

SOMERSET COUNTY Broadband Feasibility Study

May 2024









PREPARED BY

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MESSAGE FROM THE COMMISSIONERS

We are committed to addressing the connectivity gaps that exist throughout our County and initiated the Connect Somerset County project to research and document the current state of broadband, identify unserved and underserved areas, determine possible project areas, and strategically pursue funding and partnership opportunities.

The goals of our Connect Somerset County project reflect the public's need for reliable high-speed broadband service regardless of location. We have a duty to serve the public and ensure that Somerset County is a place where our residents and businesses can thrive, and this project establishes the foundational data necessary to address our County's connectivity gaps effectively.

We want to thank all the community members who took the time to respond to the survey, taskforce members who supported the work, and internet service providers who participated in interviews. We were able to develop this report thanks to your contributions.

We are pleased to present this Broadband Data Collection Report and Feasibility Study. This public-facing document presents Somerset County's work to assess the current state of broadband connectivity. It will support our continued efforts to close the digital divide and ensure all residents and businesses can access reliable, fixed, high-speed internet service.

We are excited to continue working on your behalf and look forward to the connectivity opportunities that lie ahead.

Respectfully,

Your Somerset County Commissioners



Brian K. Fochtman Chair



Irvin H. Kimmel Jr Vice Chair



Pamela A. Tokar-Ickes Secretary

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EXECUTIVE SUMMARY

High-speed internet service should be a viable option for every Somerset County (County) household, business, and organization. Access to fast, reliable internet service is no longer a luxury. It impacts numerous aspects of daily life and opens opportunities for education, business operations, workforce development, telework, telehealth, communication, and entertainment, among other activities. Ensuring reliable access is available throughout the County will also support a vibrant economy. The interest and need for high-speed internet in rural, suburban, and urban areas has been accelerating for years. However, the infrastructure has not kept pace with the growing demand, and the COVID-19 pandemic magnified the need to accelerate bridging the divide between internet service needs and infrastructure buildouts.

The Somerset County Commissioners (Commissioners) recognized the adverse effects of the lack of suitable internet service on its students, workforce, businesses, economy, and local governments. The Commissioners prioritized assessing the County's internet service to identify the unserved and underserved areas. The Connect Somerset County initiative lays the groundwork for developing a plan to pursue strategic investment opportunities and ensure high-speed internet service is an option for everyone in the County.

The Commissioners structured the project with a schedule that outlined distinct phases to ensure activities continued progressing in a timely manner. Taking an agile approach to project management allowed the Commissioners to be flexible and collaborative throughout the process. Open and continuous communication allowed those working on the project to strategically plan and execute each phase while also contributing to multiple tasks. This approach strengthened and streamlined the processes while being responsive to the project needs and adapting strategies as new information and data became available.

Connect Somerset County is a multi-faceted project that includes several qualitative and quantitative data gathering and assessment efforts. The Commissioners guided the project with the invaluable contributions of taskforce members who were asked to participate and represent their respective networks and local expertise. The County, taskforce members, and other stakeholders also supported the work by extending the County's messaging reach. The County's outreach efforts helped inform the public about the work and engagement opportunities, such as a broadband survey and hybrid

public meeting. Throughout the project, the County also enhanced its datasets through interviews with internet service providers (ISPs) and ongoing analysis, verification, and mapping.

The County analyzed the data and reviewed the feedback to document the actual speeds of internet customers, capture the sentiment about current internet service, understand the varying levels of broadband availability throughout the County, identify ISPs currently serving or interested in bringing service to the County, and consider potential future ISP projects. The data collection efforts demonstrated a clear need for reliable broadband throughout the County, including the more than 7,000 currently unserved locations and more than 540 underserved households. Further pointing to the need for improved broadband access, nearly 30% of survey respondents travel to access Wi-Fi, and over 42% of respondents indicated they are either dissatisfied or very dissatisfied with internet performance at the home or business where service is regularly accessed.

The project's final steps used the wealth of information and data from the initial project phases to develop immediate, short-term projects the County could pursue to bring internet access to currently unserved areas. The proposed Early Action Projects (EAPs) would ease access issues for the properties within the proposed project areas identified through rigorous data analysis. As a part of this process, the County also identified several goals it will pursue to support robust broadband availability for everyone in the County.

This Broadband Data Collection Report and Feasibility Study (Report) presents an overview of the activities that occurred, quantitative and qualitative data collected, and opportunities to advance the County's broadband connectivity interests. The result of this study confirms what many in the County know to be true – reliable internet is lacking in many areas. This study presents a significant opportunity for Somerset County to strengthen the community by deploying more broadband infrastructure.

