, ISPs) and entities that DTI has identified as potential future collaborators.

²⁶ \$43 million was authorized by the Governor. Of that, \$33 million is being used for deployment (\$31 million for contracted deployment by Comcast, Verizon, and Mediacom; \$2 million for a long-driveway fund). Of the remainder, \$7.5 million is earmarked for continuing the Connect Delaware Program and \$2.5 million is earmarked for staffing and support.

²⁷ “Connect Delaware Students,” <https://broadband.delaware.gov/pages/index.shtml?dc=caresAct>.

Figure 7: DTI’s current and potential future partners



Table 5: Partners

| Partners | Description of current or planned role in broadband deployment and adoption |
|-----------------------|--|
| County governments | Regular communication and commitment to continued collaboration with the State on future broadband deployment and adoption efforts |
| Municipal governments | Regular communication and commitment to continued collaboration with the State on future broadband deployment |

| Partners | Description of current or planned role in broadband deployment and adoption |
|--|---|
| | and adoption efforts |
| Public K-12 schools | Regular communication and commitment to continued collaboration with the State on future broadband deployment and adoption efforts |
| Higher education institutions | Regular communication and commitment to continued collaboration with the State on future broadband deployment and adoption efforts |
| Delaware Department of Transportation (DelDOT) | Weekly calls and follow-ups on key items; fiber deployments will almost entirely occur on State rights-of-way controlled by DelDOT, so DTI and DelDOT are closely coordinating—and DTI is learning lessons from DelDOT’s rollout of BIL EV charging station funding |
| Delaware Department of Education | Strong existing partnership through the Connect Delaware program; DTI also runs the schools’ internet service and is evaluating ways to scale up that service as needs increase |
| Delaware Department of Labor | Weekly meetings; collaboration on workforce planning |
| Delaware Department of Natural Resources and Environmental Control (DNREC) | Weekly meetings; coordination between DNREC and DelDOT on environmental reviews when needed |
| Delaware Department of Health and Social Services | Weekly meetings to coordinate planning and broadband-related efforts |
| Delaware Business Roundtable | Weekly meetings, including to plan role of broadband access in the “Ready in 6” program, in which tailored infrastructure can be ready in six months for a business relocating to Delaware |
| Talkie, Inc. | Talkie was awarded Rural Digital Opportunity Fund (RDOF) funds by the FCC to deliver broadband to certain areas in Delaware and has until 2028 to make the connections |
| Bloosurf | DTI partnered with Bloosurf in 2019 on the Rural Wireless Broadband Initiative, in which Bloosurf would design, build, operate, and commercialize a wireless network to cover the |

| Partners | Description of current or planned role in broadband deployment and adoption |
|----------|--|
| | underserved and unserved communities in Sussex and Kent counties |
| Verizon | Recipient of broadband deployment grant funding from the State; key partner in future planning |
| Comcast | Recipient of broadband deployment grant funding from the State; key partner in future planning |
| Mediacom | Recipient of broadband deployment grant funding from the State; key partner in future planning |

3.3 Asset inventory

This section catalogs and describes a sample of broadband deployment (infrastructure), broadband adoption, broadband affordability, broadband access, and digital equity activities across the State of Delaware. These inventories comprise agencies that have hard assets, such as utility poles and land, and soft assets such as programs and activities that aim to close the digital divide. These sections are not exhaustive in their scope; rather, they focus on key assets DTI believes can be readily leveraged to implement the Plan. Additional asset inventory data, including for digital equity activities, are included in Appendix A.

3.3.1 Broadband deployment

The table below lists examples of the types of State-owned structures, land, rights-of-way, utility poles, conduit, fiber, and other assets that might be leveraged to implement the Five-Year Action Plan. A discussion of available workforce assets to deploy broadband is in Section 3.4.1.

Table 6: Broadband deployment assets

| Asset name | Description |
|-----------------------|--|
| State-owned fiber | Fiber strands may be available on portions of the State’s fiber backbone; ISPs can lease backbone fiber access from Crown Castle |
| State-owned land | Land owned by State of Delaware entities may be available for placement of huts or other broadband infrastructure |
| State-owned buildings | Buildings owned by the State of Delaware may be available for placement of network electronics or other broadband infrastructure |

| Asset name | Description |
|--------------------|--|
| State-owned towers | Towers owned by the State of Delaware and other affiliated entities such as utility companies may be available for placement of antennas or other broadband infrastructure |
| Rights-of-way | Rights-of-way controlled by the Delaware Department of Transportation may be available for placement of fiber, huts, or other broadband infrastructure |

3.3.2 Broadband adoption

This section describes the current state of broadband adoption (i.e., the percentage of residents who have adopted broadband) and identifies broadband adoption assets.

According to the most recent NTIA data (November 2021), 76 percent of Delaware residents use internet at home²⁸ and 81.7 percent of residents use internet at any location.²⁹ In contrast, a survey conducted in early 2023 in preparation for the State’s Digital Equity Plan found that 94 percent of households purchase home internet service.

The table below lists programs that promote broadband adoption—such as through digital literacy and digital skills training, public computing labs, device and hotspot loans, K-12 schools with one-to-one computer programs, computer refurbishing efforts, and other broadband awareness and outreach efforts. These assets are available to all covered populations.

Table 7: Broadband adoption assets

| Asset name | Description |
|---------------|---|
| Digital DE | This website, maintained by the Delaware Department of Education, serves as an online hub for a variety of digital tools to support educators, including online learning and digital literacy resources ³⁰ |
| Get Connected | Through this program, the Delaware Division of Libraries allows patrons to borrow digital devices; ³¹ Get Connected also offers |

²⁸ “Digital Nation Data Explorer: Internet Use at Home,” NTIA, November 2021 data, <https://ntia.gov/other-publication/2022/digital-nation-data-explorer>.

²⁹ “Digital Nation Data Explorer: Internet Use (Any Location),” NTIA, November 2021 data, <https://ntia.gov/other-publication/2022/digital-nation-data-explorer>.

³⁰ Delaware Department of Education, “Digital DE,” <https://education.delaware.gov/educators/academic-support/standards-and-instruction/digital-de/>.

³¹ Delaware Libraries, “Get Connected,” <https://lib.de.us/getconnected/>.

| Asset name | Description |
|------------------|---|
| | free privacy booths so patrons can take a job interview or health consultation |
| Connect Delaware | As noted above in Section 3.1, Table 4: Broadband Funding, this program has provided broadband for students via a process that did not place on students and their families the burden of signing up for the program; instead, each school in Delaware filled out a needs assessment and DTI placed bulk orders with ISPs |

3.3.3 Broadband affordability

About one-quarter of eligible households in the State are enrolled in the FCC’s Affordable Connectivity Program (ACP), which lags the national average (see section 3.4.3). In 2023, Governor Carney and a coalition of municipal leaders and community partners launched a statewide initiative to increase awareness and enrollment in the ACP through local outreach, supported by training and enrollment materials from EducationSuperHighway.³²

The table below identifies a sampling of ISPs’ discounted service and device programs for low-income subscribers and related broadband affordability assets in the State. These assets are available to all covered populations.

Table 8: Broadband affordability assets

| Asset name | Description |
|--|--|
| EducationSuperHighway ACP outreach partnership | Tools include an online mobile assistant that simplifies the ACP enrollment process, ³³ a free certification course that trains digital equity advocates to help community members enroll, ³⁴ and a resource hub with free and customizable marketing materials to increase awareness of the ACP and promote enrollment. ³⁵ |
| Comcast Internet Essentials program | Comcast, an ISP, offers the Internet Essentials plan, priced at \$9.95 per month, which is available to qualifying low-income |

³² “Governor Carney Launches Statewide Initiative to Increase Affordable Connectivity Program Adoption – State of Delaware News,” News release, March 21, 2023, <https://news.delaware.gov/2023/03/21/icymi-governor-carney-launches-statewide-initiative-to-increase-affordable-connectivity-program-adoption/>.

³³ “ACP Enrollment Assistant,” <https://getacp.org/delaware>.

³⁴ “LearnACP,” EducationSuperHighway, <https://www.educationsuperhighway.org/learnacp/>.

³⁵ “Affordable Connectivity Program – Resource Hub,” EducationSuperHighway, <https://www.educationsuperhighway.org/acpbenefit/resource-hub/>.

| Asset name | Description |
|---|--|
| | and other households in Delaware. ³⁶ Comcast Internet Essentials delivers speeds up to 50 Mbps and Comcast Internet Essentials Plus delivers up to 100 Mbps for \$29.95 per month. ³⁷ Households that subscribe to Internet Essentials can purchase a new Dell laptop or Chromebook for \$149.99 plus tax. ³⁸ |
| Mediacom Connect to Compete plan | Mediacom, an ISP which provides service in Sussex County, offers the Connect to Compete plan, in partnership with nonprofit EveryoneOn, to qualifying households for \$9.95 per month plus taxes, delivering download speeds up to 25 Mbps. Mediacom also offers the C2C Plus plan for \$30.00 per month plus taxes, delivering download speeds up to 100 Mbps. ³⁹ |
| Breezeline Internet Assist and Internet Assist Plus plans | Breezeline, an ISP that serves some areas of the State, offers two low-cost plans to qualifying low-income customers: Internet Assist, which offers 15/1 Mbps service for \$9.99 to qualifying new subscribers only; ⁴⁰ and Internet Assist Plus, which offers customers who sign up for Breezeline service through the ACP 100/10 Mbps service for \$29.95 per month (\$0 with application of the ACP discount). ⁴¹ |
| Verizon Forward Program | The Verizon Forward Program provides an additional discount on Verizon Home Internet plans for customers enrolled in the ACP, offering Verizon’s 300/300 Mbps Fios fiber plan at no cost and plans with higher speed tiers at a discounted rate. (The program also offers Verizon 5G Home Internet at no cost where available.) ⁴² |

³⁶ Comcast, application for Internet Essentials plan, <https://apply.internetessentials.com/>.

³⁷ Comcast, “Internet Essentials,” <https://www.xfinity.com/learn/internet-service/internet-essentials>.

³⁸ Comcast, “Low-Cost Computer,” <https://internetessentials.com/low-cost-computer>.

³⁹ Mediacom, “Connect to Compete,” <https://mediacomc2c.com/>. See also: EveryoneOn, <https://www.everyoneon.org/about-us>.

⁴⁰ “Internet Assist Program,” Breezeline, <https://www.breezeline.com/support/internet/internet-assist-program>.

⁴¹ “Affordable Connectivity Program (ACP) Enrollment,” Breezeline, <https://www.breezeline.com/acp>.

⁴² “Free Internet with the Verizon Forward Program and ACP,” Verizon, <https://www.verizon.com/home/free-verizon-internet/>.

3.3.4 Broadband access

The following table identifies examples of public Wi-Fi networks, cellular connectivity (mobile broadband), and open-access middle-mile networks in the State. These assets are available to all covered populations.

Table 9: Broadband access assets

| Asset name | Description |
|--|---|
| State fiber backbone | ISPs can lease access to the fiber backbone from Crown Castle |
| Wi-Fi at public libraries | Delaware’s public libraries offer free Wi-Fi, including in their parking lots ⁴³ |
| Public Wi-Fi | New Castle County offers free public Wi-Fi; ⁴⁴ free Wi-Fi locations can also be found at many retail establishments statewide, including via the Wi-Fi Map ⁴⁵ |
| AT&T cellular service (mobile broadband) | AT&T delivers cellular connectivity (mobile broadband) throughout most of Delaware |
| T-Mobile cellular service (mobile broadband) | T-Mobile delivers cellular connectivity (mobile broadband) throughout most of Delaware |
| Verizon Wireless cellular service (mobile broadband) | Verizon Wireless delivers cellular connectivity (mobile broadband) throughout most of Delaware |

As noted above, cellular broadband is available from AT&T, T-Mobile, and Verizon Wireless throughout most of Delaware, but not all of it. In 2022, for example, New Castle County conducted a mobile coverage study to determine where the County lacks coverage by the three largest commercial mobile service providers and/or FirstNet (AT&T). The aggregated results for all providers indicated that 18 percent of the County experiences poor to no cellular coverage. The study also identified potential locations for the County to construct new cell towers to improve coverage.

While this Plan does not propose using BEAD funds to enhance mobile service, the Plan recognizes that having more robust fiber connectivity across the State will dramatically enhance the opportunities for mobile providers to offer better service to their customers; all 5G cellular antenna sites need fiber for “backhaul,” so greater availability of fiber strands in an area means

⁴³ Delaware Libraries, “Wi-Fi,” <https://lib.de.us/wifi/>.

⁴⁴ New Castle County, “Public Wi-Fi,” <https://www.newcastlede.gov/2015/Public-WIFI>.

⁴⁵ Wi-Fi Map, <https://www.wifimap.io/3327-delaware-free-wifi/map>, identified as a resource by the Delaware Department of Education, <https://www.doe.k12.de.us/Page/4273>.

cellular carriers will have an important tool for improving mobile service. Thus, the projects funded by BEAD may also deliver the ancillary benefit of improved access to cellular internet.

In addition, although the State would like to connect all of its unserved and underserved locations with fiber, Delaware may need to connect some high-cost areas with fixed-wireless services. For high-cost areas, there would be an opportunity for cellular providers to bid on locations and offer both fixed-wireless services and cellular services.

3.3.5 Digital equity

The following table identifies representative digital equity assets in the State of Delaware, including workforce development training and employment services related to broadband adoption; technical assistance programs aimed at supporting digital inclusion; and partnerships and coalitions that work toward digital equity.

These assets are available to all covered populations and underrepresented communities. Additional digital equity assets and activities are described in Appendix A.

Table 10: Digital equity assets

| Asset name | Description |
|---|---|
| Digital literacy programming initiative through Delaware’s public libraries | Literacy Delaware and the Delaware Division of Libraries announced a partnership in 2022 to expand capacity for literacy programming through the State’s public libraries, including a new digital literacy initiative that will leverage resources from the Northstar Digital Literacy program. ⁴⁶ |
| Delaware Division of Libraries | Delaware’s public libraries serve as community hubs where staff offer informal one-on-one training on internet usage as resources allow—often to help patrons from a covered population, according to input received through the stakeholder engagement and outreach efforts conducted in preparation of this Plan. |
| Connect Delaware | Delaware has been using CARES Act funding and subsequently ARPA funding to provide free broadband services to students in Delaware since August 24, 2020. ⁴⁷ |
| NERDiT CARES device | Wilmington-based NERDiT CARES, a 501(c)3 nonprofit |

⁴⁶ Literacy Delaware press release, “New Delaware Division of Libraries Partnership,” August 23, 2022, <https://literacydelaware.org/article>.

⁴⁷ Delaware Department of Technology and Information, “Connect Delaware Students,” <https://broadband.delaware.gov/pages/index.shtml?dc=caresAct>.

| Asset name | Description |
|---|---|
| donation program | organization, operates a device donation program. ⁴⁸ |
| Comcast Learning Center | Comcast hosts several short digital skills training videos for veterans ⁴⁹ using resources from nonprofit PsychArmor, ⁵⁰ as well as a similar training module for seniors using tools from the nonprofits Generations on Line and OATS. ⁵¹ |
| Delaware Office for the Deaf and Hard of Hearing | The Office provides information, education, advocacy, training, and services, including help finding assistive technology resources. ⁵² |
| Delaware Office of Veterans Services | The Office provides advocacy and assistance to veterans. ⁵³ |
| Easterseals | This non-profit supports a broad population, including individuals with disabilities, with health care, education, and employment services. ⁵⁴ Easterseals Delaware offers various resources and support around assistive technology, including a Resource and Technology Demonstration Center in its New Castle location where visitors can browse and try assistive devices. ⁵⁵ |
| Sussex County’s Advisory Committee on Aging and Adults with Physical Disabilities | The Committee advocates for and provides assistance to older residents and residents with disabilities in Sussex County and the State. ⁵⁶ |
| Code Purple of Kent County, Delaware | This non-profit provides a variety of assistance programs for residents experiencing homelessness, abuse, financial struggles, and/or drug addiction, as well as those impacted by the |

⁴⁸ NERDIT CARES, “About Us,” <https://www.nerditcares.org/about/>.

⁴⁹ Comcast, “Veterans’ Guide to Navigating the Web,” <https://www.xfinity.com/learn/internet-service/internet-essentials/learning/internet-basics/veterans-guide-to-navigating-the-web>.

⁵⁰ PsychArmo, <https://psycharmor.org/>.

⁵¹ Comcast, “Seniors’ Guide to Navigating the Web,” <https://www.xfinity.com/learn/internet-service/internet-essentials/learning/internet-basics/seniors-guide-to-navigating-the-web>.

⁵² Delaware Department of Labor, Delaware Office for the Deaf and Hard of Hearing, <https://labor.delaware.gov/divisions/dvr/dodhh/>.

⁵³ Delaware Commission of Veterans Affairs, <https://vets.delaware.gov/service-officers/>.

⁵⁴ Easterseals, “History,” <https://www.easterseals.com/de/who-we-are/history/>.

⁵⁵ “Making Life Accessible,” Easterseals Delaware & Maryland’s Eastern Shore, <https://www.easterseals.com/de/explore-resources/making-life-accessible/>.

⁵⁶ “Advisory Committee on Aging and Adults with Physical Disabilities,” Sussex County, <https://sussexcountyde.gov/advisory-committee-aging-and-adults-physical-disabilities>.

| Asset name | Description |
|--|---|
| | pandemic. ⁵⁷ |
| Delaware Council on Farm and Food policy | This statewide group addresses food security and agriculture-related issues, including mapping; they could serve as a conduit or efforts to identify and address rural digital needs. |
| Government Information Central – Accessibility Central | The Government Information Center works to help make State agency websites accessible. Web accessibility refers to the inclusive practice of removing barriers that prevent interaction or access to websites by people with disabilities. For example, accessible websites are inclusive to all, including those with a visual impairment, hearing impairment, or those that cannot use a mouse and keyboard to navigate a website. When sites are correctly designed, developed and edited, all users have equal access to information and functionality. ⁵⁸ |
| Tech Council of Delaware | Statewide entity that makes available tech internships with certification awards including cybersecurity training. |
| Delaware State Housing Authority | The agency has a direct connection with covered populations under the definition of BEAD; strong communication channels and programing opportunities. |
| Sussex Tech | Certification programs in electric and telecom modules, with a reach into graduating high schoolers. |
| Delaware Alliance of Nonprofit Associations | Umbrella organization that the State can work with to channel communication of digital equity opportunities to member organizations who have potentially eligible clients. |

3.4 Needs and gaps assessment

This section describes the gaps between the current state of broadband and digital inclusion and the needs of residents and community anchor institutions in Delaware, as documented through rigorous and comprehensive data collection and stakeholder outreach efforts.

The needs assessment documented in this Plan reflect DTI’s evaluation of the range of data sources identified by NTIA as well as data and insights gathered through the comprehensive stakeholder engagement process described in Section 5 (as well as a residential survey conducted

⁵⁷ Code Purple Delaware, <http://www.codepurplekentcounty.com/>.

⁵⁸ “Government Information Central – Accessibility Central,” <https://gic.delaware.gov/accessibility-central/>.

in early 2023 as part of the preparation of the State’s Digital Equity Plan). We note, too, that DTI will continue its stakeholder engagement efforts on an ongoing basis to assess relative needs even after submittal of this Plan.

As of the writing of this Plan, DTI is also building a mapping tool that will overlay Social Vulnerability indicators (including device access, housing status, education, income, age, disability, race) with proximity to a community anchor institution. This data-driven tool will help guide our assessment of digital equity needs across the topics discussed in the following sections.

Additional descriptions of needs and gaps identified through the State’s stakeholder outreach efforts are included in Appendix A.

3.4.1 Broadband deployment

The State has evaluated the newest release of the FCC data (May 10, 2023), which indicates that there is a total of 3,455 unserved and 20,200 underserved locations across Delaware. After accounting for full commitment grant-funded areas, the State currently identifies 2,807 unserved and 14,855 underserved locations. As of the writing of this report, DTI is still encouraging and conducting proactive outreach to residents and businesses to participate in the FCC challenge process so that unserved and underserved addresses are accurately identified. This process will likely increase these numbers further.

DTI is actively engaged in evaluating and planning workforce training efforts in collaboration with a range of potential partners to create the pool of trained workers needed to enable broadband deployment in the State. These efforts, which will be described in greater detail in the State’s Initial Proposal, may include the launch of a training program at a technical or community college; confirmed training programs operated by ISPs (some of which employ unionized workforces); coordination with the Delaware Department of Labor; and potential upscaling of existing cybersecurity training programs.

In addition, DTI intends that any training programs or grant-funded efforts it supports in this area will include outreach requirements intended to engage and train a diverse workforce.

3.4.2 Broadband adoption

According to the most recent NTIA data (November 2021), 76 percent of Delaware residents use internet at home⁵⁹ and 81.7 percent of residents use internet at any location.⁶⁰ A survey conducted in early 2023 in preparation of the State’s Digital Equity Plan found that 94 percent of households purchase home internet service. Of those households that do not purchase home

⁵⁹ “Digital Nation Data Explorer: Internet Use at Home,” NTIA, November 2021 data, <https://ntia.gov/other-publication/2022/digital-nation-data-explorer>.

⁶⁰ “Digital Nation Data Explorer: Internet Use (Any Location),” NTIA, November 2021 data, <https://ntia.gov/other-publication/2022/digital-nation-data-explorer>.

internet service (albeit a small sample size), 24 of 49 respondents do not have any internet service at all, and 21 of 49 use a cellular or mobile connection instead. In a survey conducted to support the State's 2021 "Broadband Strategic Plan," almost all (99 percent) respondents reported they make some use of the internet, on any device from any location; in that survey, adoption was high across all demographic groups, including low-income households (97 percent).

Many factors can affect a household's ability or desire to subscribe to high-speed internet service where it is available, including the cost of service, access to sufficient computing devices, and the ability to navigate activities and content online. Survey data indicate that affordability (discussed in further detail in Section 3.4.3) is a concern for many Delaware households; respondents who do not purchase service at home ranked inability to afford service as the second most common reason they do not subscribe, just below service not being available.

Lack of a sufficient device was ranked as the fourth most common reason for non-subscription. Device insecurity is a particular issue for low-income households in the State, who tend to own fewer computers and need more time to replace a non-working device. While 91 percent of all households have at least one computer in good working condition, that figure drops to 81 percent for households earning less than \$50,000. 53 percent of low-income households that do own a computer only have one; in comparison, 84 percent of households earning \$100,000 to \$149,999, and 90 percent of households earning over \$150,000, own two or more computers. If their device became non-functional, 29 percent of lower-income households would need one to six months to replace it, and 8 percent would be unable to.

Most residents are confident in their ability to complete common tasks online, such as accessing bank accounts, telehealth services, and email. However, a notable portion of respondents ranked their skill level as low; 8 percent were not confident they could utilize telehealth services, for example, and 11 percent were only slightly confident they could. Significantly, lower-income respondents indicated less confidence in their skills than higher-income respondents across all tasks. Households with a member who is 65 years of age or older also indicated less confidence than the overall response rate for several tasks, such as searching for a job online. (See 3.4.5 for further discussion of data around devices and digital literacy.)

3.4.3 Broadband affordability

Affordability is a barrier to broadband adoption in Delaware for some and an obstacle for many, and while discounted services and subsidy programs are available there is low awareness of and participation in these programs.

The State of Delaware recognizes the challenges that affordability presents to residents; as such, it has developed and deployed a comprehensive outreach and education program to promote participation in the FCC's Affordable Connectivity Program (ACP) in collaboration with

EducationSuperHighway. The State intends to continue efforts to encourage eligible residents to enroll in the ACP—and will require BEAD subgrantees to offer an affordable service option to low-income residents.