Somerset County BROADBAND FINDINGS



MORE THAN

7,000 unserved locations



MORE THAN

540

underserved households



30%

survey respondents travel to access Wi-Fi



42%

of respondents indicated they are either dissatisfied or very dissatisfied with internet performance at the home or business where service is regularly accessed





PUBLIC OUTREACH

Effectively communicating with the public was critical to raising awareness about the County's project and encouraging residents and businesses to participate. The County identified the key audiences it sought to reach through its communication efforts, categorizing them as residents and stakeholders to guide its outreach approach. Understanding that residents, organizations, community anchor institutions (CAIs), local leaders, and businesses receive information through different channels and that it takes repetition for information to resonate with people, the County took a multi-pronged approach to connect with the public and stakeholders that incorporated several outreach methods and messengers. The outreach that occurred informed the County's key audiences about the project and the data collection activities, including the hybrid public meeting and survey and speed test. The public outreach encouraged involvement by residents, stakeholders, and ISPs, and the assessment of the data collected is addressed in the Collecting County Data and The Current State of Broadband Connectivity report sections.

Key Audiences

The County sought to engage broad and specific audiences through its engagement activities. To support its outreach efforts, the County reviewed and enhanced its diverse stakeholder list and categorized them by target audience. Establishing the key audiences allowed the County to implement its communications resources efficiently and confidently as the engagement approaches were tailored to each audience to enhance participation and feedback. Three audiences capturing different segments of the County were outlined and defined as the following:



Residents: The individuals and groups that benefit from internet access and digital equity, including families, businesses, organizations, and public institutions, and covered populations as outlined in the federal Digital Equity Act of 2021.



Stakeholders: The organizations and stakeholder groups that will support the initiative through promotional communications and by raising awareness, including, among others, elected officials, municipal leaders, CAIs (i.e., schools, libraries, health care providers), and non-profit organizations that advocate for low-income populations, business/economic development organizations, public safety entities, the technology sector, the agriculture sector, transportation providers, etc.



ISPs: Those entities that make service available to residents, including mobile wireless carriers and middle mile providers.

Website

The County developed a stand-alone, dedicated project website that gave visitors an overview of the project, information about high-speed internet, and quotes from the Commissioners. A frequently asked questions section provided additional insight into various aspects of the work. The website included contact information to allow people to reach out with more specific questions or to request additional information. An embedded form also allowed users to sign up for project updates.



ConnectSomersetCounty.com received more

than 1,300 unique views during the survey period, and users spent, on average, 30 seconds engaging during each visit. Additionally, 3,291 events occurred on the website, meaning visitors were active on the site clicking links to learn more, signing up for the newsletter, proceeding to the survey, and taking other on-page actions. Whether it is the project website or the County's website, the County will continue using a website as a source of information as it advances into the next phases of the project.

Media Engagement

Connecting with local media outlets was an effective way to cast a wide net throughout the County and elevate messaging related to the County's work. Outreach to print and broadcast media outlets resulted in six print and two broadcast pieces from the project's launch through the survey's close.

The outlets helped inform the public about the County's work, including the countywide survey and hybrid public meeting. The local media was an asset to the County throughout this project, and the County will continue working with the media to keep the public informed and engaged through the next steps of its broadband work, including the EAP selection and implementation process.

CONNECT SOMERSET BY THE NUMBERS

RESPONSES



ARTICLES





WEBSITE **ACTIONS TAKEN**

COUNTY **EMAIL BLASTS**



Email Blasts

The County used a series of email blasts to help extend its reach and broadcast essential project details. By connecting with interested individuals who signed up through the project website and other County residents and stakeholders who previously expressed interest in receiving County updates, the County communicated project milestones and deadlines, which encouraged a more informed and engaged public.

Communications Toolkit

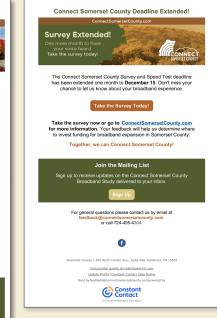
The County also used a communications toolkit to foster communication and ensure consistent messaging. The County extended its reach by sharing the toolkit in turn with the taskforce members to promote the survey and hybrid public meeting. The toolkit included text and graphics for social media posts, an email blast, a short article, a block ad, and a flyer. The press release announcing the initiative was also included as a reference for taskforce members and used in various communication materials. The toolkit was a resource for amplifying messaging about the project and participation opportunities.





connection speeds in Somerset County?











COLLECTING COUNTY DATA

The County's public outreach informed its key audiences about the project and participation opportunities, including the hybrid public meeting and countywide survey and speed test, which were two essential data collection methods for the project. The insights collected during taskforce meetings and the hybrid public meeting, which were primarily focused on connectivity concerns, service frustrations, and lack of providers, provided the County with anecdotal evidence about the experiences and connectivity capabilities of residents, students, businesses, local governments, CAIs, and other entities. This information was compiled with the countywide survey and speed test results, which contributed a layer of measurable and verifiable data. The County also spoke with ISPs, who provided information about current availability, service, and plans while enhancing business relationships. Additionally, the County drew on data from the Federal Communications Commission (FCC) National Broadband Map to capture current information about unserved and underserved areas in Somerset County. These data-collection efforts provided the foundation for developing this Report, shaped the EAPs, and will guide the County's future investments.