About one-quarter of eligible households in the State are enrolled in the ACP. As shown in Table 11, Delaware lags the national average in enrollment rate, leaving an opportunity for many more households to benefit.

Table 11: Overview of Delaware household enrollment in ACP

| | State | U.S. |
|--------------------------------|---------|------------|
| Total enrollment (households) | 37,665 | 17,432,235 |
| Estimated eligible households | 154,963 | 55,266,900 |
| Portion of eligible households | 24% | 32% |

Similarly, Delaware residents may be significantly underutilizing existing other broadband subsidy programs, according to a survey conducted for the State’s 2021 Broadband Strategic Plan. At that time, just 4 percent of all Comcast customers were enrolled in the ISP’s Internet Essentials program for low-income households and two-thirds of Comcast customers earning less than \$25,000 per year said they have never heard of the program. Just 3 percent of low-income subscribers received the \$9.25 subsidy under the FCC’s Lifeline program in 2021, and 30 percent were unsure whether they received the subsidy.

According to a statistically valid survey of residents conducted by the State in 2023 for the preparation of its Digital Equity Plan, affordability is the second most common reason for non-subscription cited by households who do not purchase home internet service—ranking above a lack of need for or interest in service, and slightly below service not being available.

Individuals in covered populations as defined by the NTIA are also more likely to participate in a subsidy program; for example, 16 percent of internet-subscribing households with a member who is a veteran participate, and 23 percent of households who have a member with a disability do. Additionally, 10 percent of primarily non-English speaking households with an internet subscription are enrolled in one or more of these programs, as well as 9 percent of those with a K-12 student.

3.4.4 Broadband access

Broadband access is available throughout most of the State (see Section 3.3.1), including through wired infrastructure, public Wi-Fi, and cellular connectivity. There is still more work to close the

final gap because remaining unserved and underserved locations throughout the State are some of the most difficult and expensive to serve.

Analysis of the FCC Broadband Data Collection system's May 10, 2023, data release indicated a total of 3,455 unserved and 20,200 underserved locations.⁶¹ After accounting for areas already grant-funded for broadband deployment, 2,807 unserved and 14,855 underserved locations remain.

To support connectivity for those without access at home, Delaware Public Libraries offer free Wi-Fi in their buildings and parking lots. New Castle County also began offering free public Wi-Fi at various locations in response to the Covid-19 pandemic and has made this a permanent service in the County. Many retail establishments in the State also offer free Wi-Fi access via hotspots.

Cellular broadband is available from AT&T, T-Mobile, and Verizon Wireless throughout most of Delaware, but not all of it. While this Plan does not propose using BEAD funds to enhance mobile service, the Plan recognizes that having more robust fiber connectivity across the State will dramatically enhance the opportunities for mobile providers to offer better service to their customers. Thus, the projects funded by BEAD may also deliver the ancillary benefit of improved access to cellular internet.

In 2022, New Castle County conducted a mobile coverage study to determine where the County lacks coverage by the three largest commercial mobile service providers and/or FirstNet (AT&T). The aggregated results for all providers indicated that 18 percent of the County experiences poor to no cellular coverage. The study also identified potential locations for the County to construct new cell towers to improve coverage.

3.4.5 Digital equity

Stakeholder engagement and survey efforts indicate that Delaware's digital equity needs include access to affordable broadband services and increased enrollment in broadband service subsidy programs, device access, and digital literacy training.

As discussed in Section 3.4.3, data from surveys conducted by the State in 2023 and 2021 show that affordability of broadband service is a persistent concern for many households in Delaware and affects their decision to subscribe to service. In 2021, just 15 percent of respondents strongly agreed that the market currently provides high-speed internet at prices they could afford, while 26 percent agreed. While the majority of respondents (85 percent) were extremely willing to subscribe to high-speed services for \$10 per month, agreement dropped sharply as the price point increased. At the same time, residents are likely underutilizing existing broadband subsidy

⁶¹ Broadband Data Collection system, National Broadband Map, FCC, <https://broadbandmap.fcc.gov/data-download/nationwide-data?version=jun2022>.

programs. According to the 2023 survey, 80 percent of households earning less than \$50,000 per year are not receiving a subsidy.

Access to sufficient computing devices also presents a barrier for some residents—particularly lower-income households: 19 percent of households surveyed in 2023 earning less than \$50,000 did not own a computer, compared to only 2 percent of households earning between \$100,000 and \$149,999. Over half (53 percent) of lower-income households rely on a single computer at home, while just 14 percent of households in that higher-income bracket had one computer and 84 percent had two or more.

Using and maintaining that device can present an additional challenge. While the majority (94 percent) of all households surveyed in 2021 indicated that they had a desktop, laptop, or tablet at home, seven in 10 respondents with internet access reported experiencing difficulties with their device, with approximately one fifth experiencing issues once a week or more. A quarter of respondents disagreed or strongly disagreed that they know how to troubleshoot problems with technology.

If their device became unusable, 6 percent of all respondents could not replace it in the foreseeable future, and almost one-fifth would require one to six months. Results for this question were almost identical in the 2023 survey and showed some correlation with household income: 29 percent of households earning less than \$50,000 per year would need one to six months to replace a non-working computer, and 8 percent would be unable to replace it—compared to 16 percent and 4 percent, respectively, of households earning between \$100,000 and \$149,999.

As lower-income households tend to own fewer devices and face more difficulty replacing them, residents may experience more instability around their access to devices.

While most residents are comfortable performing basic tasks online, many would also like to improve their digital skills. The majority of respondents to the 2023 survey indicated were very confident they could send and receive emails and access telehealth services, for example (90 percent and 81 percent, respectively). Although the 2021 survey saw similar results across various tasks, almost half of respondents agreed or strongly agreed that they would like to become more confident using computers and related technology.

Notably, however, lower-income respondents were less confident in their skills across all the tasks surveyed than higher-income households. As a representative example from 2023, 84 percent of respondents in households earning less than \$50,000 were very confident they could send or receive emails, compared to 98 percent of respondents in households in the \$100,000 and \$149,999 bracket. Households with a member who is 65 years of age or older were also less confident than the overall response rate in their abilities to complete several tasks, including

participating in online calls, taking online classes, searching for a job online, and working remotely.

Nationwide and in Delaware, digital equity in terms of the availability of digital skills for employment is a particularly important issue. The Brookings Institution calls it “digitalization”—the transformation of employment opportunities to require some level of digital skills and comfort with technology.⁶² Brookings finds that as of 2020, 77 percent of employment in the United States has either a medium or high digitalization level.⁶³ Brookings also finds that the fastest growing employment sectors have the highest demand for digital skills.

The FCC 2020 BDAC Report also finds growth in professions with high digitalization, finding for example that jobs in cybersecurity have increased by 43 percent in 2022, compared to just an 18 percent increase in the more general labor market during the same time frame.⁶⁴ This trend toward requiring increased digital skills even for “low tech” employment opportunities in warehouses, construction sites, and retail further exacerbates the digital divide. Statistics further shows that people of color are underrepresented in employment with high levels of digitalization.⁶⁵ Where the digital divide is greatest, the digitalization of employment creates a larger digital divide by leaving those without the opportunity to gain digital skills farther and farther behind.

It is also the case that increased digitalization brings with it increased productivity and increased pay levels. Brookings finds that the “wage premium” for jobs with high digitalization levels as compared to those jobs requiring medium digital skills is 47 percent.⁶⁶ Thus, communities with a concentration of employment opportunities with high demand for digital skills—which tend to be concentrated in urban and metro areas and on the east and west coast—have overall increased pay levels than those with lower digital skills jobs and more opportunity for workers to develop the necessary digital skills.⁶⁷ Creating a workforce with increased digital skills will not only help to close the digital divide, but create socioeconomic opportunities to support families and communities.

⁶² Mark Muro and Sifan Liu, The Brookings Institution, “As the digitalization of work expands, place-based solutions can bridge the gaps,” February 7, 2023, <https://www.brookings.edu/research/as-the-digitalization-of-work-expands-place-based-solutions-can-bridge-the-gaps/>.

⁶³ Mark Muro and Sifan Liu, The Brookings Institution.

⁶⁴ FCC BDAC Report, p.5, citing Brent Parton, U.S. Department of Labor Blog, “Strengthening and Diversifying the Cybersecurity Workforce,” September 19, 2022, <https://blog.dol.gov/2022/09/19/strengthening-and-diversifying-the-cybersecurity-workforce>.

⁶⁵ Mark Muro and Sifan Liu, The Brookings Institution.

⁶⁶ Mark Muro and Sifan Liu, The Brookings Institution.

⁶⁷ Mark Muro and Sifan Liu, The Brookings Institution.

USDA further notes that closing the digital divide is critical to rural workforce development, as well as economic development with telehealth and remote work.⁶⁸

The BEAD program's investment in expanding broadband access will lead to significant "indirect" job creation, which will require digital skills for those employees that intend to take advantage of these new jobs. For example, the National Governors Association has a program called the Workforce Innovation Network and members of that Network have created the State Digital Equity Scorecard.⁶⁹ This tool tracks how states are meeting digital workforce needs through trainings, apprenticeships, funding programs. Estimates from a 2016 Deloitte report suggest that just a 10 percent penetration in broadband access would create 800,000 jobs over three years.⁷⁰ The Federal Reserve Bank of Philadelphia issued a report finding that providing access to a computer and broadband services could bring 400,000 new job seekers into the market in the top 25 metropolitan areas in the country.⁷¹

⁶⁸ U.S. Department of Agriculture, "USDA Resource Guide for Rural Workforce Development: Together, America Prospers," June 2021, <https://www.rd.usda.gov/sites/default/files/060721-ic-ruralworkforceguide-final508.pdf>.

⁶⁹ National Governors Association, Commentary, "Governors' Broadband Investments Are Creating Jobs," September 13, 2021, <https://www.nga.org/news/commentary/governors-broadband-investments-are-creating-jobs/>.

⁷⁰ Jack Fritz and Dan Littmann, Deloitte Consulting LLP, "Broadband for all: charting a path to economic growth," April 2021, <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/process-and-operations/us-charting-a-path-to-economic-growth.pdf>.

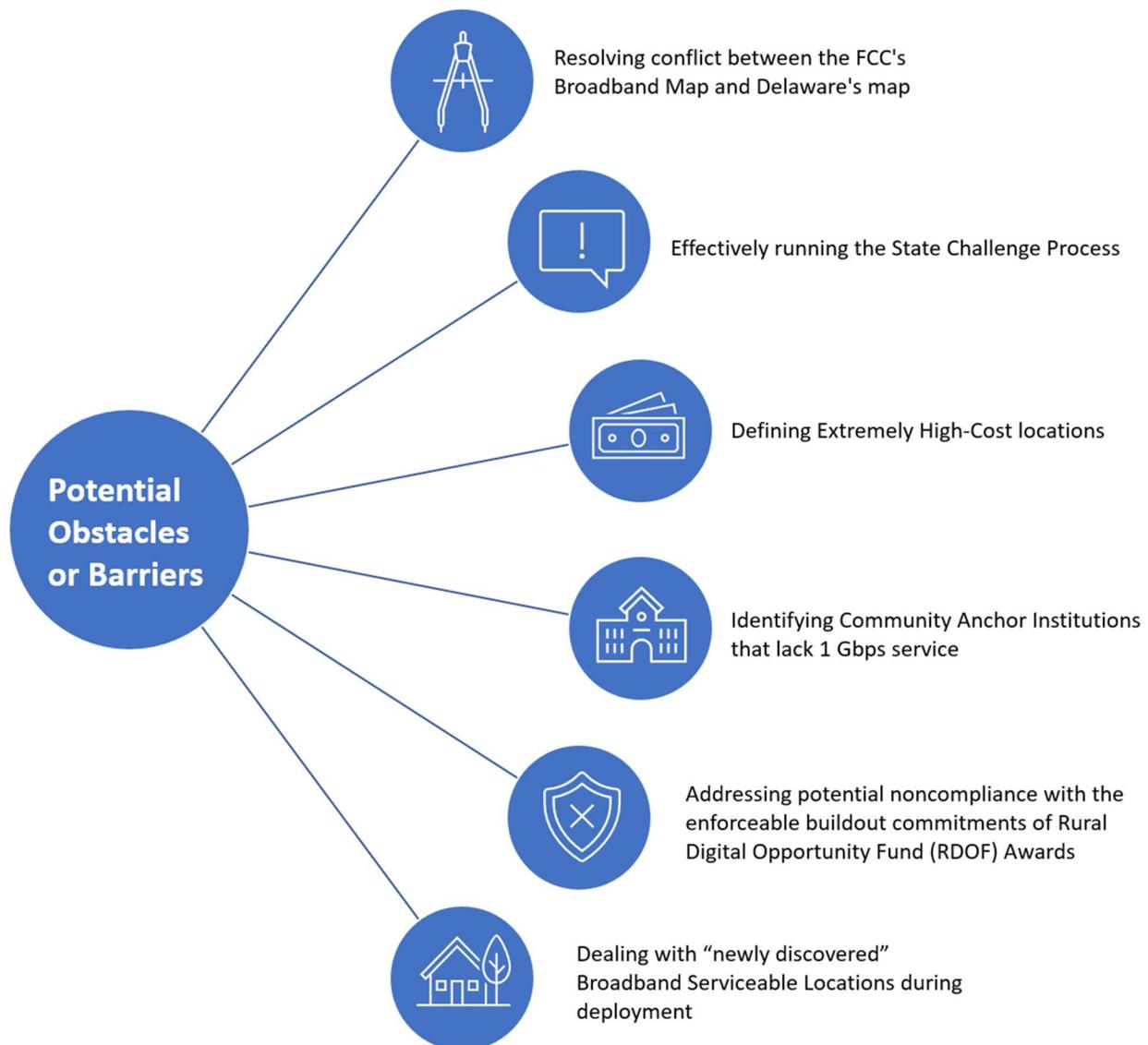
⁷¹ Alvaro Sanchez and Adam Scavette, Federal Reserve Bank of Philadelphia, "Broadband Subscription, Computer Access, and Labor Market Attachment Across U.S. Metros," June 2021, <https://www.philadelphiafed.org/-/media/frbp/assets/community-development/reports/broadband-subscription-computer-access-and-labor-market-attachment-across-us-metros.pdf>.

4 Obstacles or barriers

This section describes known or potential obstacles or barriers that might impede the successful implementation of Delaware’s BEAD Plan—as well as the Delaware Broadband Office of Delaware’s Department of Technology and Information (DTI, the Eligible Entity) plan to address these challenges.

This Five-Year Action Plan represents a comprehensive needs assessment that will guide the State’s Initial Proposal. Through the process of developing this Plan, DTI has identified a range of potential obstacles or barriers that it will seek to mitigate. Successfully working through these potential barriers will be critical to achieving the State’s vision of universal broadband service and digital equity throughout the State.

Figure 8: Potential obstacles or barriers



In addition to the high-level discussions in the subsections below, the potential obstacles or barriers include the following:

- **How to deal with “newly discovered” Broadband Serviceable Locations (BSL) during deployment.** During implementation of another deployment program, funded by the American Rescue Plan Act, it was routine for ISPs to find homes and businesses that lacked qualifying broadband access, but were not on existing address lists or the FCC Broadband Map. BEAD lacks the flexibility to allow us to efficiently add these “newly discovered” homes to our deployment list of addresses, and as a result we anticipate very upset constituents who see their neighbors getting subsidized broadband access but will not be receiving it themselves. We will be seeking a waiver to be able to deploy to these BSLs as they are found.
- **How to resolve conflict between the FCC’s Broadband Map and Delaware’s map** – both in terms of availability and fabric, the State seeks guidance on which data sources the NTIA will accept.
- **How to effectively run the State Challenge Process** – related to the discrepancies between the FCC’s broadband map and the State’s location and service data, the State will need to develop guidelines and an implementation scheme for an effective challenge process.
- **How to define Extremely High-Cost locations** – for example, can Delaware include very long driveways (over 1,000 feet) and use satellite to serve those locations? Can the State identify those long driveways before its subgrantee is on site?
- **How to identify Community Anchor Institutions that lack 1 Gbps service** – identifying all qualifying anchor institutions likely will require more extensive research than can be completed prior to the State’s submittal of this Plan.
- **How to address potential noncompliance with the enforceable buildout commitments of Rural Digital Opportunity Fund (RDOF) awards** – the BEAD rules prohibit the State from allocating funds to areas that will be served by RDOF-funded projects. Delaware’s 2021 Broadband Strategic Plan questioned whether an awardee in the State—Talkie—would deliver on its obligations.

The following sections describe potential obstacles more generally.

4.1 Legislative and regulatory barriers

Delaware is a small state that can react quickly to unexpected legislative or regulatory barriers. The State's experience with ARPA deployment has shown that the whole of Delaware government is fully committed to this cause and is working together very well to lower barriers.

The State recognizes the importance of efforts to streamline State and local permitting in such a way as to protect the State's interests while also ensuring effective and efficient broadband construction permitting.⁷² To that end, the State is proud to note that it has not experienced any permitting-related barriers in any ARPA-funded projects. To further protect against permitting delays in BEAD implementation, DTI is considering submitting in its Initial Proposal a request for authorization to use BEAD funds to hire additional permitting staff for the Delaware Department of Transportation.

Delaware is working on streamlining its permitting process, and the State's Government Efficiency and Accountability Review (GEAR) Board recommends supporting "the Ready in Six" permitting improvement initiative by investing in recommendations for specific process improvements being gathered through a survey distributed to over 1,500 industry focused partners."⁷³

In addition, the Ready In 6 Coalition is actively working within the State's regulatory and permitting framework to "enable economic development investors to achieve permit approvals in six months or less."⁷⁴ The Ready In 6 Coalition is comprised of: the Delaware Business Roundtable, Delaware State Chamber, Kent Economic Partnership, Greater Kent Committee, Sussex County Economic Development Action Team, ACEC Delaware, the Committee of 100, the Central Delaware Chamber, the New Castle County Chamber, Delaware Contractors Association, the Delaware Chapter of Associated Builders and Contractors, and the Home Builders Association of Delaware.⁷⁵

4.2 Labor shortages

National experts report the pool of skilled workers for broadband deployment is smaller than necessary for the broadband projects that BEAD will fund nationwide.⁷⁶ In Delaware, though, ISPs

⁷² Lindsay McKenzie, "NTIA chief says states have 'homework assignments' on broadband permits," *State Scoop*, <https://statescoop.com/alan-davidson-ntia-state-broadband-permits/>.

⁷³ "Governor Carney Releases Government Efficiency and Accountability Review (GEAR) Board Report," December 9, 2022, <https://news.delaware.gov/2022/12/09/governor-carney-releases-government-efficiency-and-accountability-review-gear-board-report/>.

⁷⁴ "Analysis of Delaware Permit Competitiveness," Ready in 6 Coalition, https://www.dbrt.org/files/ugd/5cde7e_eff6b929af5e4d6cacc77ddd7b7f040f.pdf.

⁷⁵ Delaware Business Roundtable, "Ready In 6," <https://www.dbrt.org/ready-in-6>.

⁷⁶ See, for example: Will Feuer, "The U.S.'s \$42.5 Billion High-Speed Internet Plan Hits a Snag: A Worker Shortage," *Wall Street Journal*, April 23, 2023, <https://www.benton.org/headlines/us%E2%80%99s-425-billion-high-speed-internet-plan-hits-snag-worker-shortage>.

report they will *not* need any additional workforce to complete BEAD project. (That said, some ISPs have agreed to consider hiring graduates of a BEAD-funded training program if DTI funds such a program.) The ongoing implementation of the ARPA-funded broadband expansion have revealed no workforce concerns.

Anticipating the possibility of workforce concerns down the line, DTI is actively evaluating and planning for training efforts in collaboration with a range of potential partners. These efforts, which will be described in greater detail in the State’s Initial Proposal, may include a variety of approaches that are properly scaled to the needs of the State and the regional nature of both the workforce and the broadband industry. Broadband workforce training programs will need to be both nimble and right sized as a result.

As described elsewhere in this Plan, the State plans to use new and existing relationships to promote workforce development efforts and to use its grant program to encourage service providers to hire and train employees as part of their BEAD-funded projects. Workforce development efforts supported by Digital Equity Act funding will further enhance BEAD projects by providing a larger, more diverse pool of talent, which is also an acknowledged need and priority.

4.3 Supply chain issues and materials availability

The extensive funding allocated to broadband infrastructure deployment by Congress—and the current and planned investments by state and local governments and ISPs nationwide⁷⁷—has caused a spike in demand for labor and materials. This increased demand compounded an already disrupted market still recovering from Covid-19 caused factory closures and other issues in the supply chain.

Supply chain challenges in general reached unprecedented levels during the COVID-19 pandemic and have not disappeared. “Given that there are multiple new risk factors on the horizon, it is hard to envision trust in the system being restored to pre-COVID-19 levels any time soon,” according to a 2023 S&P Global Intelligence report,⁷⁸ citing both geopolitical risks such as Ukraine and Taiwan and transportation risks including labor unrest and unanticipated cargo surges.

According to recent research, there is a nine- to 12-month waiting period⁷⁹ on orders of new fiber. The allocation of BEAD funding may exacerbate the situation.

⁷⁷ Diana Goovaerts, “Editor’s Corner: Is the fiber hangover real?” *Fierce Telecom*, March 15, 2023, <https://www.fiercetelecom.com/broadband/editors-corner-fiber-hangover-real>.

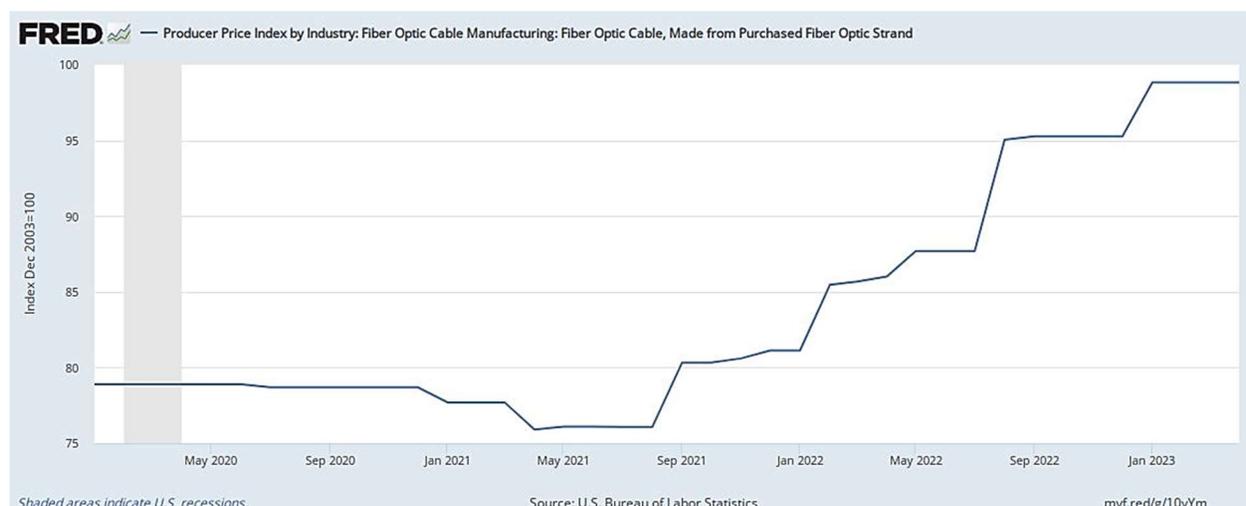
⁷⁸ Peter Tirschwell, “Risk Will Define Supply Chains for Years To Come,” S&P Global Market Intelligence, January 13, 2023, <https://www.spglobal.com/en/research-insights/featured/special-editorial/look-forward/risk-will-define-supply-chains-for-years-to-come>.

⁷⁹ “Strategies to Mitigate Bottlenecks in the Current Fiber Broadband Supply Chain,” Fiber Broadband Association, October 2022, <https://www.fiberbroadband.org/d/do/4495>.

During 2023, the impact of inflation on materials costs also remains a potential barrier. “Even though inflation started to cool toward the end of 2022, it is still unclear how long it will take to return to its long-run average—that is, if currently high inflation will persist,” the Federal Reserve Bank of St. Louis said.⁸⁰

For example, the fiber optic cable producer price index from the Federal Reserve Bank of St. Louis rose more than 20 percent between January 2020 and January 2023, the most recent date for which data are available as of the writing of this Plan, as shown below.⁸¹

Figure 9: Fiber optic cable producer price index, January 2020 to January 2023



DTI will remain aware of these supply chain and materials challenges—including limited availability and higher prices—and will seek to advise ISPs as requested, including on the best practices identified by the Fiber Broadband Association in its recent white paper, “Strategies to Mitigate Bottlenecks in the Current Fiber Broadband Supply Chain.”⁸² As of the submission of this Plan, ISPs have not expressed concern regarding labor or supply chain issues; however, DTI will continue to engage providers on this critical and potentially challenging issue. Furthermore, DTI will incorporate the latest cost data as it designs its grant program.

⁸⁰ Michael McCracken and Trần Khánh Ngân, Federal Reserve Bank of St. Louis, *On the Economy Blog*, “Will High Inflation Persist?” January 10, 2023, <https://www.stlouisfed.org/on-the-economy/2023/jan/will-high-inflation-persist>.

⁸¹ Federal Reserve Bank of St. Louis, “Producer Price Index by Industry: Fiber Optic Cable Manufacturing: Fiber Optic Cable, Made from Purchased Fiber Optic Strand (PCU3359213359210)” for the period January 2020 to January 2023, <https://fred.stlouisfed.org/graph/fredgraph.png?g=10yYm> (note that the hyperlink connects to the most recent data and therefore may link to a more recent version of the graph).

⁸² “Strategies to Mitigate Bottlenecks in the Current Fiber Broadband Supply Chain,” Fiber Broadband Association, October 2022, <https://www.fiberbroadband.org/d/do/4495>.

4.4 Industry participation

As DTI's experience in broadband grant-making illustrates, industry participation—that is, commitments by ISPs to share the cost and risk of last-mile broadband deployment in exchange for partial public funding—will be an important factor in closing the State's digital divide.

This is particularly true given the findings presented in DTI's 2021 Broadband Strategic Plan. Analysis conducted for that study using the State's GIS database, the State's data about unserved areas, and field and desk survey results found that approximately 9,600 of the State's estimated 11,600 unserved homes could be served if the existing telecommunications providers would expand their network footprints by half a mile into unserved areas (i.e., an edge-out strategy).

Just as Comcast, Verizon, and Mediacom have accepted State funding to build new broadband infrastructure to connect more than 6,000 unserved homes, the State believes ISPs and other industry participants will continue to be engaged partners in the State's efforts to bridge the digital divide. The stakeholder outreach DTI conducted in preparation of this Plan confirms that ISPs in the State intend to be collaborative partners in future broadband deployment efforts.

4.5 Topography

Delaware's beaches have played a key role in the tourism industry, which contributed 5 percent of State GDP in 2019, according to a report by the Delaware Tourism Office.⁸³ But those beaches also point to a topographical fact: The entire State is classified as a coastal zone due to the proximity of inland areas to tidal waters. No geographic location within the State is more than 8 miles from tidal waters.⁸⁴

As a result, flooding is Delaware's topographical challenge. Delaware has the lowest mean elevation of all U.S. states at 60 feet.⁸⁵ Delaware is located at a sea level rise "hotspot" where "sea levels could rise faster and higher than elsewhere due to a combination of rising seas and sinking land."⁸⁶

Topography thus presents a potential obstacle to broadband deployment to the extent that construction methods need to consider survivability in terms of flooding and other natural disasters. However, given that this is a known concern, both the State and private deployers have a demonstrated history of successfully mitigating this issue.

⁸³ "The Value of Tourism: 2019," Delaware Tourism Office, https://www.visitdelaware.com/sites/default/files/2021-06/The_Value_of_Tourism_2019_77ac3097-b2ea-444f-9b1d-090b01d5b9b8.pdf.

⁸⁴ NOAA National Centers for Environmental Information, "Delaware State Climate Summary 2022," available via interactive map at <https://statesummaries.ncics.org/>.

⁸⁵ UD Research, Vol.4 No. 1, "Introduction," November 2012, https://www1.udel.edu/researchmagazine/issue/vol4_no1/slr_intro.html.

⁸⁶ UD Research, Vol.4 No. 1.

Delaware’s fiber broadband backbone⁸⁷ is designed to address this challenge, creating ring topologies where possible to minimize the impact of any cuts or breaks. The Delaware Department of Natural Resources and Environmental Control (DNREC) has implemented a comprehensive multi-agency floodplain management program.⁸⁸ DNREC has created a Flood Planning Tool to help residents and businesses understand their flood risk.⁸⁹

4.6 Affordability

Affordability is a barrier to broadband adoption in Delaware for some and an obstacle for many, and while discounted services and subsidy programs are available there is low awareness of and participation in these programs.

A statistically valid survey conducted for the State’s 2021 Broadband Strategic Plan found that affordability was a barrier to broadband adoption. At that time, only four in 10 respondents felt that the market provided high-speed internet at a price their household could afford. Discounted internet services and subsidy programs were available (as they are now) but appeared to be significantly underused, with many low-income respondents reporting they were unaware of programs such as Comcast’s \$10-per-month Internet Essentials service.

Similarly, there is low awareness nationwide of the federal Affordable Connectivity Program (ACP), which provides a \$30 monthly subsidy for broadband services to low-income and other eligible households.⁹⁰ That means households that might be able to sign up for free or low-cost service are not taking advantage of the opportunity.

The State of Delaware is already leading the way in helping its residents to overcome affordability as a barrier. In 2023, Governor Carney and a coalition of municipal leaders and community partners launched a statewide initiative to increase awareness and enrollment in the ACP through local outreach, supported by training and enrollment materials from EducationSuperHighway.⁹¹ In the future, DTI may continue to develop even more robust initiatives to further educate residents about the availability of low-cost internet programs

⁸⁷ “Fiber Broadband,” Delaware Broadband Initiative, <https://broadband.delaware.gov/pages/index.shtml?dc=fiber>.

⁸⁸ DNREC, “Floodplain Management,” <https://dnrec.alpha.delaware.gov/watershed-stewardship/waterways/floodplains/>. (“Flooding is a year-round threat in Delaware. Just a few inches of rainfall can cause significant damage to homes and businesses. Some coastal areas are at risk of flooding caused by storm surges or tidal flooding during coastal storms.”)

⁸⁹ DNREC, “Flood Planning Tool,” <https://floodplanning.dnrec.delaware.gov/>.

⁹⁰ “Half of ACP-Eligible Households Still Unaware of the Program,” Benton Institute for Broadband & Society, March 17, 2023, <https://www.benton.org/blog/half-acp-eligible-households-still-unaware-program>.

⁹¹ “Governor Carney Launches Statewide Initiative to Increase Affordable Connectivity Program Adoption – State of Delaware News,” News release, March 21, 2023, <https://news.delaware.gov/2023/03/21/icymi-governor-carney-launches-statewide-initiative-to-increase-affordable-connectivity-program-adoption/>.

offered by incumbent ISPs, and to assist residents with enrollment. DTI also expects to promote residents' enrollment in the ACP.

4.7 Digital literacy

While most Delawareans have adequate internet and computer skills, a small percentage has significant challenges doing basic things online and expressed an interest in improving their online skills. According to the residential survey DTI conducted in 2021 to inform the Delaware Broadband Strategic Plan,⁹² most respondents had adequate internet and computer skills. However, a small segment of respondents reported significant challenges with respect to their ability to perform basic functions online and avoid harms. Respondents also expressed interest in improving those skills.

For example, one-fourth of respondents did not know how to troubleshoot technology issues. Additionally, 14 percent reported they did not know how to recognize and avoid a phishing attack.⁹³

A survey conducted in early 2023 as part of the preparation of the State's Digital Equity Plan found similarly high overall levels of proficiency in common online tasks. Notably, however, respondents in lower-income households indicated less confidence in their skills than higher-income respondents across all tasks surveyed. Households with a member who is 65 years of age or older also reported lower skill levels than the overall rate for several tasks, including participating in video or voice calls online and searching for a job online.

DTI intends to address these digital literacy issues by identifying and supporting established, successful digital literacy programs (see Section 3.3 and Section 5.1). As Delaware expands efforts to improve digital literacy, a new partnership with the Delaware Division of Libraries and Literacy Delaware⁹⁴ will be an asset the State can draw on as the need for this work becomes clearer.

4.8 Procurement and contracting

Effective procurement and contracting are essential to the success of government-funded infrastructure projects—so challenges in this regard are potential obstacles to the success of the BEAD Plan. That said, DTI and the State of Delaware have a successful track record of efficient procurement and contracting for infrastructure deployment, including fiber funded by ARPA and CARES Act. Given this successful track record, DTI does not anticipate that procurement or contracting will present any obstacles to the implementation of this Plan.

⁹² "Broadband Strategic Plan of the State of Delaware," DTI, May 2021, <https://broadband.delaware.gov/contentFolder/pdf/strategicplan.pdf>, p. 64.

⁹³ "Broadband Strategic Plan of the State of Delaware," DTI, May 2021.

⁹⁴ Delaware Libraries, "Services," click "Northstar Digital Literacy" at <https://lib.de.us/services/>; Literacy Delaware, "New Delaware Division of Libraries Partnership," August 23, 2022, <https://literacydelaware.org/article>.

5 Implementation plan

This section describes the State’s comprehensive stakeholder engagement process; its priorities, planned activities, and strategies in terms of implementing the BEAD Five-Year Action Plan; and the estimated cost and timeline for achieving universal service in Delaware.

5.1 Stakeholder engagement process

This section describes the comprehensive external engagement process the Department of Technology and Information (DTI) conducted in preparation for this Plan. DTI intends to continue its stakeholder engagement and outreach efforts around broadband deployment and digital equity in the State—particularly to engage with Covered Populations and stakeholders that historically may not have had as much representation in public planning processes.

Figure 10: Overview of stakeholder engagement process



DTI is Delaware’s central information technology (IT) organization and is chartered to deliver both core technology services to State organizations and to guide technology direction and investments. To achieve DTI’s mission of delivering high-quality and cost-effective broadband solutions, DTI has established a strong collaborative relationship with local and State agencies and the organizations they serve.

Delaware has a strong track record of collaboration and successful inclusive engagement with respect to broadband deployment. DTI followed through on this commitment when designing and implementing a truly inclusive engagement process so that all State residents had multiple opportunities to participate and share their meaningful feedback to help craft the Five-Year Action Plan.

DTI developed an inclusive engagement model to facilitate feedback on the creation of this Plan from diverse stakeholder groups throughout Delaware. DTI utilized its existing relationship with Delaware stakeholders to identify and engage with private individuals, community anchor institutions, elected officials, faith-based communities, rural communities, labor unions, industry entities, civil rights organizations, small businesses, and the unserved, underserved, and underrepresented communities of Delaware. The stakeholder engagement process also included representatives of the Covered Populations⁹⁵ that have been identified as core stakeholder groups.

The stakeholder engagement effort was comprised of email outreach, 13 statewide meetings with a complete range of stakeholders, four public forums across the State, a phone survey of Delaware residents, polls during the presentations, follow-up stakeholder surveys, and a Digital Equity Needs Assessment survey.

DTI actively collected and updated its stakeholder list throughout the engagement process to further diversify and expand outreach efforts. In total, 204 organizations with hundreds of associated contacts were invited to attend DTI's engagements.

The stakeholder engagement effort comprised email outreach, 13 statewide meetings with a complete range of stakeholders, five public forums across the State, a phone survey of Delaware residents, polls during the presentations, follow-up stakeholder surveys, and a Digital Equity Needs Assessment survey made available on DTI's website for both stakeholders and the public. The process demonstrates collaboration with local and regional entities (governmental and non-governmental), reflecting DTI's effort to facilitate an inclusive and effective engagement model.

5.1.1 Full geographic coverage

DTI engaged the full geographic range of Delaware through both stakeholder outreach and public engagement.

DTI maintains ongoing communication with the organizations and agencies that it services—including Legislative, Executive, and Judicial government branches, public schools, and other

⁹⁵ Per NOFO Section I.C.g, referencing IJJA Section 60302(10), the covered populations are:

1. Individuals who live in covered households;
2. Aging individuals;
3. Incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility;
4. Veterans;
5. Individuals with disabilities;
6. Individuals with a language barrier, including individuals who—
 - a. Are English learners; and
 - b. Have low levels of literacy;
7. Individuals who are members of a racial or ethnic minority group; and
8. Individuals who primarily reside in a rural area.

government and non-government agencies that serve Delaware. Additionally, the executive broadband director engages in outreach by interview with specific agencies and organizations.

To ensure the entirety of the State had the opportunity to engage with the planning efforts, DTI began its stakeholder outreach by hosting a Virtual Statewide Kickoff Meeting on February 23, 2023. The Virtual Statewide Kickoff Meeting invitation was distributed to 204 identified stakeholder contacts throughout Delaware. DTI then hosted 12 more virtual stakeholder meetings. Invitations to the meetings were sent out to stakeholders statewide. Attendees in both the Statewide Kickoff Meeting and the 12 additional virtual stakeholder meetings were asked to answer brief survey questions through an online poll during the meeting about the broadband and digital equity needs of their organization, their constituents, and the State of Delaware.

DTI first engaged the public through a residential phone survey. The survey interviewed a random sample of adult Delaware residents sourced from a commercially available dataset of phone numbers about broadband availability, digital skills, and their broadband needs.

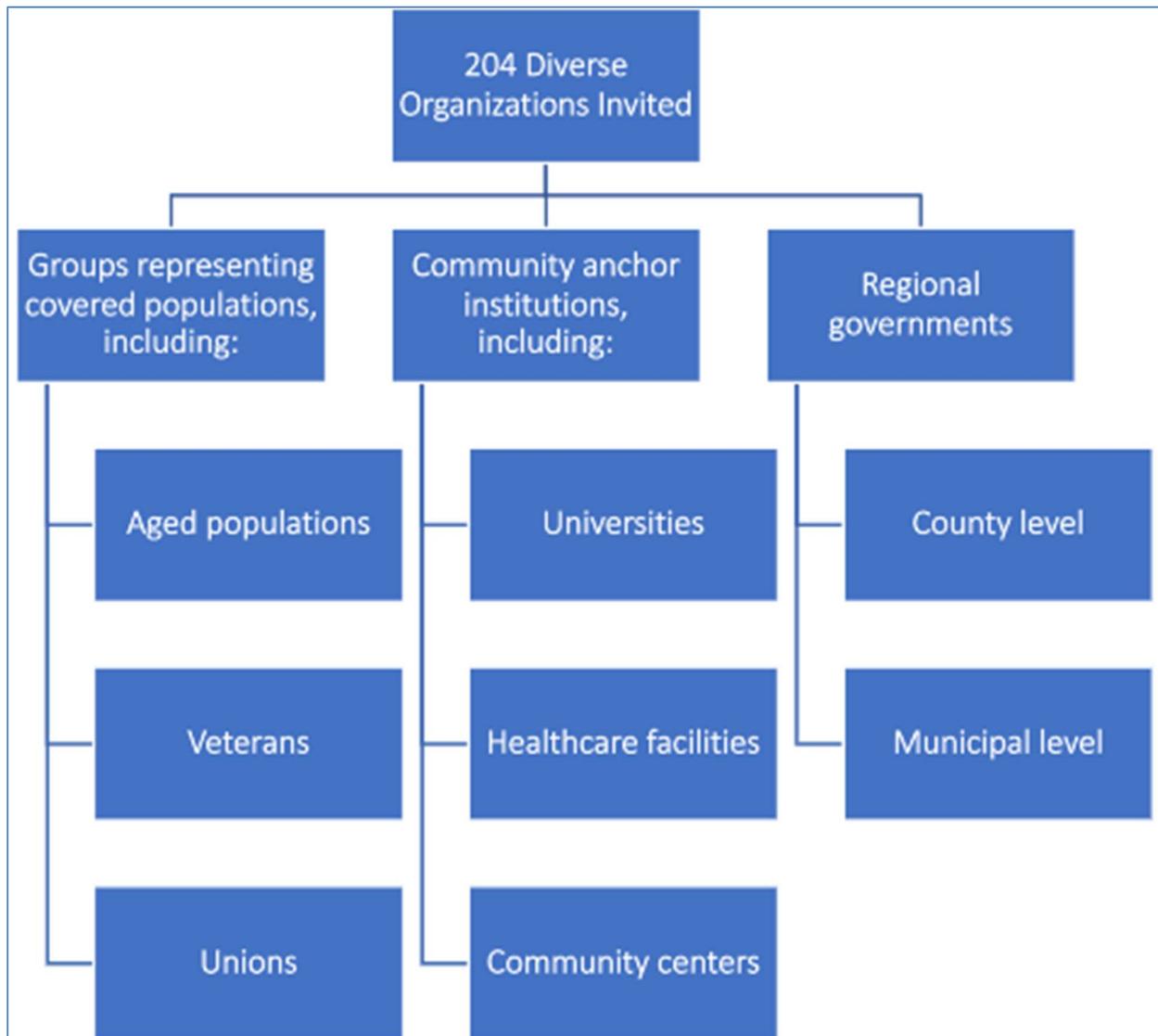
DTI also held five hybrid public forums in the City of Dover on March 1st, the City of Georgetown on March 2nd, the Town of Middletown on March 6th, the City of Seaford on March 14th, and the City of Wilmington on March 15th. The public forums provided a broad review of broadband concepts, current broadband initiatives and projects, and how the public can engage in infrastructure and digital equity planning and development. The forum was open for questions, comments, and feedback from the public. Each in-person forum was also livestreamed to allow online participants the ability to ask questions and provide feedback.

The locations of the forums were selected to maximize full geographic coverage of the State. These engagements were held at local libraries with the intent of maximizing accessibility for underrepresented communities by hosting the events at locations that provide and enable community services and support.

5.1.2 Meaningful engagement and outreach to diverse stakeholder groups

At each engagement DTI conducted, several strategies were implemented to ensure the attendees had a comprehensive understanding of Delaware’s broadband goals and were able to provide meaningful feedback. This included a substantive overview of the program (“Broadband 101” and an introduction to broadband technologies) as well as opportunities throughout the stakeholder engagements for all participants to provide input.

Figure 11: Overview of comprehensive outreach and engagement efforts



DTI leveraged its existing collaborative relationship with stakeholders to expand its already inclusive, diverse outreach list. Entities on the list included organizations representing aged populations (Laurel Senior Center, AARP, Lillian Smith Senior Center), unions (Communications Workers of America), universities (University of Delaware, Delaware State University), regional governments, school districts, healthcare facilities, internet service providers, organizations representing veterans (Veteran Awareness Center), community centers (Latin American Community Center), industry-associated organizations (EducationSuperHighway), and many more representing the diverse communities of Delaware. A total of 204 organizations with hundreds of associated contacts were ultimately invited to attend DTI’s engagements.

The virtual stakeholder meetings that followed the initial statewide meeting were targeted to specific stakeholder groups that highlighted the broad range of stakeholder interests and

constituents (see Appendix D): Local and Regional Governments on March 15th and 16th; Community Anchor Institutions on March 22nd and 23rd; Internet Service Providers on March 29th and March 30th; Digital Equity and Covered Population Serving Organizations on April 5th and 6th; Workforce Development on April 12th and 13th, and Business and Economic Development on April 19th and 20th. Stakeholders had the opportunity to ask questions and provide feedback on broadband challenges, needs, and potential opportunities specific to their constituents and community.

Figure 12: Virtual stakeholder meetings



DTI also held five public forums in person at local libraries to encourage community participation in a familiar and accessible location. Each in-person engagement offered a hybrid option that allowed a resident from anywhere in Delaware to both watch the live presentation and submit feedback in real time.

After evaluating the effectiveness of these larger public meetings, DTI supplemented this outreach with one-on-one meetings and presentations given by invitation at regular meetings of membership organizations. Presentations given to audiences of hundreds of community leaders at luncheons and membership meetings of organizations like the Delaware State Chamber of Commerce, the Delaware League of Local Governments, and at a variety of digital equity focused nonprofits have successfully solicited greater input on community needs and what existing digital equity programs are already in place in Delaware.

Feedback from some of these meetings included

- Delaware Council on Farm and Food Policy – Serving as a resource for food security and agriculture issues for the State, the Council maps both resources and needs. The Council has a critical reach into communities where rural poverty is highest and as such could be beneficial with respect to digital opportunity outreach.

- Tech Council of Delaware – This statewide council has several important IT workforce development opportunities available to residents, including Cyber-Security and Tech internships.
- Delaware State Housing Authority – This statewide agency has a direct reach into BEAD-defined covered populations and offers potential partnership on future digital adoption and access expansion.
- Delaware Department of Corrections – Potential opportunities exist for defined workforce training as part of State programs.

During each engagement DTI considered the recipient’s level of familiarity with broadband. To assure the public and stakeholders could make informed insights about their and their constituents’ broadband and digital equity needs, DTI provided a custom overview of broadband history, usage, and functionality. DTI then reviewed its major broadband initiatives and funding for both infrastructure and digital equity made available through BEAD.

5.1.3 Multiple awareness and participation mechanisms

For the statewide meeting and the 12 virtual stakeholder meetings, DTI sent a mass invite through email to all contacts on the stakeholder list in advance of the forums. DTI offered two dates for the virtual stakeholder meetings to allow stakeholders to select the date that best fit their schedule.

The public meetings were advertised on the Delaware State website, DTI's website and social media pages, and the Delaware Public Meeting Calendar.

In addition to the meetings, stakeholders and the public were able to provide feedback through surveys. Links to targeted stakeholder surveys were provided during meetings and in a post-meeting follow-up email. A Digital Equity Needs Assessment survey was also made available on DTI’s website to enable stakeholder feedback from both expert representatives and the public.

5.1.4 Clear procedures to ensure transparency

DTI took significant steps to ensure compliance with all applicable laws and best practice procedures. Participants were able to attend meetings anonymously and closed-caption transcripts were available in real time to enable additional engagement for some participants with differing abilities. The surveys allowed respondents to choose which questions to answer, which allowed individuals to control the level of personal detail provided.

Information was collected from meeting chats, Q&A sessions, and surveys. If contact information was provided, individuals were added to the stakeholder list. The intent to include the participants in future stakeholder outreach was clearly communicated during meetings.

After meetings, the slide deck was sent to all attendees that provided their contact information along with all invited stakeholders for that topic (e.g., the Community Anchor Institutions meeting slide deck was sent to all healthcare facilities, libraries, schools, higher education facilities, and other relevant organizations.)

5.1.5 Outreach and engagement of unserved and underserved communities

DTI took a proactive approach in advance of all forums to engage representatives of and organizations that serve defined Covered Populations by ensuring the contact list used for outreach was both comprehensive and inclusive.

DTI additionally engaged with unserved and underserved communities by ensuring accessibility to materials, meetings, and information. The stakeholder virtual presentations were accompanied by closed captions. All advertisements for the public meetings were published in multiple languages (English, Spanish, and Creole) as requested by the libraries where the events were hosted.

The public meetings were hosted at local libraries to facilitate participation at a location that is both accessible and provides vital community support. All State library locations are accessible and compliant with the Americans with Disabilities Act (ADA) in accordance with federal law. Libraries serve as a familiar resource hub for underrepresented and underserved communities. Delaware libraries provide reading materials in accessible formats for individuals who are unable to read or use standard printed materials, host job and career assistance, enable access to social workers, and offer private telehealth kiosks. Individuals who were not able to join the meetings in person were able to attend virtually and engage in the Q&A segment of the presentation. This work with the public libraries is another example of the strong partnerships that DTI and the State have fostered as part of the engagement process specifically and in striving for universal service more broadly.

Going forward, DTI will continue to find opportunities to present to membership of community organizations (meeting constituents where they are). DTI will also host regular (quarterly) virtual town halls to give updates on the program and provide additional opportunities for the public to submit comments on DTI's work.

5.2 Priorities

The Delaware Broadband Office will work to **ensure that every Delawarean has access to a reliable, affordable, high-speed internet connection and the tools and understanding to use the internet safely and responsibly.** Full participation in the 21st century economy requires no less.

The State's priorities for broadband deployment (primary objectives) are aligned with the principal focus of the BEAD Program:⁹⁶

1. Serving 100 percent of unserved locations (i.e., below 25/3 Mbps) within five years
2. Serving 100 percent of underserved locations (i.e., between 25/3 and 100/20) within five years
3. Delivering gigabit connections to certain community anchor institutions that do not have that level of service within five years

Should BEAD funds remain after the first three objectives are fulfilled, the State will then focus on the next set of priorities:

4. Constructing line extensions to unserved and underserved residences that are determined to be extremely high-cost locations (i.e., replacing fixed wireless or satellite connections to those locations)
5. Upgrading internal wiring in multiple-dwelling-unit buildings to ensure the availability of reliable broadband access in low-income and affordable housing

Other digital equity initiatives, developed through ongoing community engagement and development of the Digital Equity Act Plan. These initiatives may be prioritized above items 4 and 5 above as needs as assessed and refined, and may include—by way of example and not limitation:

- Providing free or low-cost internet service to low-income residents, including those living in affordable housing (e.g., through a monthly subsidy)
- Expanding training and development of the State's broadband workforce, including for cybersecurity jobs
- Supporting digital navigator programs in public libraries
- Purchasing additional devices to enable broadband adoption by covered populations and low-income residents
- Delivering training to support the use of telehealth services

⁹⁶ "NOFO: BEAD Program," NTIA, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>, at p. 7.

DTI has established the following priorities to support the BEAD vision for broadband deployment and digital equity:

Table 12: Priorities for broadband deployment and digital equity

| Priority | Description |
|--|--|
| Engage community stakeholders to increase broadband adoption amongst covered populations | DTI will continue to engage critical community stakeholders, including anchor institutions, to help drive broadband adoption amongst covered populations, assess and find solutions to workforce gaps, and achieve other digital equity priorities. |
| Set reasonable “extremely high-cost location” standards | DTI will set “extremely high-cost location standards” that are as high as reasonably possible to prioritize end-to-end fiber deployment for as many locations as possible. |
| Develop strategies to bring service to “newly discovered” BSLs that are not on the FCC Broadband Map | DTI will engage with NTIA to find a workable solution to ensure the BEAD program actually delivers Internet for All in Delaware, because the State is anticipating constituent outrage at discovering that just because they are not on the FCC Broadband Map fabric they need to wait potentially years more for service. |

5.3 Planned activities

DTI’s plan for ensuring reliable, affordable broadband service to all residents may include the following activities, among others that are developed as the State collects more data and stakeholder input:

Provision of grant funding to potential ISP partners to achieve universal service: Utilize BEAD funding to award competitive grants to potential ISP partners to construct end-to-end fiber to unserved and underserved address locations as identified by the FCC data fabric and certified by the State’s challenge process. This activity will be complemented by the State’s previously awarded broadband deployment grants (e.g., using ARPA funding).

Award competitive grants to achieve 1 Gigabit connection speeds for community anchor institutions (CAI): Use remaining BEAD funding, after unserved and underserved address locations are awarded for buildout, for competitive grants to potential ISP partners to supply fiber 1 Gigabit connection speeds to identified CAIs that do not currently have such service today and are certified by the challenge process.

5.4 Key strategies

Ensuring universal, affordable, reliable, high-speed broadband service throughout the State of Delaware requires a comprehensive set of key strategies, all of which will work together and

complement each other in both their formulation and execution. As such, DTI is focused on three key strategies over the next five years to reach universal service.

The first strategy focuses on the use of a competitive subgrant process to drive construction and deployment of fiber infrastructure (as described in Section 5.3 above). In concert with the physical buildout must also be the successful utilization of partnerships to increase broadband adoption among residents, with a special emphasis on identified Covered Populations. The third key strategy focuses on strong workforce development programs that will power the broadband ecosystem with skilled labor. Each of these three strategies is discussed in greater detail below.

5.4.1 Successfully utilizing partnerships to increase broadband adoption

The State is a leader when it comes to creating strong partnerships with community stakeholders to address broadband affordability issues. This includes working with stakeholders to conduct outreach, education, and enrollment initiatives into the Affordable Connectivity Program (ACP). Governor Carney's administration launched a comprehensive education campaign in March 2023 via a statewide partnership with EducationSuperHighway to help drive broadband adoption amongst residents of covered populations.

EducationSuperHighway⁹⁷ is supporting statewide awareness efforts by training community leaders and partner organizations and providing outreach materials and tools to help households enroll into ACP. The non-profit recently launched GetACP.org,⁹⁸ a virtual mobile assistant that is available to residents of the State that simplifies the ACP enrollment process by providing real-time support to help eligible households determine the easiest way to qualify.

This outreach approach combines both intensive resident-to-resident outreach (via community partner organizations) with cutting-edge technology (e.g., design and use of the ACP education app) and it is the type of thinking and strategy that the State plans to continue to expand upon to achieve high broadband adoption rates within a system of universal service. DTI will be developing a complete Digital Equity program as part of the forthcoming Digital Equity Capacity Planning grant.

5.4.2 Eliminating affordability as a barrier to broadband adoption

The State's goal is to remove affordability as a barrier to participation in the digital economy or digital experience. The strategies to achieve this goal include:

1. Maximizing, to the greatest degree possible, eligible residents' participation in the ACP by working with counties and other entities to support outreach and enrollment programs

⁹⁷ EducationSuperHighway, <https://www.educationsuperhighway.org/>.

⁹⁸ GetACP, <https://getacp.org/>.

2. Making affordability an important scoring criterion of all State broadband grant programs
3. Working collaboratively with ISPs to encourage them to create plans in the event the ACP is not extended, such that there will be robust and adequate low-income products offered at reasonable price by ISPs to low-income Delawareans
4. Giving additional points in grant program scoring to entities that make commitment to offer adequate and reasonable low-income products statewide, not only on newly funded infrastructure

This affordability agenda will be expanded further and analyzed with appropriate data in the State's BEAD Initial Plan and the Digital Equity Plan.

5.4.3 Creating and supporting strong workforce development programs to power the broadband ecosystem

Delaware prioritizes fostering the availability of a highly skilled workforce that proves both scalable and sustainable in meeting the goal of constructing and deploying broadband throughout all unserved and underserved communities of the State. DTI recognizes that a strong and talented workforce will minimize potential disruptions in the recruitment of needed labor by ISP's (and their contractors and subcontractors).

DTI is in the formulation stages of identifying best practices for effective workforce development that will meet the unique needs of the State. Any workforce strategy will need to take into account the nature of the State itself—a smaller general population and corresponding labor market, with an influx of seasonal workers as well. Strong labor standards and protections will be critical.

DTI will explore a variety of workforce development programs that are both right sized as well as can be 'hosted' by community anchor institution partners, with curriculum that allows for trainees to rapidly enter the market and be desirable for employment by ISP partners and entities that require trained cybersecurity workers. Workforce development efforts will be further documented in the State's forthcoming Initial Proposal.

5.4.4 Considering the impact of fiber availability on statewide mobile service

While the State of Delaware recognizes that BEAD funds cannot be used to improve mobile phone service (because BEAD funds are limited to fixed broadband needs), this Plan represents a broader strategic effort by the State of Delaware to address connectivity issues—and thus includes consideration of, and strategy with regard to, enhanced mobile service.

So, while this Plan does not propose using BEAD funds to enhance mobile service, the Plan recognizes that having more robust fiber connectivity across the State will dramatically enhance the opportunities for mobile providers to offer better service to their customers. (This is similar

to the way in which middle-mile fiber is recognized as an enabler for last-mile fiber providers.) In fact, Delaware is likely positioned to be one of the best-served states in the country with regard to mobile data and voice, because providing robust wireline everywhere delivers backhaul capabilities for robust mobile service.

5.5 Estimated timeline for universal service

This section presents the State’s data-driven model and estimated timeline for the availability of reliable, universal broadband service in Delaware. It reflects the current state and gap assessment documented in Section 3; the potential barriers and obstacles identified in Section 4; and the issues identified through the State’s comprehensive stakeholder engagement and outreach efforts.

In summary, the State estimates that universal service can be achieved by deploying fiber during the BEAD grant period, but it will look to deploy more quickly at an estimated 18 to 30 months upon selecting subgrant recipients (based on previous experience with State-grant-funded buildouts completed by ISPs). The model excludes areas funded by other federal broadband grants and awards.

5.5.1 Mapping of served, unserved, and underserved locations

The model assumes the State’s grant program will fund the deployment of fiber to pass each unserved or underserved location.

In summary, analysis of the FCC’s address fabric (May 2023) found the following:

- 2,052 addresses (0.5 percent) are unserved
- 12,904 addresses (3.3 percent) are underserved
- 372,167 addresses (96.1 percent) are served

The maps below illustrate the State’s unserved and underserved locations (first on a statewide basis, then by county). The served locations include those slated to receive connectivity under enforceable commitments such as RDOF funding.

Figure 13: Unserved locations in Delaware

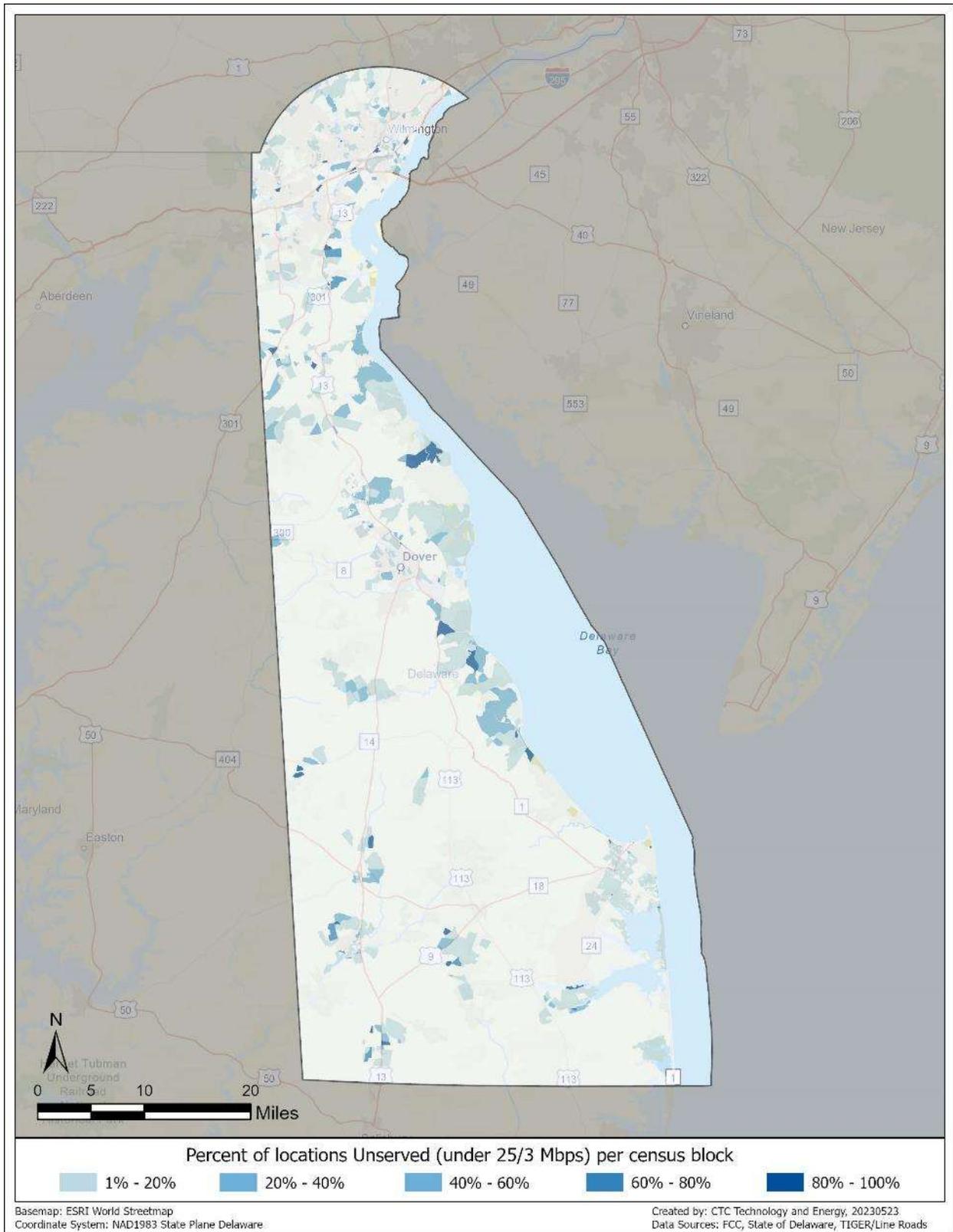


Figure 14: Underserved locations in Delaware

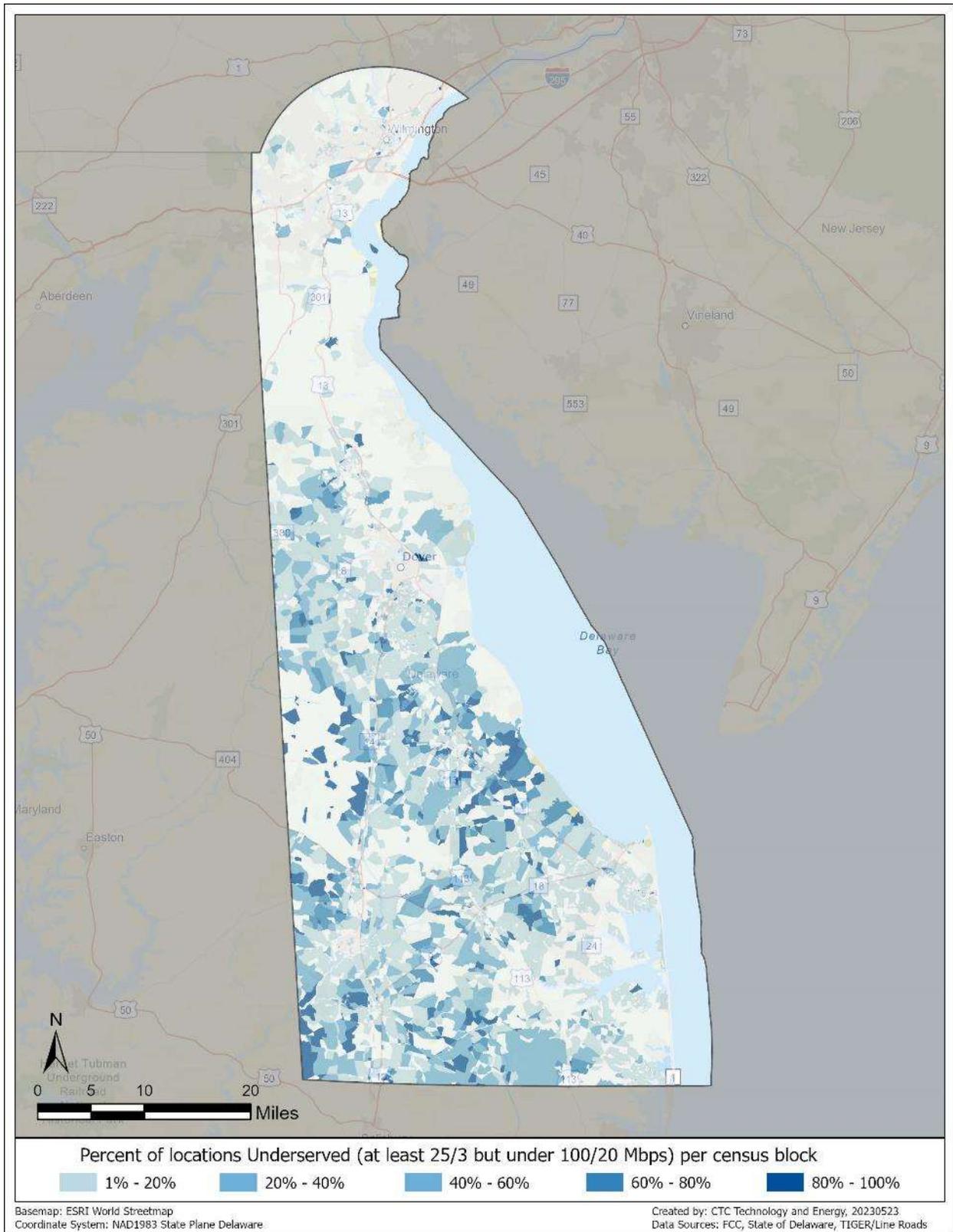


Figure 15: Served locations in Delaware

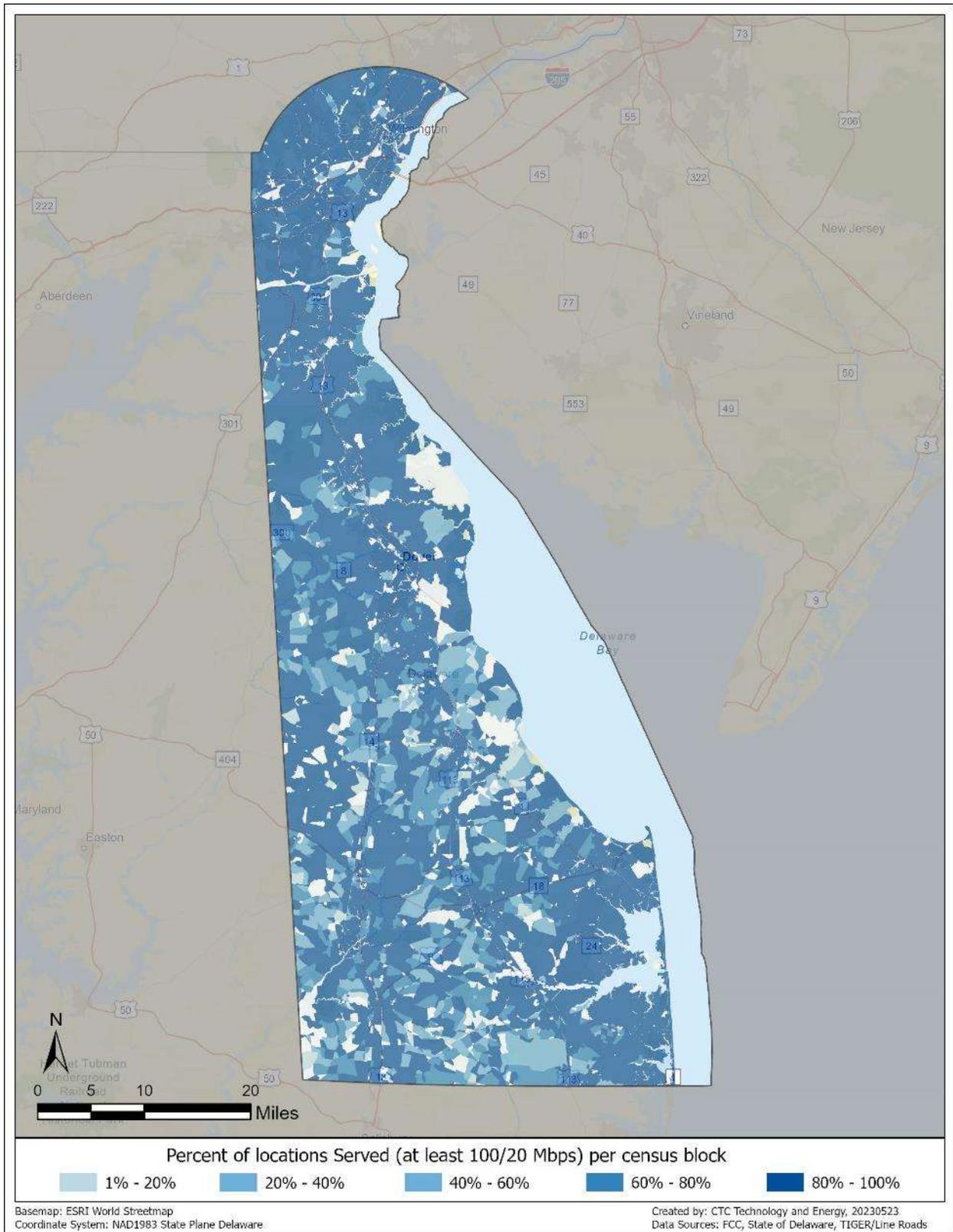


Figure 16: Unserved, underserved, and served locations in New Castle County

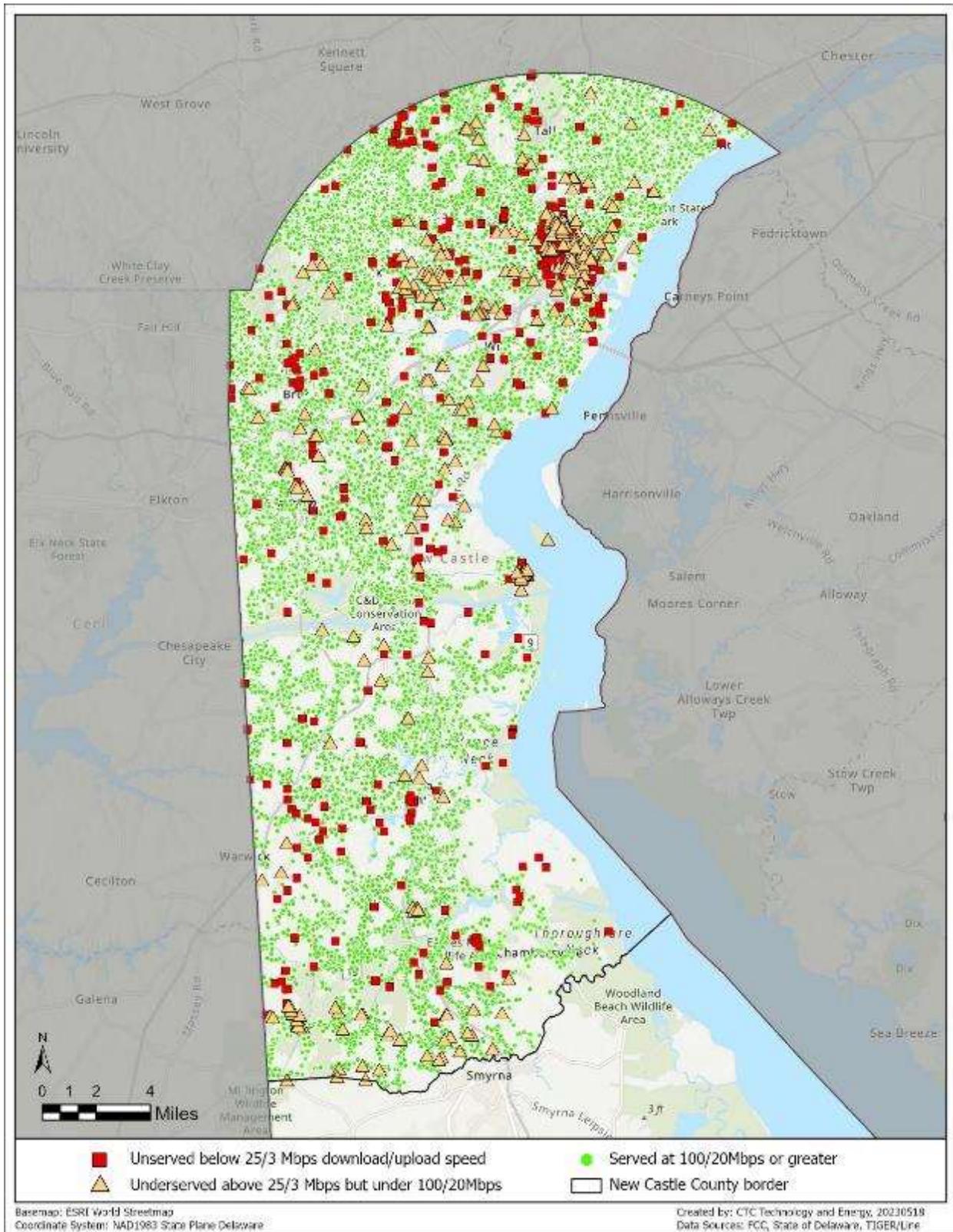


Figure 17: Unserved, underserved, and served locations in Kent County

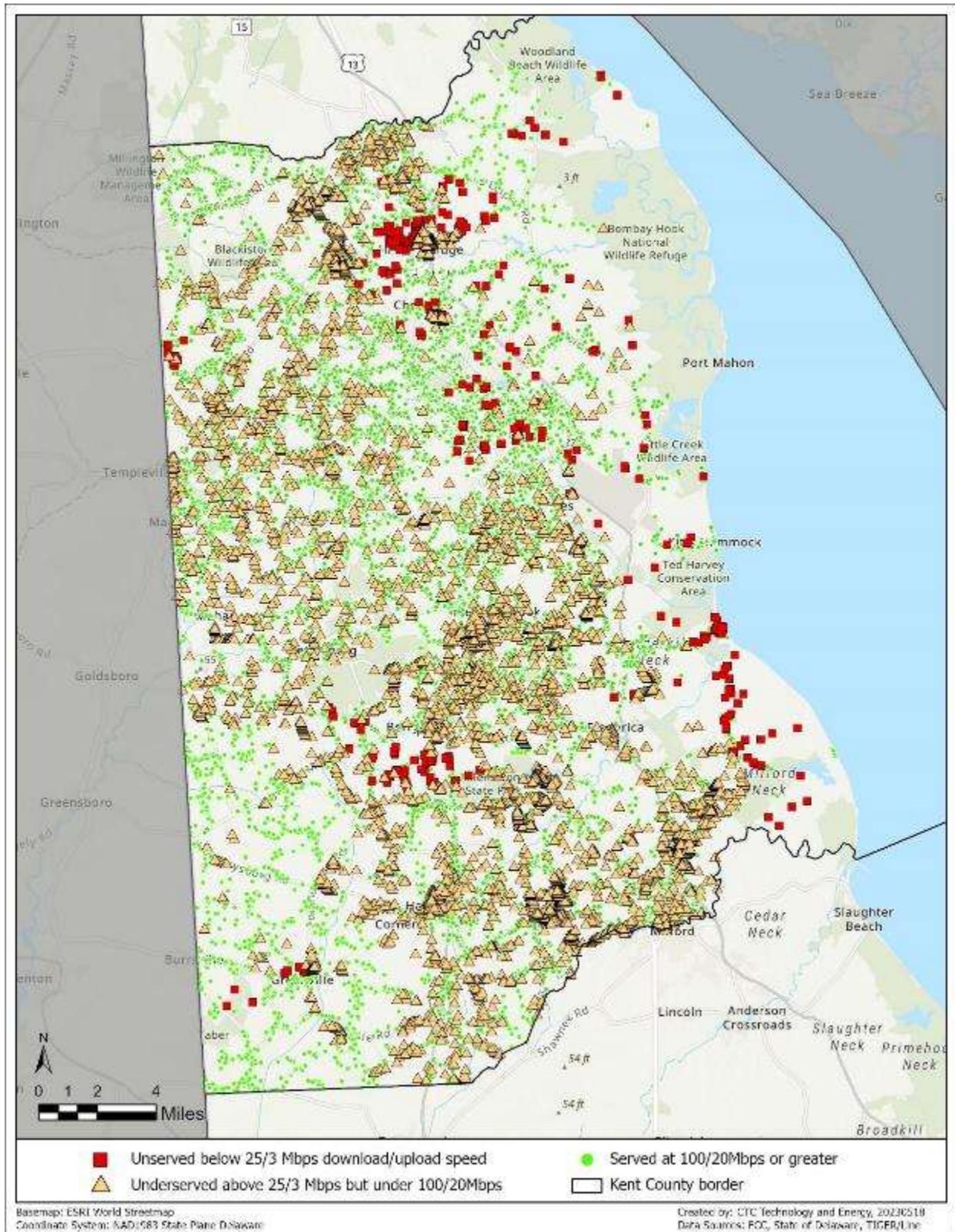
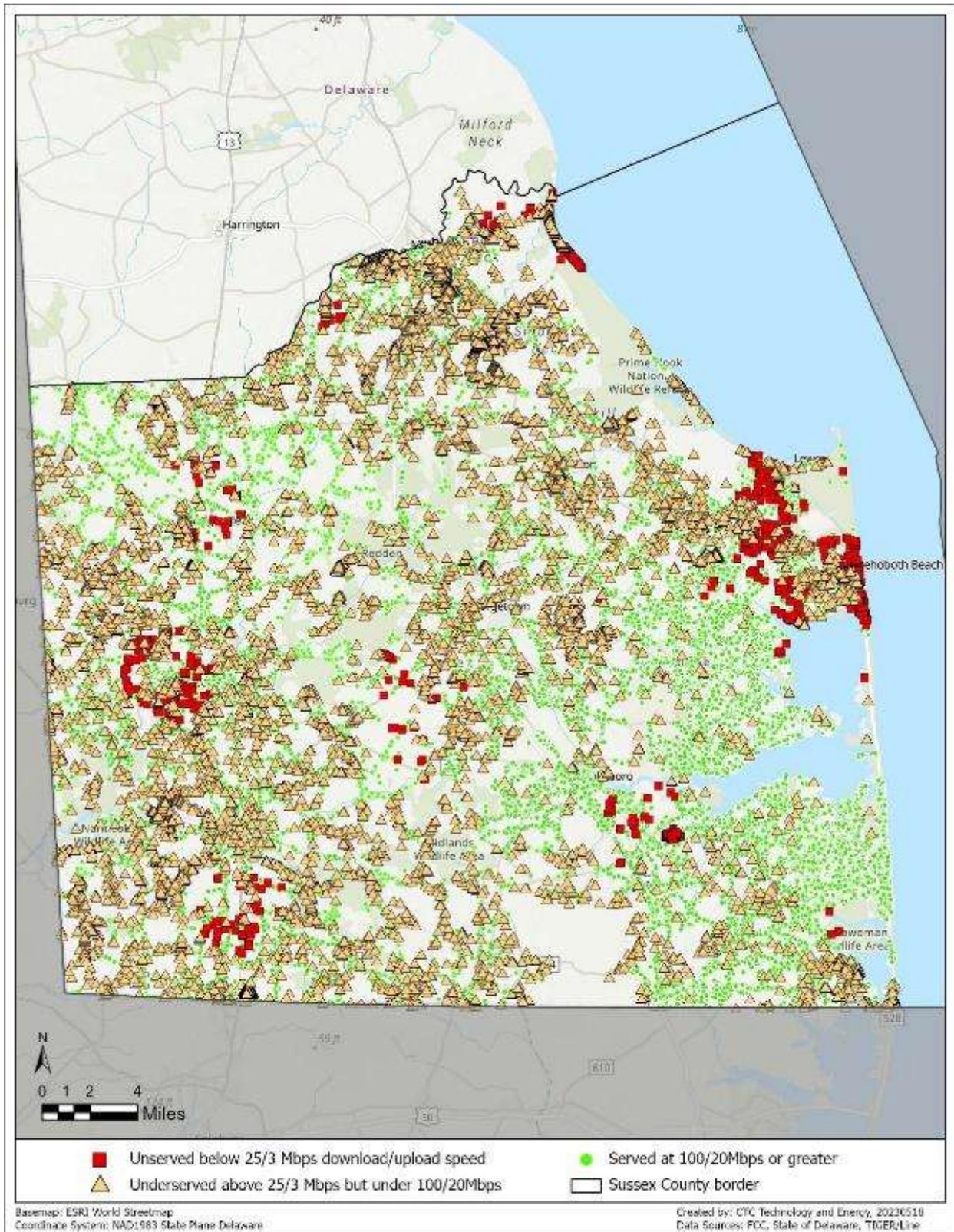
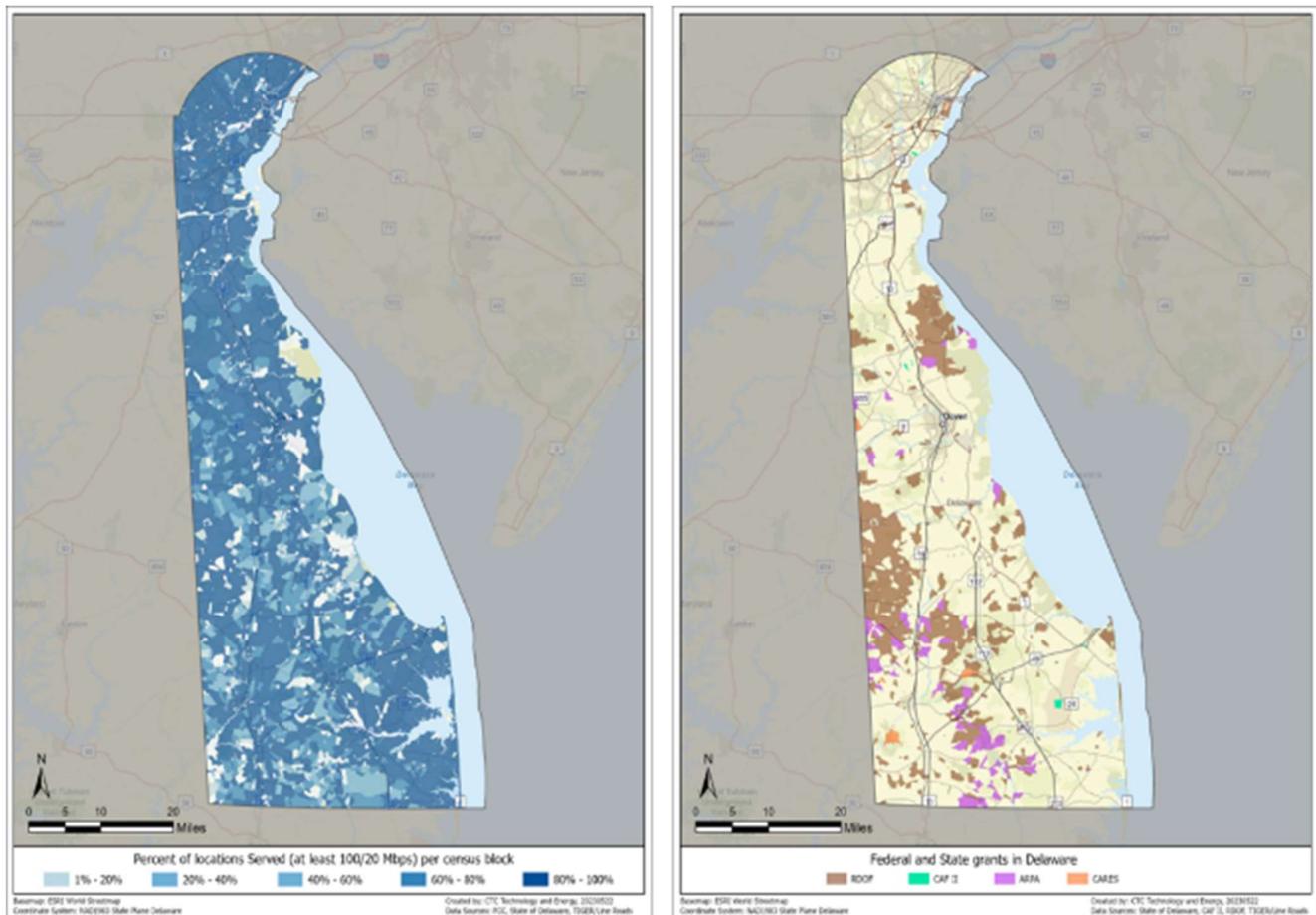


Figure 18: Unserved, underserved, and served locations in Sussex County



More than 95 percent of Delaware addresses are served at 100/20 Mbps and 51 percent are served at 100/100 Mbps, which is the standard used by Delaware for previous grant-funded construction. The map on the left (below) shows areas of the State that have 100/20 Mbps service, while the map on the right shows areas of the State that have received federal or State funding for future deployment at that level.

Figure 19: More than 95 percent of Delaware addresses are served at 100/20



5.5.2 Timeline assumptions

As discussed in the previous section, the State believes it can achieve universal service with this funding within the BEAD grant period. Based on previous experience with State-grant-funded buildouts completed by ISPs, the State estimates that completion of the planned fiber buildout would ideally occur within 18 to 30 months upon selecting subgrant recipients. This assumes the State will not experience major barriers that it cannot mitigate such as a nationwide supply chain disruption; and that other environmental conditions do not have a material impact. Regardless, the State and its implementation partners will work as efficiently as possible, consistent with

Delaware’s goal of being first in the nation to achieve universal service and meeting BEAD requirements.

In general, six to 12 months will be required for planning, design and permitting. After these steps are complete, construction can begin. Construction may proceed more quickly where fiber is a short “line extension” from an ISP’s existing service area to a few adjacent addresses, and where the incumbent provider already has an attachment on a utility pole or can use existing underground conduit. Construction may take longer where larger-scale deployment is needed, and where new easements are required for access.

5.6 Estimated cost for universal service

This section presents the State’s estimated costs for providing universal access to reliable broadband service to unserved and underserved locations in Delaware. These estimates are based on an analytical model that incorporates local labor and material unit costs; the location of existing infrastructure that can be used as a starting point; and surveys of a statistically valid sample of unserved and underserved areas.

A preliminary analysis of the FCC data (May 2023) using conservative assumptions indicates that the total capital cost for extending high-speed, end-to-end fiber broadband to both unserved and underserved locations is approximately \$239.5 million.

These unserved and underserved addresses represent the last, hardest-to-build locations. These locations also represent a lower population density with longer distances between locations and current providers, which increases the costs to extend high-speed, end-to-end fiber. In addition, this estimate accounts for funding that the State may need to incentivize providers to build fiber to those locations. Other factors such as defining extremely high-cost locations will also impact the actual amount of BEAD funding (and match) that will be required to deliver universal service.

Delaware will adjust the proposed technology mix underpinning its cost modeling estimates as development of the Initial Proposal continues and in accordance with the BEAD allocation of \$107,748,384.66 announced by NTIA on June 26, 2023.⁹⁹

This estimate includes a total of 1,260 miles of new fiber construction to reach all of the estimated unserved and underserved locations. In this scenario, the buildout of primary FTTP infrastructure and customer activations extends through the BEAD performance period.

⁹⁹ “Biden-Harris Administration Announces State Allocations for \$42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda,” Internet for All, News Release, June 26, 2023, <https://internetforall.gov/news-media/biden-harris-administration-announces-state-allocations-4245-billion-high-speed-internet>.

Table 13: Estimated deployment costs to reach all unserved and underserved addresses (five-year performance period)

| Cost component | Estimated cost |
|---|------------------------|
| Physical fiber plant construction – FTTP distribution network | \$190.5 million |
| Core and distribution network electronics | \$9.0 million |
| Subscriber drop construction | \$33.6 million |
| Customer premises equipment | \$6.4 million |
| Total | \$239.5 million |

Delaware anticipates the need to adjust its cost modeling estimates accordingly with the BEAD designations.

5.7 Alignment

The vision, goals, and proposed supporting actions within Delaware’s Five-Year Action Plan are fully aligned with the State’s priorities of expanding broadband deployment and adoption. The Delaware Broadband Initiative (DBI) has a goal of connecting all homes and businesses in the State to affordable, high-speed broadband. This vision is consistent with the Five-Year Action Plan’s goal of providing universal service throughout Delaware.

The FCC’s Rural Digital Opportunity Fund (RDOF) has awarded \$13 million to a bidder within the State to construct broadband to previously identified unserved homes. The State also awarded \$33 million from the American Rescue Plan Act (ARPA) to construct high-speed internet service to more than 6,000 addresses. The proposed Five-Year Action Plan takes both funding programs into account so as not to duplicate these efforts when identifying the unserved and underserved addresses to be served with BEAD-funded efforts.

The BEAD requirements also align with the experience and strong technical ability of DTI and coordinating State agencies to successfully enact this program. Over time, the State has utilized best practices learned from similar broadband expansion programs, including refining the permit process to minimize potential delays; maintaining active and open channels of communication with likely ISP partners; and establishing significant partnerships with community anchor institutions, local governments, and other organizations that may be both beneficiaries and stakeholders of BEAD-funded projects.

The permitting best practices aligned with this BEAD Five-Year Action Plan include the “Ready in 6” initiative launched in 2019. A coalition of agencies and organizations led the effort with

Governor Carney to develop and implement best practices to go from development concept to approval. This includes enhanced communication, increased efficiency, reduced paperwork, and tracking and using data to help develop key performance indicators on permit timelines and process.

The Ready In 6 Coalition is comprised of the Delaware Business Roundtable, Delaware State Chamber of Commerce, Kent Economic Partnership, Greater Kent Committee, Sussex County Economic Development Action Team, ACEC Delaware, Committee of 100, Central Delaware Chamber of Commerce, New Castle County Chamber of Commerce, Delaware Contractors Association, Delaware Chapter of Associated Builders and Contractors, and Home Builders Association of Delaware.

5.8 Technical assistance

DTI is in regular contact with its Federal Program Officer and anticipates requesting assistance regarding the FCC's service availability data, whose flaws are noted in Section 4. DTI will also be in contact with NTIA as it develops its State Challenge Process, which it anticipates will reflect the NTIA's Challenge Process Model.¹⁰⁰

¹⁰⁰ "BEAD Challenge Process Policy," Internet for All, <https://www.internetforall.gov/bead-challenge-process-policy>.

6 Conclusion

This Five-Year Action Plan establishes Delaware’s broadband goals and priorities—and presents a comprehensive needs assessment that will inform the State’s Initial Proposal.

The Delaware Broadband Office will work to **ensure that every Delawarean has access to a reliable, affordable, high-speed internet connection and the tools and understanding to use the internet safely and responsibly**. Full participation in the 21st century economy requires no less.

The State’s priorities for broadband deployment (primary objectives) are aligned with the principal focus of the BEAD Program:¹⁰¹

1. Serving 100 percent of unserved locations (i.e., below 25/3 Mbps) within five years
2. Serving 100 percent of underserved locations (i.e., between 25/3 and 100/20) within five years
3. Delivering gigabit connections to certain community anchor institutions that do not have that level of service within five years

Should BEAD funds remain after the first three objectives are fulfilled, the State will then focus on the next set of priorities:

4. Constructing line extensions to unserved and underserved residences that are determined to be extremely high-cost locations (i.e., replacing fixed wireless or satellite connections to those locations)
5. Upgrading internal wiring in multiple-dwelling-unit buildings to ensure the availability of reliable broadband access in low-income and affordable housing

Other digital equity initiatives, developed through ongoing community engagement and development of the Digital Equity Act Plan. These initiatives may be prioritized above items 4 and 5 above as needs as assessed and refined, and may include—by way of example and not limitation:

- Providing free or low-cost internet service to low-income residents, including those living in affordable housing (e.g., through a monthly subsidy)

¹⁰¹ “NOFO: BEAD Program,” NTIA, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>, at p. 7.

- Expanding training and development of the State’s broadband workforce, including for cybersecurity jobs
- Supporting digital navigator programs in public libraries
- Purchasing additional devices to enable broadband adoption by covered populations and low-income residents
- Delivering training to support the use of telehealth services

Delaware has been at the forefront of expanding broadband access on behalf of its residents and businesses; with initiatives that began well before the start of the Covid-19 public health emergency and the focus on universal services as a national public policy priority.

By creating strong partnerships and developing effective processes, the State has already demonstrated substantive progress towards closing the digital divide. However, the need for access to affordable, high-speed broadband service remains significant for portions of our community—and meeting their needs is critical. BEAD funding will allow Delaware to achieve its goal of universal service, and to be the first in the nation to achieve universal broadband access for all residents.

On behalf of Delaware, DTI submits this Five-Year Action Plan—continuing the State’s commitment of operating under a strong and unified guiding vision and through the lens of full transparency. DTI looks forward to next submitting the State’s Initial Proposal.

Appendix A: Additional asset inventory data

Asset inventory data by county

The following tables identify a sample of broadband deployment (infrastructure), broadband adoption, broadband affordability, broadband access, and digital equity assets across the State of Delaware. DTI may be able to leverage these assets to implement the Plan.

Kent County

| Entity | Organization type | Office or program name |
|--------------------------------------|-------------------|--|
| Boy & Girls Club | Non-profit | Greater Smyrna Clayton Boys & Girls Club |
| Boy & Girls Club | Non-profit | Greater Dover Boys & Girls Club |
| Boy & Girls Club | Non-profit | Dover Air Force Base Youth Center |
| Central Delaware Chamber of Commerce | Non-profit | |
| City of Dover | Government | City Council |
| City of Dover | Government | Information Technology Department |
| City of Dover | Government | Electric Department |
| City of Dover | Government | Dover Public Library |
| City of Dover | Government | Emergency Management Office |
| City of Dover | Government | Public Affairs and Emergency Management |
| Code Purple | Non-profit | Code Purple Kent County |
| Delaware Farm Bureau | Association | Kent County Farm Bureau |
| Delaware Office of Veterans Services | Government | |
| Dover Interfaith Mission for Housing | Non-profit | |
| Easterseals | Non-profit | Easterseals Dover |
| Frederica Senior Center | Non-profit | |
| Greater Kent Committee | Non-profit | |
| Harrington Senior Center | Non-profit | |
| Harvest Years Senior Center | Non-profit | |
| Independent Resources Inc. | Non-profit | Kent County branch |

| Entity | Organization type | Office or program name |
|---|--------------------------|--|
| Kent County | Government | Department of Administration |
| Kent County | Government | Department of Public Works |
| Kent County | Government | Department of Planning Services |
| Kent County | Government | Department of Finance |
| Kent County | Government | Assessment Division (Department of Finance) |
| Kent County | Government | Department of Community Services – Parks & Recreation Division |
| Kent County | Government | Department of Public Safety |
| Kent County | Government | Kent County Public Library (Libraries Division – Department of Community Services) |
| Kent County | Government | Department of Housing and Community Development |
| Kent County | Government | Levy Court (County Commissioners) |
| Kent County | Non-profit | Community Legal Aid Society, Inc. – Kent County branch |
| Kent Economic Partnership (Choose Central Delaware) | Non-profit | |
| Lillian Smith Senior Center | Non-profit | |
| Milford Senior Center | Non-profit | |
| Modern Maturity Center | Non-profit | |
| NeighborGood Partners | Non-profit | Dover office |
| People's Place | Non-profit | |
| The Arc of Delaware | Non-profit | Kent & Sussex County branch |
| The Shepherd Place | Non-profit | |
| University of Delaware | Higher Ed | Kent County Delaware Cooperative Extension |
| Veterans Multi-Service Center | Non-profit | Dover Office |
| YMCA | Non-profit | Dover YMCA |

New Castle County

| Entity | Organization type | Office or program name |
|--|--------------------------|--|
| Boys & Girls Club | Non-profit | New Castle Boys & Girls Club |
| Boys & Girls Club | Non-profit | H. Fletcher Brown Boys & Girls Club |
| Boys & Girls Club | Non-profit | Greater Newark Boys & Girls Club |
| Boys & Girls Club | Non-profit | Claymont Boys & Girls Club |
| Boys & Girls Club | Non-profit | Clarence Fraim Boys & Girls Club |
| Boys & Girls Club | Non-profit | Boys & Girls Clubs of Delaware |
| Child, Inc. | Non-profit | |
| City of Newark | Government | Council |
| City of Newark | Government | City Manager's Office |
| City of Newark | Government | Communications Department |
| City of Newark | Government | Information Technology Division |
| City of Newark | Government | Parks and Recreation Department |
| City of Newark | Government | Planning and Development Department |
| City of Newark | Government | Public Works and Water Resources Department (PWWR) |
| City of Wilmington | Government | Department of Public Works |
| City of Wilmington | Government | Department of Land Use and Planning |
| City of Wilmington | Government | Department of Parks and Recreation |
| City of Wilmington | Government | Department of Real Estate and Housing |
| City of Wilmington | Government | Office of Economic Development (OED) |
| City of Wilmington | Government | Office of Emergency Management |
| City of Wilmington | Government | Office of the Mayor |
| Community Legal Aid Society, Inc. | Non-profit | Delaware Community Legal Aid Society |
| Delaware Association of the Deaf (DAD) | Association | |
| Delaware Black Chamber of Commerce (DEBCC) | Association | |

| Entity | Organization type | Office or program name |
|--|-------------------|----------------------------------|
| Delaware Center for Justice (DCJ) | Non-profit | |
| Delaware Family Center | Non-profit | |
| Delaware Legal Help Link | Non-profit | |
| Delaware Manufacturing Extension Partnership (DEMEP) | Non-profit | |
| Delaware Community Reinvestment Action Council | Non-profit | |
| Family Promise of Northern New Castle County | Non-profit | Hospitality Center |
| Hispanic American Association of Delaware | Non-profit | |
| Latin American Community Center | Non-profit | |
| Middletown Odessa Townsend (MOT) Senior Center | Non-profit | |
| National Federation of the Blind | Non-profit | Delaware branch |
| New Castle County | Government | Executive Office |
| New Castle County | Government | County Council |
| New Castle County | Government | Executive Office |
| New Castle County | Government | Diversity Commission |
| New Castle County | Government | Emergency Management |
| New Castle County | Government | Housing Advisory Board |
| New Castle County | Government | Libraries |
| New Castle County | Government | Appoquinimink Library |
| New Castle County | Government | Bear Library |
| New Castle County | Government | Brandywine Hundred Library |
| New Castle County | Government | Claymont Library |
| New Castle County | Government | Corbit-Calloway Memorial Library |
| New Castle County | Government | Delaware City Library |
| New Castle County | Government | Elsmere Library |

| Entity | Organization type | Office or program name |
|--|--------------------------|---|
| New Castle County | Government | Garfield Park Lending Library |
| New Castle County | Government | Hockessin Library |
| New Castle County | Government | Kirkwood Library |
| New Castle County | Government | New Castle Public Library |
| New Castle County | Government | Newark Free Library |
| New Castle County | Government | North Wilmington Library |
| New Castle County | Government | Route 9 Library & Innovation Center |
| New Castle County | Government | Wilmington Library |
| New Castle County | Government | Woodlawn Library |
| New Castle County | Government | Sheriff's Office |
| New Castle County | Government | Absalom Jones Senior Center |
| New Castle County | Government | Community Services Advisory Board |
| New Castle County | Government | Department of Land Use, Permits & Inspections |
| New Castle County | Government | Engineering |
| New Castle County | Government | Zoning |
| New Castle County | Government | Housing Choice Voucher Program |
| New Castle County | Government | New Castle County Housing Authority (NCCA) |
| New Castle County | Government | New Castle County Housing Everyone Locator Program (NCC HELP) |
| New Castle County Chamber of Commerce | Association | |
| New Castle County Vocational Technical School District | Government | |
| New Castle Senior Center | Non-profit | |
| Newark Senior Center | Non-profit | |
| Reach Riverside Development Corporation | Non-profit | |

| Entity | Organization type | Office or program name |
|-------------------------------------|-------------------|--|
| State of Delaware | Government | Delaware Office for the Deaf and Hard of Hearing |
| State of Delaware | Government | Office of Veterans Services |
| The Newark Partnership (TNP) | Non-profit | |
| U.S. Department of Veterans Affairs | Government | Wilmington Regional Office |
| United Way of Delaware | Non-profit | Delaware Racial Justice Collaborative (DRJC) |
| Wilmington University | Higher Ed | |
| YMCA | Non-profit | YMCA of Delaware |
| YMCA | Non-profit | Central YMCA |
| YMCA | Non-profit | Brandywine YMCA |
| YMCA | Non-profit | Walnut Street YMCA |
| YMCA | Non-profit | Bear-Glasgow Family YMCA |
| YMCA | Non-profit | Western Family YMCA |
| YMCA | Non-profit | Middletown Family YMCA |

Sussex County

| Entity | Organization type | Office or program name |
|-----------------------------|-------------------|--|
| Beebe School of Nursing | Higher Ed | |
| Boy & Girls Club | Non-profit | Western Sussex Boys & Girls Club – Seaford |
| Boy & Girls Club | Non-profit | Laurel Boys & Girls Club |
| Boy & Girls Club | Non-profit | Rehoboth Beach Boys & Girls Club |
| Boy & Girls Club | Non-profit | Oak Orchard Riverdale Boys & Girls Club |
| Boy & Girls Club | Non-profit | Georgetown Boys & Girls Club |
| Boy & Girls Club | Non-profit | Dagsboro Boys & Girls Club |
| Bridgeville Senior Center | Non-profit | |
| Cape Henlopen Senior Center | Non-profit | |

| Entity | Organization type | Office or program name |
|--------------------------------------|--------------------------|-------------------------------|
| City of Georgetown | Government | |
| City of Georgetown | Government | City Council |
| City of Georgetown | Government | Planning Commission |
| City of Georgetown | Government | |
| City of Georgetown | Government | Public Works |
| City of Georgetown | Government | Code Enforcement |
| City of Georgetown | Government | Board of Adjustment |
| City of Georgetown | Government | ADA Compliance |
| Delaware Association of the Deaf | Non-profit | Sussex County branch |
| Delaware Farm Bureau | Association | Sussex County Farm Bureau |
| Delaware State University | Higher Ed | |
| Delaware Technical Community College | Higher Ed | |
| Delmarva Christian Schools | Government | |
| Epworth Christian School | Government | |
| First State Community Action Agency | Non-profit | |
| Georgetown Chamber of Commerce | Association | |
| Habitat for Humanity | Non-profit | Sussex County branch |
| Indian River Senior Center | Non-profit | |
| La Esperanza | Non-profit | |
| La Red Health Center | Non-profit | |
| Laurel Senior Center | Non-profit | |
| Lewes Chamber of Commerce | Association | |
| Lewes Senior Center | Non-profit | |
| Lighthouse Christian School | Higher Ed | |
| Love INC of Mid-Delmarva | Non-profit | Code Purple |
| Milford Housing Development | Non-profit | |

| Entity | Organization type | Office or program name |
|--|-------------------|---|
| Corporation | | |
| Milford Senior Center | Non-profit | |
| Nanticoke Senior Center | Non-profit | |
| Sussex Community Crisis Housing Services | Non-profit | |
| Sussex County | Government | Building Code Office |
| Sussex County | Government | Community Development & Housing |
| Sussex County | Government | Sussex County Office of Economic Development |
| Sussex County | Government | Emergency Operations Center |
| Sussex County | Government | Environmental Services Department |
| Sussex County | Government | Facilities Management |
| Sussex County | Government | Geographic Information Office |
| Sussex County | Government | Information Technology |
| Sussex County | Government | Department of Libraries |
| Sussex County | Government | Planning & Zoning Office |
| Sussex County | Government | Office of Public Information |
| Sussex County | Government | Safety & Security Department |
| Sussex County | Government | Sheriff's Office |
| Sussex County | Government | Utility Engineering |
| Sussex County | Government | Engineering Department |
| Sussex County | Government | Utility Permits Division |
| Sussex County | Government | Utility Planning & Design Review |
| Sussex County | Government | County Council |
| Sussex County | Government | Delaware Department of Transportation-Sussex County |
| Sussex County | Government | Affordable and Fair Housing Resource Center |

| Entity | Organization type | Office or program name |
|-------------------------------------|-------------------|---|
| Sussex County | Government | Advisory Committee on Aging and Adults with Physical Disabilities |
| Sussex County | Government | County Administration |
| Sussex Technical School | Government | Adult Education Division |
| The Cross Christian Academy | Higher Ed | |
| U.S. Department of Veterans Affairs | Government | Sussex County Vet Center |
| Western Sussex Chamber of Commerce | Association | |
| YMCA | Non-profit | Sussex Family YMCA |

Statewide

| Entity | Organization type | Office or program name |
|---|-------------------|------------------------|
| A House of Hope | Non-profit | |
| AARP | Non-profit | |
| AFL-CIO | | |
| Big Brothers Big Sisters | Non-profit | |
| Catholic Charities | Non-profit | |
| Catholic Charities Immigration Services | Non-profit | |
| Central Delaware Housing Collaborative | Non-profit | |
| Challenge Program | Non-profit | |
| CHEER | Non-profit | |
| Children & Families First | Non-profit | |
| Code Purple | Non-profit | |
| Communications Workers of America | Non-profit | CWA Local 1301 |
| Community Connectors Centers for Disability Studies – Univ. of Delaware | Non-profit | |
| Delaware Alliance for Community | Non-profit | |

| Entity | Organization type | Office or program name |
|---|--------------------------|--|
| Advancement | | |
| Delaware Municipal Electric Corporation (DEMEC) | Government | |
| Delaware Red Cross | Non-profit | |
| Delaware Council on Farm and Food Policy | Non-profit | Director of Ag and Environmental Affairs |
| Delaware State Housing Authority | Government | Chief Policy Advisor |
| Department of Corrections | Government | Re-Entry |
| Department of Corrections | Government | IT Director |
| Department of Corrections | Government | Education/Programming |
| Department of Education | Government | Academia Antonia Alonso Charter School |
| Department of Education | Government | Milford School District |
| Department of Education | Government | Indian River School District |
| Department of Education | Government | Charter School of Wilmington |
| Department of Education | Government | Delmar School District |
| Department of Education | Government | Sussex Technical School District |
| Department of Education | Government | Cape Henlopen School District |
| Department of Education | Government | Red Clay Consolidated School District |
| Department of Education | Government | Adult & Prison Education |
| Department of Education | Government | Polytech School District |
| Department of Education | Government | DACCTE |
| Department of Education | Government | Delaware Higher Education Office |
| Department of Education | Government | Appoquinimink School District |
| Department of Education | Government | Brandywine School District |
| Department of Education | Government | Caesar Rodney School District |
| Department of Education | Government | Capital School District |
| Department of Education | Government | Christina School District |

| Entity | Organization type | Office or program name |
|---|--------------------------|---|
| Department of Education | Government | Colonial School District |
| Department of Education | Government | Early College School |
| Department of Education | Government | Academy of Dover |
| Department of Education | Government | Lake Forest School District |
| Department of Education | Government | Laurel School District |
| Department of Education | Government | Seaford School District |
| Department of Education | Government | Smyrna School District |
| Department of Education | Government | New Castle County Vocational Technical School District |
| Department of Education | Government | Sussex Technical School District |
| Department of Health and Social Services | Government | Division of Health Care Quality |
| Department of Health and Social Services | Government | Division for the Visually Impaired |
| Department of Health and Social Services | Government | Services for Aging Adults and Adults with Physical Disabilities |
| Department of Health and Social Services | Government | Division of Developmental Disabilities |
| Department of Health and Social Services | Government | Division of Social Services |
| Department of Labor | Government | Division of Unemployment Insurance |
| Department of Labor | Government | Employment and Training |
| Department of Labor | Government | Office of Deaf and Hard of Hearing |
| Department of Labor | Government | Division of Vocational Rehabilitation Services |
| Department of Management and Budget | Government | Office of Facilities Management |
| Department of Natural Resources and Environment | Government | Division of Climate, Coastal and Energy |
| Department of Safety and Homeland | Government | State Council for Persons with Disabilities |

| Entity | Organization type | Office or program name |
|---|-------------------|---|
| Security | | |
| Department of Safety and Homeland Security | Government | Developmental Disabilities Council |
| Department of Safety and Homeland Security | Government | Emergency Management Agency |
| Department of Services for Children, Youth and Families | Government | Division of Family Services |
| Department of State | Government | Division of Libraries |
| Department of State | Government | Office of Veterans services |
| Department of Technology and Information | Government | Office of the CIO |
| Department of Technology and Information | Government | Office of the CIO |
| Farm Bureau | Non-profit | |
| NERDiT Foundation | Non-profit | |
| Office of the Governor | Government | Infrastructure |
| Office of the Governor | Government | Legal Counsel |
| State Housing Authority | Government | |
| State Office of Volunteerism | Government | Commission on Community and Volunteer Service |
| Student Freedom Initiative | Non-profit | |
| Tech Council of Delaware | Non-profit | Executive Director |
| Urban Tech Hero | Non-profit | |
| Delaware State Housing Authority | Government | Dover – Main Office |
| Delaware Technical Community College | Higher Ed | |
| Delaware State University | Higher Ed | |
| Kent County | Government | Delaware Division of Services for Aging & Adults with Physical Disabilities |

| Entity | Organization type | Office or program name |
|------------------------|-------------------|--------------------------|
| University of Delaware | Higher Ed | |
| Polytech | Higher Ed | Polytech Adult Education |

Asset inventory data by type

During DTT’s outreach and engagement, various entities stated that they have broadband deployment (infrastructure), broadband adoption, broadband affordability, broadband access, and digital equity assets. Those statements are reflected in the following tables.

Additional asset inventory – partners

The following table shows entities that participated in DTI’s outreach and engagement sessions and that offered to become partners of DTI.

| Partner | Description of current or planned role in broadband deployment and adoption |
|---|---|
| Bloosurf ¹⁰² | Bloosurf worked with DTI through a long-term agreement (valid until 2026) to deploy a hybrid fiber backhaul/Fixed Wireless Access (FWA) network to serve residential customers. The fiber backbone, which provides pick-up points at 10 locations in Delaware, will be leveraged to expand fiber to the unserved/underserved homes. |
| Communication Service for the Deaf, ¹⁰³ a nonprofit located in Austin, Texas | A representative attended an outreach session and expressed an interest in partnering to deliver services to the deaf. |
| Division for the Visually Impaired (DVI) of DHSS (Delaware Health and Social Services) ¹⁰⁴ | A representative attended an outreach session and said that DVI is a vocational organization interested in creating programs for specific employment outcomes. |
| Office of Veterans Services (OVS) ¹⁰⁵ | A representative attended an outreach session and offered to assist DTI via information sharing. |

¹⁰² <https://bloosurf.com/>.

¹⁰³ <https://www.csd.org>.

¹⁰⁴ <https://dhss.delaware.gov/dvi/>.

¹⁰⁵ <https://vets.delaware.gov/>.

| Partner | Description of current or planned role in broadband deployment and adoption |
|--|---|
| Talkie Communications (Talkie Fiber) ¹⁰⁶ | A representative attended an outreach session and said that it is interested in BEAD subgrants, and that the Build America, Buy America requirements would not impact the ISP’s interest in applying for the grant. |
| Talkie Communications (Talkie Fiber) | A representative attended an outreach session and said that it would like to start an apprenticeship program with the State and work with DTI to hire local residents. |
| Wilmington-based Ezion Mount Carmel United Methodist Church ¹⁰⁷ | A representative expressed interest in offering computer time to help constituents look for employment, and in offering technology training for seniors and others in low-income areas. |
| Wilmington-based I Am My Sister’s Keeper ¹⁰⁸ | A representative attended an outreach session and said that their nonprofit would like to give marketable skills to low-income families to help them acquire gainful employment. |

Additional asset inventory – broadband deployment assets

The following table details entities that participated in DTI’s outreach and engagement sessions and that stated that they have programs or other broadband deployment assets.

| Asset name | Description |
|--|---|
| Highly skilled workforce available to deploy broadband | A representative of Bloosurf, an ISP, attended an outreach session and said that it offers internships to increase workforce involvement. Bloosurf works with the State of Delaware and can provide various offerings including cybersecurity training and training fiber technicians. |
| Highly skilled workforce available to deploy broadband | A representative of New Castle County ¹⁰⁹ attended an outreach session and said that the county has no plans to add capacity for on-the-job training and K-12 training, but that the county offers programs for veterans or current military personnel, people with disabilities, seniors, low-income households or those without reliable housing, and specific racial or ethnic minority groups. |

¹⁰⁶ <https://talkiefiber.com/>.

¹⁰⁷ <https://ezion-mountcarmelumc.org/>.

¹⁰⁸ <https://www.IAMMSK.org>.

¹⁰⁹ <https://www.newcastlede.gov/>.

| Asset name | Description |
|--|---|
| Highly skilled workforce available to deploy broadband | A representative of the Communications Workers of America ¹¹⁰ attended an outreach session and said that the telecommunications union is currently developing a training/certification/apprenticeship program. |
| Highly skilled workforce available to deploy broadband | A representative of the Delaware Department of Education ¹¹¹ attended an outreach session and said that the department is expanding career and technical education (CTE) programs and has a taskforce focused on creating an integrated data sharing platform to track individuals and their career choices. |
| Highly skilled workforce available to deploy broadband | A representative of the Delaware Division of Libraries ¹¹² attended an outreach session and said that the organization is interested in developing partnerships with other agencies to assist in workforce development. |

Additional asset inventory – broadband adoption assets

The following table details entities that participated in DTI’s outreach and engagement sessions and that stated that they have broadband adoption assets such as programs that provide devices to those who lack them or that provide digital literacy or digital skills training.

| Entity name | Description |
|--------------------------------|---|
| Delaware Division of Libraries | A representative attended an outreach session and stated that libraries are loaning devices and hotspots to the public and could further help distribute devices. |
| Delaware Division of Libraries | A representative attended an outreach session and stated that libraries support Digital Literacy/Equity every day (since the 1990s). The libraries’ newest tool is Northstar Digital Literacy. ¹¹³ Library staff assist with use of Northstar and provide other computer assistance. |

¹¹⁰ <https://cwa-union.org/>.

¹¹¹ <https://education.delaware.gov/>.

¹¹² <https://libraries.delaware.gov/>.

¹¹³ “Northstar,” Delaware Division of Libraries, <https://lib.de.us/northstar/>.

| Entity name | Description |
|--------------|--|
| La Esperanza | A representative attended an outreach session and stated that La Esperanza, a neighborhood organization and community center for the Latino community, offers support for applicants to broadband subsidy programs such as the Affordable Connectivity Program (ACP). The organization also loans and/or donates devices (computers, tablets), and provides hotspots and free or subsidized internet access. |

Additional asset inventory – broadband affordability assets

The following table details entities that participated in DTI’s outreach and engagement sessions and that stated that they have broadband affordability assets such as discounted or subsidized broadband tiers or ACP outreach programs.

| Asset name | Description |
|--------------------|---|
| ACP outreach | A representative attended an outreach session and stated that Talkie Fiber, and ISP, participates in the ACP program. The monthly cost of the lowest-tier subscription after applying ACP benefit is over \$30. Each Talkie customer is notified that it accepts ACP either by website, phone calls, and emails. Talkie will waive the installation fee and will install on long driveways at no charge for ACP customers. Its lowest tier (100/100 Mbps) is \$69.99 per month. |
| ACP outreach | A representative of Bloosurf, an ISP, attended an outreach session and said that it participates in the ACP program. Its lowest priced tier is 25/3, and the post-ACP credit price of a monthly subscription is between \$11 and \$20. It promotes the ACP credit through its website, ads (TV, radio), and mailers. |
| Subsidized service | A representative of the ISP Bloosurf attended an outreach session and said that, during the Covid-19 pandemic, in partnership with the Department of Education (DOE) and DTI, it provided a free service for low-income families with children to work from home and do schoolwork (from 6 AM to 6 PM), charging DTI \$30 per month per household. |

Additional asset inventory – broadband access assets

The following table details entities that participated in DTI’s outreach and engagement sessions and that stated that they have broadband access assets such as providing public internet access.

| Asset name | Description |
|-------------------------------------|---|
| MSK Community Center ¹¹⁴ | A representative attended an outreach session and said that their location is an internet hub for the community, providing internet service to an eight-block area. |

Additional asset inventory – digital equity assets

The following table details entities that participated in DTI’s outreach and engagement sessions and that stated that they have digital equity assets such as workforce development programs.

| Asset name | Description |
|---|--|
| Bloosurf | A representative of Bloosurf, an ISP, attended an outreach session and said that it has designed an in-person class/demonstration to walk seniors through all the possibilities of high-speed internet: Wi-Fi 6, 4K streaming, teleconferencing, VoIP, and more. |
| Communication Service for the Deaf, ¹¹⁵ a nonprofit located in Austin, Texas | A representative attended an outreach session and expressed an interest in partnering to deliver services to the deaf. |
| Delaware Division of Libraries | A representative attended an outreach session and said that the libraries’ open labs, where facilitators help walk-ins with their immediate digital needs, are “crazy busy.” |
| Delaware Division of Libraries | A representative attended an outreach session and said that the Division of Libraries was a NASS finalist ¹¹⁶ for programming in workforce. |
| Division for the Visually Impaired (DVI) of DHSS (Delaware Health and Social Services) | A representative attended an outreach session and said that DVI is a vocational organization interested in creating programs for specific employment outcomes. |

¹¹⁴ <https://www.iammsk.org/>.

¹¹⁵ <https://www.csd.org>.

¹¹⁶ “NASS Ideas Award, 2017: Delaware Libraries Inspiration Spaces,” National Association of Secretaries of State (NASS), <https://www.nass.org/sites/default/files/DE-IDEAS-Award.pdf>.

| Asset name | Description |
|---|--|
| Division of Management Support Services (DMSS) of the Department of Services for Children, Youth, and Their Families (DSCYF) ¹¹⁷ | A representative attended an outreach session and said that the organization offers training in computer literacy and cybersecurity. |
| I Am My Sister’s Keeper (Wilmington-based) ¹¹⁸ | A representative attended an outreach session and said that their nonprofit would like to give marketable skills to low-income families to help them acquire gainful employment. |
| Office of Veterans Services (OVS) | A representative attended an outreach session and offered to assist DTI via information sharing. |
| Student Freedom Initiative ¹¹⁹ | A representative from Student Freedom Initiative, based in DC, attended an outreach session and said that it is in the process of developing a new program that focuses on digital skills and literacy, devices, broadband access and digital navigators. |
| Student Freedom Initiative; Connect101 | <p>A representative from Student Freedom Initiative, based in DC, attended an outreach session and said that it offers a program called Connect101. The population SFI serves is primarily historically black colleges and universities (HBCUs) and minority-serving institutions (MSIs) and the surrounding communities. Connect101 is a program engineered to ensure Historically Black Colleges and Universities and their communities have the knowledge and financial resources needed to fully participate in the digitizing economy. Designed, piloted, and led by the Student Freedom Initiative (SFI) and Connect Humanity,¹²⁰ Connect101 combines deep relationships with HBCUs and Connect Humanity’s technical and blended finance skills. Connect101 plans to:</p> <p>Engage HBCUs, their communities, and local governments in the development of technical, business, and financing plans.</p> <p>Prepare communities to effectively compete for coming IJA funds dedicated to achieving digital equity across America</p> |

¹¹⁷ <https://kids.delaware.gov/management-support-services/>.

¹¹⁸ <https://www.IAMMSK.org>.

¹¹⁹ <https://studentfreedominitiative.org/>.

¹²⁰ <https://connecthumanity.fund/>.

| Asset name | Description |
|--------------|--|
| | <p>(BEAD and DEA); as well as other blends of philanthropy, patient capital, and Community Reinvestment Act (CRA), funds needed to finance networks, device access, and digital literacy programming.</p> <p>Build a \$300M investment fund to support communities where government resources fall short.</p> <p>Connect101 plans to ensure tens of thousands of currently unconnected and underserved families living in HBCU communities currently considered “broadband deserts” have a pathway to participating in the digitizing economy – while laying the foundation to scale this work to hundreds of MSIs, ensuring they can embody their traditional role as drivers of economic mobility in our digital age.</p> |
| Talkie Fiber | <p>A representative of Talkie Fiber, an ISP, attended an outreach session and said that it does not have an official program to close the digital divide currently, but would be willing to work with the State and counties, such as bridging the digital divide by providing access to technology and devices, such as computers, internet connectivity, and software. Organizations can work with local communities to provide access to technology, especially for those who may not have the means to afford it. ACP provides device subsidies up to \$100.</p> <p>Offering training and support: Technology can be overwhelming for some people, and organizations can offer training and support to help people learn how to use technology effectively. By providing training and support, organizations can help individuals and communities build the skills necessary to bridge the digital divide.</p> <p>Collaborating with local organizations: Organizations can partner with local organizations, such as schools, libraries, and community centers, to provide technology access and training to underserved communities. These partnerships can extend the reach of technology to those who need it the most.</p> <p>Tailoring solutions to local needs: Different communities have different needs when it comes to technology access and training. Organizations can work with local communities to</p> |

| Asset name | Description |
|--|---|
| | understand their specific needs and tailor solutions accordingly. For example, some communities may need access to broadband internet, while others may need support for using software applications. |
| Tech Council of Delaware ¹²¹ | A representative of the Tech Council of Delaware attended an outreach session and said that the workforce-related organization provides tech certification programs, internships, digital literacy training for specific employment opportunities, job placement and recruitment services, sponsorships and scholarships for third-party training and classes, and new workforce program design and development |
| The Latin American Community Center ¹²² | A representative of the Latin American Community Center, based in Wilmington, attended an outreach session and said that it is currently in the process of developing a digital equity program focused on digital skills and literacy, data privacy and cybersecurity, devices and technical support. |
| The Latin American Community Center | A representative of the Latin American Community Center, based in Wilmington, attended an outreach session, and said that it is currently in the process of developing a digital equity program focused on digital skills and literacy, devices, digital navigators, and creating accessible and inclusive internet content with the goal to help augment health care and State services to veterans, particularly in Sussex County where there are gaps. |

Needs and gaps identified through stakeholder engagement

The following table details entities that participated in DTI’s outreach and engagement sessions and that stated that they have needs and gaps in the various categories detailed in this Plan.

¹²¹ <https://techcouncilofdelaware.org/>.

¹²² <https://www.thelatincenter.org/>.

| Issue | Need or gap identified |
|--|---|
| Broadband deployment (workforce development) | A representative of New Castle County Vo-Tech SD ¹²³ attended an outreach session and said that the organization is at capacity and offers a wide variety of training programs. |
| Broadband deployment (workforce development) | A representative of Polytech Adult Education, ¹²⁴ which is located in Woodside, said that the organization is interested in adding capacity but lacks resources. The organization would like resources for tuition assistance and access to transportation. |
| Broadband access | A representative of the Delaware Division of Libraries attended an outreach session and said that the Delaware Library Network has been impacted by reliability issues |
| Broadband deployment | A representative of the Delaware Division of Libraries attended an outreach session and said that the Delaware Library Network needs redundant paths, as libraries are Second Responders during emergencies for the transmission of accurate information. The person added that people ask librarians for information about local broadband options. |
| Broadband deployment | A representative of the Department of Labor, Division of Employment and Training ¹²⁵ attended an outreach session and said that parts of Sussex County have limited broadband availability and are served by a limited number of ISPs. |
| Broadband deployment | A representative of the ISP Bloosurf attended an outreach session and said that the company is hiring talent from out of state and implementing training programs to supplement workforce available in Delaware as it cannot fulfill its needs through local hires. Bloosurf is implementing referral programs, internships, mentorships, and sponsorships/scholarships for third-party training and classes. In another session, a representative of Bloosurf said that the company intends to quadruple in size in Delaware over the next five years. |
| Broadband deployment | A representative of the Kent County Alliance ¹²⁶ attended an outreach session and said that the Alliance is looking for funding to expand capacity for training in telecommunications infrastructure |

¹²³ <https://www.nccvotech.com/>.

¹²⁴ <https://polytechworks.com/contact-us/>.

¹²⁵ <https://labor.delaware.gov/divisions/employment-training/>.

¹²⁶ <https://kentcountyalliance.org>.

| Issue | Need or gap identified |
|------------------------------------|--|
| (workforce development) | deployment, general construction, computer science, and related areas. |
| Broadband adoption, digital equity | A representative of the Tech Council of Delaware ¹²⁷ stated that lack of digital literacy skills is a major barrier. |
| Broadband adoption, digital equity | A representative of the Delaware Division of Libraries attended an outreach session and said that library staff assist with use of Northstar and other computer assistance, but that the library would like to have the resources to add a team of digital navigators. |
| Broadband adoption, digital equity | A representative of the Delaware Division of Libraries attended an outreach session and said that that certain populations have seen time as a barrier toward their internet adoption and upskilling: “the Social Innovation team works with a lot of people are in crisis mode – struggling with survival – maybe working two jobs, have a family, and are still in a shelter. They need upskilling but time is a barrier. We are teaching digital skills while we get them the help they need... We have a lot of free online resources-time ... internet and devices are all needed.” |
| Broadband adoption, digital equity | A representative of the Dover Public Library ¹²⁸ attended an outreach session and said that a primary challenge is lack of digital literacy. |
| Broadband adoption, digital equity | A representative of the neighborhood organization and community center La Esperanza ¹²⁹ attended an outreach session and said that a major barrier is lack of digital literacy and language issues. |
| Broadband adoption, digital equity | A representative of the MSK Community Center ¹³⁰ attended an outreach session and said that people lack knowledge about services. |
| Broadband adoption, digital equity | A representative of the Delaware Division of Libraries attended an outreach session and said that with additional funding they could: 1) provide more access to digital literacy trainings and support, 2) facilitate the process of device distribution to households, and 3) design, develop, and launch new workforce programs with key partners, for adults and youth. |

¹²⁷ <https://techcouncilofdelaware.org/>.

¹²⁸ <https://dover.lib.de.us/>.

¹²⁹ <https://www.laesperanzacenter.org/>.

¹³⁰ <https://www.iammsk.org/community-center>.

| Issue | Need or gap identified |
|---|--|
| Broadband affordability | A representative of the Dover Public Library attended an outreach session and said that affordability of services is a challenge. |
| Broadband affordability | A representative of the ISP Bloosurf attended an outreach session and said that affordability is a significant barrier to customers accessing home computers. |
| Broadband adoption, digital equity | A representative of the neighborhood organization and community center La Esperanza who attended an outreach session said it needs funds to supply devices and digital literacy training in Spanish. |
| Broadband adoption, digital equity | A representative of the Dover Public Library attended an outreach session and said that people lack access because they lack housing. |
| Broadband adoption, digital equity | A representative of the Delaware Division of Libraries attended an outreach session and said that it could use additional resources (digital navigators) to provide one-on-one, just-in-time assistance. |
| Broadband adoption, digital equity | A representative of the Department of Labor, Division of Employment and Training attended an outreach session and said that a lack of digital literacy is a problem for some in Delaware. |
| Broadband adoption, digital equity | A representative of the Department of Labor, Division of Employment and Training attended an outreach session and said that people don't know what to do to prevent security threats, lack knowledge of common internet scams, and could benefit from cybersecurity education. |
| Broadband adoption, digital equity | A representative of the ISP Bloosurf who attended an outreach session said customers do not know how to protect their information online; lack awareness of cybercrime and internet threats, and often do not use anti-virus and security software. |
| Broadband adoption, digital equity (veterans) | A representative of the Office of Veterans Services (OVS) attended an outreach session and said that there would be demand for classes for veterans, perhaps provided by veteran support organizations and/or telehealth or education providers. |
| Broadband adoption, digital equity | A representative of the Tech Council of Delaware who attended an outreach session said some residents may need technical assistance or support to navigate the processes required to access and use broadband and that digital navigators could ameliorate the issue. |

Appendix B: Survey instruments

DTI gathered input from stakeholders through both a high-level Digital Equity Needs Assessment survey and surveys targeted to individual groups of stakeholders. The Needs Assessment was also posted on DTI's website to collect responses from the public.

Survey instrument 1: Broadband Equity, Access, and Deployment Digital Equity needs assessment

The Broadband Equity, Access, and Deployment (BEAD) Digital Equity Needs Assessment aims to collect high-level digital equity data to direct DTI's planning efforts. The Digital Equity Needs Assessment was provided through a link during stakeholder meetings and was posted publicly on the DTI website to gather additional responses.

3/14/23, 9:59 AM

Delaware Broadband Initiative - Delaware Broadband Initiative

Broadband Equity, Access, and Deployment (BEAD) Digital Equity Needs Assessment

Listen

The State of Delaware wants your input as part of the planning for the BEAD grant program, which will support the State's broadband and digital equity efforts.

Please take a few moments to answer the following five questions.

How important is competition among internet service providers for ensuring the availability of reliable broadband service?

Very important

Somewhat important

Neutral

Somewhat unimportant

Not important at all

Who should be leading the efforts to ensure our residents have the digital skills they need?

State Government

Local Governments

<https://broadband.delaware.gov/pages/index.html?do=public-comments>

1/3

3/14/23, 9:59 AM

Delaware Broadband Initiative - Delaware Broadband Initiative

Schools

Employers

Nonprofits

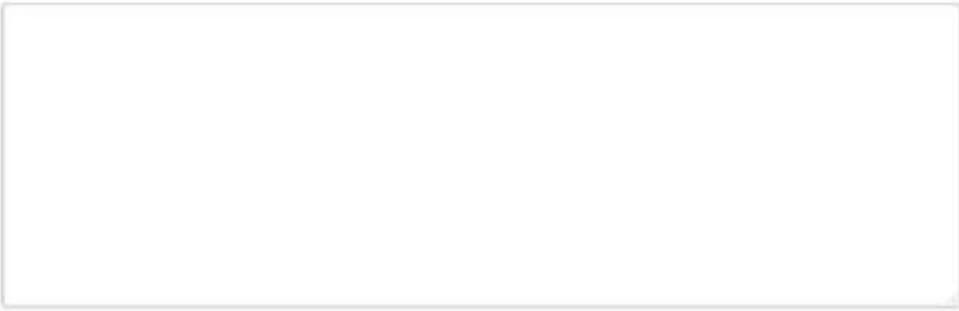
What do you think is the biggest obstacle to increasing high-speed internet subscriptions in Delaware?

Are you satisfied with your internet service connection at your home and/or place of work? If not, please explain why this is (i.e., price, speed, reliability, lack of quality device to connect to the internet, etc.).

What stakeholder organization(s) or group(s) do you want to make sure we include in these broadband engagement meetings?

3/14/23, 9:59 AM

Delaware Broadband Initiative - Delaware Broadband Initiative



Submit Form

+

Survey instrument 2: Delaware agency asset inventory survey

The Delaware Agency Asset Inventory Survey was provided via a direct link during the Local and Regional Governments stakeholder sessions and through email to all stakeholders.

5/31/23, 9:02 AM

Delaware Agency Asset Inventory Survey



Delaware Agency Asset Inventory Survey

By completing this short questionnaire, you will help Delaware's Department of Technology and Information identify infrastructure-related assets that may potentially help facilitate broadband deployment in Delaware. As the State engages with Internet Service Providers (ISPs) to extend network footprints and services, this information will support Delaware's goal of optimizing federal Broadband Equity, Access, and Deployment (BEAD) funding to achieve statewide universal access to high-speed broadband.

1. Please provide your contact information

Agency
name

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey

**Government level
(State, regional,
county, local,
tribal)**

Name of jurisdiction

First and last name

Title

Email

Phone number

Agency website URL (if any)

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey

2. Does your agency own or manage physical assets (i.e. conduit, fiber, structures, real estate, poles, etc.) that are available for lease to Internet Service Providers (ISP) for broadband deployment?

Yes

No

What information about these leasable assets would you like the State to include in its broadband planning and communications with ISPs?

3. Will your agency oversee capital construction projects between now and 2027 that include opportunities for the placement of communications facilities by your agency, other state or local agencies, regional or local consortia, or ISPs?

Yes

No

What information about these projects (i.e. scope, location, schedule) would you like included in State broadband planning and in communications with ISPs?

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey

4. Has your agency analyzed workforce readiness (i.e., the availability of skilled labor) in Delaware as it may impact State broadband policies and deployment goals?

Yes

No

Please provide a URL link where relevant documents, presentations, or analyses are located or send to the following email address: DEbroadband@ctcnet.us

5. Does your agency have a role in workforce development that would support wired or wireless broadband deployment (including training and recruitment for equipment technicians, cable installation and repair, and construction jobs)?

Yes

No

Please describe programs or initiatives that your agency operates or supports or relevant programs operated by other agencies.

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey

6. Are you aware of, or does your agency have reason to track and monitor frequent or widespread broadband or other communications outages that have significant impact on your community (or, if you represent a statewide organization, on the communities in Delaware)?

Yes

No

If yes, please describe your agency's role in monitoring or tracking communications reliability in your community and discuss the impact of significant outages.

7. Are you aware of, or is your agency involved in, planning efforts or development of regulations related to reliable and resilient emergency-level broadband or other communications services, especially services for critical facilities in Delaware (e.g. hospitals, schools, evacuation sites, utilities, data centers, public safety locations)?

Yes

No

Please provide a URL link to any publicly available materials relating to these issues and briefly describe the relevant issues related to critical facilities, including planning for climate and

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey

weather-related hazards. You may also email these materials to DEbroadband@ctcnet.us

8. Has your agency developed any policies, regulations, or guidance regarding emergency communications, network redundancy, climate resilience, disaster preparedness, or disaster recovery planning applicable to the broadband and communications industry in Delaware?

Yes

No

Please provide a URL link to any publicly available documents and briefly describe policies and other materials that you believe would be helpful to Delaware's broadband planning efforts. You may also email these materials to DEbroadband@ctcnet.us

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey

9. Has your agency developed policies or strategic planning documents that will facilitate broadband access efforts in Delaware (e.g. publicly available information that directly addresses digital equity, infrastructure deployment, economic development, network resilience, partnerships, business planning, or other related efforts)?

Yes

No

Please briefly summarize the material and provide a URL link or email information to DEbroadband@ctcnet.us

10. If applicable please share information regarding broadband-related planning efforts of other Delaware state and local agencies or contact information for agencies involved in broadband-related planning efforts, that you believe would be helpful to DTI's broadband planning efforts.

11. Please describe how your agency can collaborate with DTI and participate in its efforts to achieve statewide universal access to high-speed broadband.

5/9/23, 9:02 AM

Delaware Agency Asset Inventory Survey



Done

Survey instrument 3: Delaware community anchor institution survey

The Delaware Community Anchor Institution Survey was provided via a direct link during the Community Anchor Institutions stakeholder sessions and through email to all stakeholders.

5/9/23, 9:02 AM

Delaware Community Anchor Institution Survey



Delaware Community Anchor Institution Survey

Community anchor institutions play a critical role in facilitating greater use of broadband by underserved and vulnerable populations. Your responses to this brief survey will help Delaware's Department of Technology and Information identify programs to advance residents' opportunities to use broadband to work, learn, receive health care, and participate in civic events. This information will be an important part of Delaware's work toward achieving statewide universal access to high-speed broadband with federal funding through the Broadband, Equity, Access, and Deployment (BEAD) and Digital Equity Planning programs.

1. Contact information

Your name

Your job title

5/9/23, 9:02 AM

Delaware Community Anchor Institution Survey

- Community support organization that facilitates use of broadband service by low-income or other underserved populations
- Other (please specify)

3. Which of the following programs or services do you offer to facilitate the use of broadband services by your constituents or clients? Select all that apply.

- Support for applicants to broadband subsidy programs such as the Affordable Connectivity Program (ACP)
- Loans or donations of devices (computers, tablets) to access the internet
- Hotspots and free or subsidized internet access
- Cybersecurity training
- Other digital literacy training
- Training, equipment, subsidized services, or other resources to facilitate access to telehealth and telemedicine services
- Training teachers of broadband skills and digital literacy

5/9/23, 9:02 AM

Delaware Community Anchor Institution Survey

Please
indicate if
your
organizati
on serves
statewide
,
regionally
, or
locally

2. Choose the option that best describes your organization. Select the one that best applies.

- K-12 school
- Higher education entity
- Library
- Health clinic, health center, hospital, or other medical provider
- Public safety entity
- Public housing organization (including HUD-assisted housing and tribal housing organizations)
- Neighborhood organization and community center
- Faith-based organization

5/9/23, 9:02 AM

Delaware Community Anchor Institution Survey

- Community support organization that facilitates use of broadband service by low-income or other underserved populations
- Other (please specify)

3. Which of the following programs or services do you offer to facilitate the use of broadband services by your constituents or clients? Select all that apply.

- Support for applicants to broadband subsidy programs such as the Affordable Connectivity Program (ACP)
- Loans or donations of devices (computers, tablets) to access the internet
- Hotspots and free or subsidized internet access
- Cybersecurity training
- Other digital literacy training
- Training, equipment, subsidized services, or other resources to facilitate access to telehealth and telemedicine services
- Training teachers of broadband skills and digital literacy

5/9/23, 9:02 AM

Delaware Community Anchor Institution Survey

- Developing and distributing accessible online content or devices designed for us by persons with disabilities
- Developing and distributing accessible online content directed at populations with specific needs, such as seniors, low-income residents, those with low-literacy, and those whose first language is not English
- Broadband internet access services at community centers or other gathering spaces used by clients and constituents
- Funding of programs that provide any of the above programs, including broadband infrastructure, devices, and subsidies to support affordability
- Program development and planning of broadband-related services
- Advocacy for digital inclusion, affordability, and the broadband-related needs of vulnerable populations
- Emergency and disaster relief services such as evacuation centers, charging stations, replacement equipment, and information on grants, loans, and services to those impacted by disasters
- My organization does not offer programs that facilitate the use of broadband services

https://www.surveymonkey.com/r/DT1_CommunityAnchor01

5/6

5/9/23, 9:02 AM

Delaware Community Anchor Institution Survey

Other (please specify)

Next

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Survey instrument 4: Internet service provider survey

The Delaware Internet Service Provider Engagement Survey was provided via a direct link during the internet service provider stakeholder sessions and through email to all stakeholders.

5/9/23, 9:04 AM

Delaware Internet Service Provider Engagement Survey



Delaware Internet Service Provider Engagement Survey

DTI (Delaware Department of Technology Information) seeks your input on a range of broadband-related issues. Your responses to this brief survey will be an important part of Delaware's work toward achieving statewide universal access to high-speed broadband with federal funding through the Broadband, Equity, Access, and Deployment (BEAD) and Digital Equity Planning programs.

1. Contact information

Your name

Your job title

Your email

5/9/23, 9:04 AM

Delaware Internet Service Provider Engagement Survey

Your
phone
number

Organizat
ion name

Organizat
ion
address

Organizat
ion
website
URL

Organizat
ion's
number
of
employee
s

2. Choose the option that best describes your organization and the services it offers:

Internet service provider (ISP)

Provider
type

5/9/23, 9:04 AM

Delaware Internet Service Provider Engagement Survey

3. What recruitment and hiring sources does your organization use to hire technicians, lineworkers, engineers, construction laborers and managers, and similar positions? (Select all that apply)

- Internet-based employment posting sites
- Workforce development and community job placement centers
- Communications industry-specific training classes
- Third-party hiring and recruitment firms
- Advertisements in trade association publications and websites
- Incentivizing employee referrals

4. Does your organization offer, sponsor, or participate in any workforce development or apprenticeship programs?

- Yes
- No

5. If you answered yes to Q.4, please specify the type of programs. (Select all that apply)

- Mentorship
- Certification programs

5/9/23, 9:04 AM

Delaware Internet Service Provider Engagement Survey

- Apprenticeship
- Internship
- Sponsorships/scholarships for third-party training and classes
- Other (please specify)

6. How would you propose to work with Delaware on workforce development issues related to broadband deployment, including programs to support diversity among your organization's employees?

7. Does your organization participate in the Affordable Connectivity Program (ACP)?

- Yes
- No



Next

Survey instrument 5: Delaware Digital Equity Program inventory survey

The Delaware Digital Equity Program Inventory Survey was provided via a direct link during the Digital Equity and Covered Population Serving Organizations stakeholder sessions and through email to all stakeholders.

5/9/23, 9:08 AM

Delaware Digital Equity Program Inventory Survey



Delaware Digital Equity Program Inventory

Hello. Your responses to this brief survey will help the Delaware's Department of Technology and Information identify current and active programs that provide community members the skills and tools to participate broadband-related opportunities to work, learn, receive health care, and participate in civic events.

This information will be an important part of Delaware's work toward achieving statewide universal access to high-speed broadband with federal funding through the Broadband, Equity, Access, and Deployment (BEAD) and Digital Equity Planning programs.

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

- K - 12 school
- Civil rights organization
- Community college and institution of higher education
- Workforce development and

5/9/23, 9:06 AM

Delaware Digital Equity Program Inventory Survey

- Library
- Medical and health care provider
- State government
- County government
- Municipal government
- Council of governments (COG) or regional authority
- Tribal government
- Public housing authority
- adult literacy organization
- Internet Service Provider (ISP)
- Business
- Regional or industry association or commission
- 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

https://www.surveymonkey.com/r/DTI_DigitalEquity01

2/4

5/9/23, 9:06 AM

Delaware Digital Equity Program Inventory Survey

represents English
learners

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

Yes

No

3. Is your organization part of a broadband
coalition?

Yes

No

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

Name

Organization name

Address

Address 2

City/Town

State/Province

5/9/23, 9:06 AM

Delaware Digital Equity Program Inventory Survey

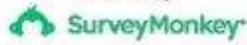
ZIP/Postal
Code

Email
Address

Phone
Number

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Survey instrument 6: Digital Equity and inclusion for historically marginalized populations (“Covered Populations”)

The Delaware Digital Equity and Inclusion for Historically Marginalized Populations Survey was provided via a direct link during the Digital Equity and Covered Population Serving Organizations stakeholder sessions and through email to all stakeholders.

5/9/23, 10:41 AM

Delaware Broadband Office Survey on Digital Equity & Inclusion for Historically Marginalized Populations (“Covered Populations”)



Delaware Broadband Office Survey on Digital Equity & Inclusion for Historically Marginalized Populations (“Covered Populations”)

This survey is meant to aid in Delaware’s planning and implementation of two federal programs: the Broadband, Equity, Access, and Deployment (BEAD) program and the Digital Equity Act program. Federal regulations require that planning for these programs consider the needs of populations that historically have faced barriers in fully engaging in our modern digital society. The program rules refer to these populations as “Covered Populations,” and they include:

- Individuals with disabilities
- Veterans or current military personnel
- Aging individuals
- Incarcerated individuals
- Individuals with low levels of literacy
- Individuals with a language barrier
- Individuals who primarily reside in a rural area
- Individuals who are members of a racial or ethnic minority group

https://www.surveymonkey.com/lv/DTL_HMP01

14

5/9/23, 10:41 AM

Delaware Broadband Office Survey on Digital Equity & Inclusion for Historically Marginalized Populations ("Covered Populations")

Organizations that serve or represent Covered Populations have a critical role in shedding light on the unique barriers such populations face, and how their needs can best be addressed. Your responses to this brief survey will help the Delaware Broadband Office identify opportunities for programs to advance vulnerable residents' full participation in broadband-related opportunities to work, learn, receive health care, and participate in civic events. This information will be an important part of Delaware's work toward achieving universal access to high-speed Internet.

1. Contact information

Your name

Your job title

Your e-mail

Your phone number

Organization name

5/9/23, 10:41 AM

Delaware Broadband Office Survey on Digital Equity & Inclusion for Historically Marginalized Populations ("Covered Populations")

Organizat
ion
address

Organizat
ion
website
URL

Organizat
ion's
number
of
employee
s

2. Does your organization provide programs and services that are primarily targeted to any of the following communities (the "covered populations")? (Select all that apply)

- Individuals with disabilities
- Veterans or current military personnel
- Aging individuals
- Incarcerated individuals
- Individuals with low levels of literacy
- Individuals with a language barrier

5/9/23, 10:41 AM

Delaware Broadband Office Survey on Digital Equity & Inclusion for Historically Marginalized Populations ("Covered Populations")

- Individuals who primarily reside in a rural area
- Individuals who are members of a racial or ethnic minority group
- No particular focus on a population or community
- Other (please specify)



Next

Survey instrument 7: Workforce development opportunity survey

The Delaware Workforce Development Opportunity Survey was provided via a direct link during the Workforce Development and Business and Economic Development stakeholder sessions and through email to all stakeholders.

5/8/23, 10:40 AM

Delaware Broadband Office Workforce Development Opportunity Survey



Delaware Broadband Office Workforce Development Opportunity Survey

Broadband infrastructure deployment and network operations require a highly skilled workforce. Your responses to this brief survey will help the Delaware Broadband Office identify opportunities for workforce training and readiness programs to prepare residents for new job opportunities in this field. This information will be an important part of Delaware's work toward achieving statewide universal access to high-speed broadband with federal funding through the Broadband, Equity, Access, and Deployment (BEAD) and Digital Equity Planning programs.

1. Contact information

Your
name

Your job
title

https://www.surveymonkey.com/r/DTI_WorkforceDevelopment01

1/3

5/9/23, 10:40 AM

Delaware Broadband Office Workforce Development Opportunity Survey

Your e-mail

Your phone number

Organization name

Organization address

Organization website URL

2. Type of organization (one selection only)

- Internet service provider (ISP)
- Labor union
- Trade association
- Industry certification or standards body
- Government agency (state, county, local, tribal, or regional consortia)

5/9/23, 10:40 AM

Delaware Broadband Office Workforce Development Opportunity Survey

- Economic development association or agency
- Regional or local workforce development board or agency
- K-12 education (private, charter, public)
- Higher education organization (all levels, public or private)
- Trade, technical or vocational school (public, nonprofit, or for-profit)
- Community based or nonprofit organization
- Other (please specify)

Next

Powered by
 SurveyMonkey
See how easy it is to [create a survey](#).

[Privacy & Cookie Notice](#)

Appendix C: Schedule of public engagements

This appendix contains the schedule of the five public engagements, event listings as posted in the State of Delaware Public Meeting Calendar, and an example meeting agenda.

Table 14: Schedule of public engagements

| Meeting | Date | Format |
|---|----------------|--------------------------------|
| Kent County Broadband Funding Hearing | March 1, 2023 | Hybrid (in person and virtual) |
| New Castle County Broadband Funding Hearing | March 6, 2023 | Hybrid (in person and virtual) |
| Sussex County Broadband Funding Hearing | March 14, 2023 | Hybrid (in person and virtual) |
| Seaford Broadband Funding Hearing | March 14, 2023 | Hybrid (in person and virtual) |
| Wilmington Broadband Funding Hearing | March 15, 2023 | Hybrid (in person and virtual) |

Stakeholder engagement session 1: Sussex County broadband funding hearing

3/13/23, 3:49 PM

Public Meeting Calendar: State of Delaware



Search and view public meetings with information back to March 2004. [SUBSCRIPTIONS](#) [SYNC](#)

Sussex County Broadband Funding Hearing

06:30 PM - 07:30 PM Tuesday March 14, 2023

Technology and Information / Department of Technology and Information

MEETING DESCRIPTION

To share information about major broadband initiatives happening across the state.

Funding for both infrastructure and digital equity will be made available to Delaware through the Broadband Equity, Access, and Deployment (BEAD) Program administered by the National Telecommunications and Information Administration (NTIA). Delaware is expected to receive approximately \$100 million for these purposes. The public is encouraged to attend one of the sessions in their area. More information on the Delaware Broadband Strategy is available at

<https://publicmeetings.delaware.gov/#/meeting/74850>

CONTACT INFORMATION

Tammy Shelton

[302-739-9500](tel:302-739-9500)

Tammy.Shelton@delaware.gov

[Website](#)

ADDRESS

Seaford District Library

600 N Market St

Seaford DE 19973

VIRTUAL MEETING INFORMATION

Via Zoom

1/3

3/13/23, 3:49 PM

Public Meeting Calendar: State of Delaware

<https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>. Information on the NTIA BEAD program can be found at <https://broadbandusa.ntia.doc.gov/resources/grant-programs/broadband-equity-access-and-deployment-bead-program>.

[Delaware Broadband Initiative](#)

<https://us06web.zoom.us/j/88166347>

DOCUMENTS

[Agenda](#)

CHANGE HISTORY

| Date | Reason |
|------------|--|
| 03/06/2023 | Location change Virtual Meeting Information, Virtual Meeting Url |
| 03/05/2023 | Document change Agenda saved |
| 03/05/2023 | New |

Meeting Location [Get Directions](#)



GOVERNMENT :::

BUSINESS :::

<https://publicmeetings.delaware.gov/#/meeting/74850>

2/3

3/13/23, 3:49 PM

Public Meeting Calendar: State of Delaware

- Cities & Towns
- Delaware Courts
- Delaware State Code
- Elected Officials
- General Assembly
- Delaware Governor
- Locations Directory
- Phone Directory
- State Employees
- State Agencies
- State Regulations
- Transparency
- Calendar API
- Make a FOIA Request
- Economic Development
- Incorporate
- Business First Steps
- Tax Center
- Bid for State Contracts
- Export Assistance
- Start a Small Business



Stakeholder engagement session 2: New Castle County broadband funding hearing

3/13/23, 3:30 PM

Public Meeting Calendar: State of Delaware



Search and view public meetings with information back to March 2004.

SUBSCRIPTIONS SYNC

New Castle County Broadband Funding Hearing

06:30 PM - 07:30 PM Monday March 06, 2023

Technology and Information / Department of Technology and Information

MEETING DESCRIPTION

To share information about major broadband initiatives happening across the state.

Funding for both infrastructure and digital equity will be made available to Delaware through the Broadband Equity, Access, and Deployment (BEAD) Program administered by the National Telecommunications and Information Administration (NTIA). Delaware is expected to receive approximately \$100 million for these purposes. The public is encouraged to attend one of the sessions in their area. More information on the Delaware Broadband Strategy is available at

<https://publicmeetings.delaware.gov#/meeting/74711>

CONTACT INFORMATION

Tammy Shelton

[302-739-9500](tel:302-739-9500)

Tammy.Shelton@delaware.gov

[Website](#)

ADDRESS

Appoquinimink Community Library
651 N Broad St
Middletown DE 19709

VIRTUAL MEETING INFORMATION

Via Zoom

1/3

3/13/23, 9:50 PM

Public Meeting Calendar: State of Delaware

<https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>. Information on the NTIA BEAD program can be found at <https://broadbandusa.ntia.doc.gov/resources/grant-programs/broadband-equity-access-and-deployment-bead-program>.

[Delaware Broadband Initiative](#)

<https://us06web.zoom.us/j/85768850>

DOCUMENTS

[Agenda](#)

CHANGE HISTORY

| Date | Reason |
|------------|--|
| 02/27/2023 | Location change Virtual Meeting Information, Virtual Meeting Url |
| 02/22/2023 | Location change Building, Location Comments |
| 02/14/2023 | Document change Agenda saved |
| 02/13/2023 | New |

Meeting Location Get Directions [↗](#)



<https://publicmeetings.delaware.gov/#meeting/74711>

2/3

3/13/23, 3:50 PM

Public Meeting Calendar: State of Delaware

GOVERNMENT :::

- Cities & Towns
- Delaware Courts
- Delaware State Code
- Elected Officials
- General Assembly
- Delaware Governor
- Locations Directory

- Phone Directory
- State Employees
- State Agencies
- State Regulations
- Transparency
- Calendar API
- Make a FOIA Request

BUSINESS :::

- Economic Development
- Incorporate
- Business First Steps
- Tax Center
- Bid for State Contracts
- Export Assistance
- Start a Small Business



Stakeholder engagement session 3: Kent County broadband funding hearing

3/13/23, 3:52 PM

Public Meeting Calendar: State of Delaware



Search and view public meetings with information back to March 2004.

SUBSCRIPTIONS SYNC

Kent County Broadband Funding Hearing

06:30 PM - 07:30 PM Wednesday March 01, 2023

Technology and Information / Department of Technology and Information

MEETING DESCRIPTION

To share information about major broadband initiatives happening across the state.

Funding for both infrastructure and digital equity will be made available to Delaware through the Broadband Equity, Access, and Deployment (BEAD) Program administered by the National Telecommunications and Information Administration (NTIA). Delaware is expected to receive approximately \$100 million for these purposes. The public is encouraged to attend one of the sessions in their area. More information on the Delaware Broadband Strategy is available at

<https://publicmeetings.delaware.gov/#/meeting/74709>

CONTACT INFORMATION

Tammy Shelton

302-739-9500

Tammy.Shelton@delaware.gov

[Website](#)

ADDRESS

Dover Public Library

35 Loockerman Plaza

Dover DE 19901

VIRTUAL MEETING INFORMATION

Via Zoom

1/3

3/13/23, 3:52 PM

Public Meeting Calendar: State of Delaware

<https://broadband.delaware.gov/pages/index.shtml?dc=DelawareBroadbandStrategy>. Information on the NTIA BEAD program can be found at <https://broadbandusa.ntia.doc.gov/resources/grant-programs/broadband-equity-access-and-deployment-bead-program>.

[Delaware Broadband Initiative](#)

<https://us06web.zoom.us/j/85382858>

DOCUMENTS

[Agenda](#)

CHANGE HISTORY

| Date | Reason |
|------------|--|
| 02/27/2023 | Location change Virtual Meeting Information, Virtual Meeting Url |
| 02/22/2023 | Location change Building, Location Comments |
| 02/14/2023 | Document change Agenda saved |
| 02/13/2023 | New |

Meeting Location Get Directions [🗺](#)



<https://publicmeetings.delaware.gov/#/meeting/74709>

2/3

3/13/23, 3:52 PM

Public Meeting Calendar: State of Delaware

GOVERNMENT :::

- Cities & Towns
- Delaware Courts
- Delaware State Code
- Elected Officials
- General Assembly
- Delaware Governor
- Locations Directory

- Phone Directory
- State Employees
- State Agencies
- State Regulations
- Transparency
- Calendar API
- Make a FOIA Request

BUSINESS :::

- Economic Development
- Incorporate
- Business First Steps
- Tax Center
- Bid for State Contracts
- Export Assistance
- Start a Small Business



Stakeholder engagement session 4: Seaford broadband funding hearing



Delaware Department of Technology and Information

Broadband Funding Public Hearing
Tuesday, March 14 (6:30 p.m. – 7:30 p.m.)
Seaford District Library, 600 N. Market Street Extended, Seaford, DE 19973

- I. **Opening Remarks**
- II. **Broadband Technology 101**
- III. **Broadband Infrastructure and Digital Equity Grant Programs Overview**
- IV. **Public Comment and Question & Answer**
- V. **Public Survey (anonymous)**

Appendix D: Schedule of virtual stakeholder engagements

This appendix includes copies of the outreach emails sent by DTI to stakeholders documenting the schedule of virtual meetings.

| | |
|------------------------|--|
| Subject: | SAVE the DATE: Stakeholder Invitation for Broadband Funding and Digital Equity in Delaware |
| Attachments: | DTI BEAD and DE State Wide Presentation.pdf; Statewide Stakeholder Question and Answer.pdf |
| Follow Up Flag: | Flag for follow up |
| Flag Status: | Flagged |



Dear Broadband Partner,

SAVE the DATE: Stakeholder Invitation for Broadband Funding and Digital Equity in Delaware

As a key stakeholder, you are invited to attend one of the upcoming online meetings hosted by the Delaware Department of Technology and Information (DTI) to focus on broadband and digital equity funding. We have six meeting topics planned over a six-week period with two meetings per week/per topic to allow you to choose the meeting time that best fits your schedule. Below is a list of the topics and the meeting dates. Please feel free to attend as many as you wish. In these sessions, we will share more about the grant programs, as well as collect your input for the grant planning process.

We encourage you to forward this information to your colleagues and local affiliates to attend these important engagements. You are welcome to use the link for the session that best meets your schedule.

Also, attached to this email are two additional documents:

- The initial stakeholder meeting presentation held on February 23, 2023
- A Q&A document which includes the questions/statements from the session with answers

Please see the engagement dates below. We look forward to seeing you there!

March 15, 2023
Week 1: **Local and Regional Governments**
3:00 pm – 4:30 pm EST
Zoom Link – <https://us06web.zoom.us/j/83968823123>

March 16, 2023
Week 1: **Local and Regional Governments**
11:00 am – 12:30 pm EST

1

Zoom Link – <https://us06web.zoom.us/j/84643396150>

March 22, 2023

Week 2: **Community Anchor Institutions**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

March 23, 2023

Week 2: **Community Anchor Institutions**

11:00 am – 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

March 29, 2023

Week 3: **Internet Service Providers**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

March 30, 2023

Week 3: **Internet Service Providers**

11:00 am – 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

April 05, 2023

Week 4: **Organizations Focused on Digital Equity and Supporting Covered Populations**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

April 06, 2023

Week 4: **Organizations Focused on Digital Equity and Supporting Covered Populations**

11:00 am – 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

April 12, 2023

Week 5: **Workforce Development**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

April 13, 2023

Week 5: **Workforce Development**

11:00 am – 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

April 19, 2023

Week 6: **Business and Economic Development**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

April 20, 2023

Week 6: **Business and Economic Development**

11:00 am – 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

Do not reply to this email. Please send questions and correspondences to broadband@delaware.gov.

This email is sent on behalf of the state of Delaware.

Subject: Stakeholder Invitation and Surveys for Broadband Funding and Digital Equity in Delaware
Attachments: Stakeholder Surveys.pdf



Dear Broadband Partner,

The Broadband Funding and Digital Equity online meetings have begun!

As a key stakeholder, you are invited to attend the upcoming online meetings hosted by the Delaware Department of Technology and Information (DTI) to learn more about upcoming grant programs and provide your input for the grant planning process.

There are six meeting topics planned over a six-week period. Each weekly topic has two meetings to allow you to choose the meeting which best fits your schedule. Please attend as many as you wish.

Each meeting topic is paired with a stakeholder engagement survey. You may take any of the surveys that apply to you and your organization before or after participating in the online meetings. Please see the attached PDF "**Stakeholder Surveys**" for a link to and description of each survey. We appreciate and value your input!

Please see the engagement dates below. We look forward to seeing you there!

March 22, 2023

Week 2: **Community Anchor Institutions**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

March 23, 2023

Week 2: **Community Anchor Institutions**

11:00 am - 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

March 29, 2023

Week 3: **Internet Service Providers**

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

March 30, 2023

Week 3: Internet Service Providers

11:00 am - 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

April 05, 2023

Week 4: Organizations Focused on Digital Equity and Supporting Covered Populations

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

April 06, 2023

Week 4: Organizations Focused on Digital Equity and Supporting Covered Populations

11:00 am - 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

April 12, 2023

Week 5: Workforce Development

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

April 13, 2023

Week 5: Workforce Development

11:00 am - 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

April 19, 2023

Week 6: Business and Economic Development

3:00 pm - 4:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/83968823123>

April 20, 2023

Week 6: Business and Economic Development

11:00 am - 12:30 pm EST

Zoom Link - <https://us06web.zoom.us/j/84643396150>

Do not reply to this email. Please send questions and correspondences to broadband@delaware.gov.

This email is sent on behalf of the state of Delaware.

Appendix E: Stakeholder engagement outreach list

The following table includes the complete list of entities invited to participate in stakeholder engagements. DTI contacted multiple representatives from some organizations.

Table 15: Stakeholder engagement outreach list

| Entity name |
|--|
| 302 Strategies |
| American Enterprise Institute |
| Appoquinimink School District |
| Beebe Healthcare |
| Bethany-Fenwick Chamber |
| BGR Government Affairs |
| Bloosurf |
| Boys & Girls Club – Kent County |
| Boys & Girls Club – New Castle County |
| Boys & Girls Club – Sussex County |
| Boys and Girls Clubs of Delaware, Inc. |
| Breezeline |
| Bridgeville Senior Center |
| BrightSpring Health Services |
| Byrd Gomes |
| Caesar Rodney School District |
| Cape Henlopen Senior Center |
| Cape Henlopen Support Staff Association |
| Capital School District |
| Catholic Charities Immigration Services |
| Central Baptist Community Development Center |
| Central Delaware Chamber of Commerce |

| Entity name |
|---|
| Child, Inc. |
| Choptank Electric Cooperative |
| Christiana Care |
| City of Dover |
| City of Georgetown |
| City of Milford |
| City of Newark |
| City of Seaford |
| City of Wilmington |
| Code Purple – Kent County |
| Colonial School District |
| Comcast |
| Communication Service for the Deaf |
| Communications Workers of America |
| Community Connectors Centers for Disability Studies – Univ. of Delaware |
| Compass Group |
| Concerned Black Educators of Schenectady |
| Could not identify |
| Criminal Justice Council |
| CTC |
| Delaware Advisory Council on Career and Technical Education |
| Delaware Art Museum |
| Delaware Association of Counties |
| Delaware Association of Realtors |

| Entity name |
|--|
| Delaware Auditor |
| Delaware Black Chamber of Commerce (DEBCC) |
| Delaware Center for Justice (DCJ) |
| Delaware Criminal Justice Council |
| Delaware Department of Corrections |
| Delaware Department of Health and Social Services |
| Delaware Department of Labor |
| Delaware Division for the Visually Impaired |
| Delaware Electric Cooperative |
| Delaware Family Center |
| Delaware Farm Bureau Kent County |
| Delaware Health Care Facilities Association |
| Delaware League of Local Governments |
| Delaware Libraries |
| Delaware Manufacturing Extension Partnership (DEMEP) |
| Delaware Office of Veterans Services |
| Delaware Prosperity Partnership |
| Delaware Public Defender |
| Delaware Schools |
| Delaware State Chamber of Commerce |
| Delaware State House of Representatives |
| Delaware State Housing Authority |
| Delaware State Senate |
| Delaware State University |
| Delaware Technical Community College |

| Entity name |
|---|
| Delaware Treasurer |
| Delaware Union Soccer |
| Delaware Workforce Development Board |
| Delmarva Christian Schools |
| Democratic Party |
| Denhardt Consulting |
| Department of Education |
| Department of Labor |
| Department of Natural Resources and Environment |
| Department of Safety and Homeland Security |
| Department of Services for Children, Youth and Families |
| Department of State |
| Department of Technology and Information |
| Department of Transportation |
| Division of Developmental Disability Services |
| Division of Family Services |
| Division of Libraries |
| Dover Interfaith Mission for Housing |
| DTI |
| Early College School at Delaware State University |
| Easterseals |
| EducationSuperHighway |
| Ezion-Mount Carmel United Methodist Church |
| Family Promise of Northern New Castle County |
| First State Community Action Agency |

| Entity name |
|---|
| First State Strategies |
| Fitzgerald Consulting, Inc. |
| Frederica Senior Center |
| Georgetown Chamber of Commerce |
| Georgetown Public Library |
| Graybar Broadband Utility Sales |
| Habitat for Humanity |
| Harrington Senior Center |
| Harvest Christian Church |
| Harvest Years Senior Center |
| Health and Social Services |
| Hilltop Lutheran Neighborhood Center |
| Hispanic American Association of Delaware |
| Hispanic Commission |
| I Am My Sister's Keeper, Inc. |
| Independent Resources Inc. |
| Indian River School District |
| Indian River Senior Center |
| International Brotherhood of Electrical Workers |
| International Brotherhood of Electrical Workers, Local 13 |
| Internet & Television Association |
| J. Arthur OP&C, LLC |
| Jefferson Street Center |
| Jobs for the Future |
| Johnson C. Smith University |

| Entity name |
|---|
| Kent County |
| Kent County Alliance |
| Kent Economic Partnership |
| Kitts Hummock Improvement Association |
| Klein Law Group |
| La Esperanza |
| Latin American Community Center |
| Laurel Commons Senior Community |
| Lead Reduction/Healthy Homes, New Castle County |
| Leading Age |
| Lewes Senior Center |
| Lighthouse Christian School |
| Lillian Smith Senior Center |
| Lt. Governor |
| Lt. Governor's Office |
| Mediacom |
| Metropolitan Wilmington Urban League |
| Milford School District |
| Milford Senior Center |
| Milton Chamber of Commerce |
| Miracle Revival Center |
| Modern Maturity Center |
| Multicultural Media, Telecom and Internet Council |
| National Collaborative for Digital Equity |
| National Federation of the Blind |

| Entity name |
|--|
| Neighborhood House, Inc. |
| NERDiT Cares |
| New Castle County |
| New Castle County Chamber of Commerce |
| New Castle County Vocational Technical School District |
| New Castle Senior Center |
| Newark Senior Center |
| NTIA |
| Office of Management and Budget |
| Office of Rep. Lisa Blunt-Rochester |
| Office of Sen. Chris Coons |
| Office of Sen. Tom Carper |
| Office of the Governor |
| Office of the Secretary |
| Office of Veterans Services |
| Police Athletic League of Wilmington |
| Polytech |
| Reach Riverside Development Corporation |
| Rehoboth-Dewey Chamber of Commerce |
| Rhodium Group |
| Seaford Community of Hope |
| Seaford District Library |
| Sen. Tom Carper |
| Social Contract |
| Southern Delaware Alliance for Racial Justice |

| Entity name |
|---|
| State Chamber of Commerce |
| State Housing Authority |
| State of Delaware |
| State Senate |
| Student Freedom Initiative |
| Sussex County |
| Sussex County Health Coalition |
| Sussex Economic Development Action Committee |
| Sussex Montessori School |
| Talkie Fiber |
| Tech Council of Delaware |
| Telecommunications Industry Association |
| The Arc of Delaware |
| The Shepherd Place |
| The Willis Group |
| Town of Bowers, DE |
| Town of Georgetown |
| U.S. Department of Veterans Affairs – New Castle County |
| U.S. Small Business Administration Delaware District Office |
| United Way of Delaware |
| University of Delaware |
| University of Delaware – Kent County |
| Urban Tech Hero |
| USTelecom |
| Verdantas |

| Entity name |
|---|
| Verizon |
| Veteran Awareness Center |
| Veterans Multi-Service Center |
| Virginia, Maryland, and Delaware Association of Electric Cooperatives |
| Volunteers of America |
| Western Sussex Chamber of Commerce |
| Wilmington Community Advisory Council |
| Wilmington University |