Taskforce

To support the project and bring diverse perspectives and expertise, the County formed a taskforce consisting of leaders from the local, regional, and state levels in government, technology, economic development, education, healthcare, and library systems. The taskforce members committed to supporting the project by sharing their professional knowledge and insights, amplifying information and feedback opportunities with their networks, and contributing to developing long-term broadband deployment goals. The taskforce met three times from the project's inception and through the finalization of this Report. The County appreciates the time and dedication of the taskforce members, and a full list of participants can be found in Appendix A.

Municipal Summit Participation

To further connect with local leaders, the County took advantage of the opportunity to speak at the Somerset County Municipal Summit in November 2023. Attended by local elected officials and municipal managers, the event provided the County with a forum to provide an overview of the project and ask for support. Information about the hybrid public meeting and countywide survey and speed test was shared. Those in attendance were invited to participate in the survey and speed test and asked to promote the information and opportunities through their communication channels.

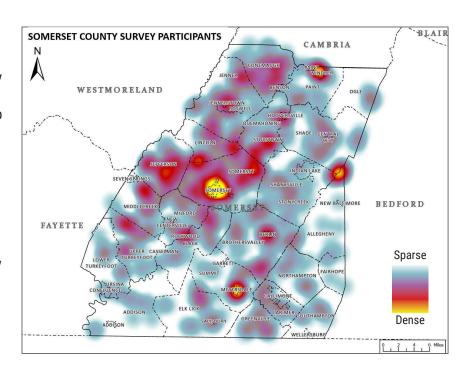
Hybrid Public Meeting

The hybrid public meeting provided the community with an opportunity to learn about the Connect Somerset County project plan, outreach efforts, mapping, and next steps. The County also sought feedback from the meeting participants to gain insights about their internet experiences and sentiment. Attendees expressed concerns about internet connectivity and frustration about the inability to access internet service. The interactive presentation and discussion achieved the County's objectives of sharing project information and hearing from residents and stakeholders.

Countywide Survey and Speed Test

The County launched a countywide survey to gather current data and input about internet service and sentiment and to help identify access and connectivity gaps. In addition to basic demographic data, the survey gathered information about the type of service available, download and upload speeds, devices used, satisfaction level, service cost, household use, affordability, and barriers to connectivity. A copy of the Broadband Expansion Study Survey is included in **Appendix C**.

The County actively encouraged residents and businesses to participate during the 12 weeks it was open. Paper surveys were available for those without



internet or who preferred the hard copy version, but the County encouraged people to take the online survey regardless of their home internet speeds. The benefit of the online survey was an embedded speed test that provided a real-time assessment of the location's download and upload speeds while respondents completed the survey questions.

The Speedtest by Ookla, which was embedded in the survey platform, captured a real-time snapshot of the respondents' broadband speed, measuring download speed, upload speed, latency, and jitter at the locations where the speed test was taken. Based on the address information provided in the survey response, the County could better visualize the state of connectivity. The full list of survey results by municipality is in **Appendix D**.

The survey and speed test responses were analyzed after the survey closed, contributing to the County's understanding of current internet availability, unserved and underserved areas, and the public's perspective of their current service. The results of this data collection method. including the types of respondents, type of internet service, internet satisfaction, barriers for upgrading internet service, and respondents who travel for Wi-Fi, are highlighted in the next section, The Current State of Broadband Connectivity.

TOP 5 MUNICIPALITIES WITH THE MOST SURVEY RESPONSES

85

SOMERSET TOWNSHIP 44

JEFFERSON TOWNSHIP

42

JENNER TOWNSHIP **36**

CONEMAUGH **TOWNSHIP**

34

BROTHERSVALLEY TOWNSHIP

"We have no cell phone service in my area so when the internet goes down we have no emergency services."

- Jenner Township Resident

"We have struggled for years with out any good options for internet. It has affected my business and the ability to do my work for years. Very frustrating and affects the ability to make a living."

- Middlecreek **Township Resident** access on it. My neighbors have also voiced their need for internet to me. If I had internet access I could more effectively do my job and would be more likely to remain in the area long term."

"My house is on a short section of road that has no internet

- Quemahoning Township Resident

"We live 1/2 mile from the last home that has broadband. We have struggled with poor service due to weather, speed, slowdowns. Satellite is not strong enough to support our business, virtual learning requirements for our child, or my needs as a teacher."

- Stonycreek **Township Resident**

"As we are forced to do more and more things on the internet, higher speeds are becoming a necessity. It shouldn't take me 15 minutes just to pay a bill online."

- Elk Lick Township Resident

"I rely on captioned telephone and must have reliable service in order to know exactly what was said. With a slower speed there is a lag time of 5 to 10 seconds for the captioning to be displayed and this may or may not be an accurate translation."

- Meyersdale Borough Resident

"Our only access to the internet and television is by way of satellite services. No cable, no wireless. Even cell service is extremely limited. The satellite services we use are costly, running over \$300 per month and subject to weather conditions."

- Northampton Township Resident

DATA POINTS CAPTURED BY THE SPEED TEST



DOWNLOAD SPEED

is the rate at which a user's computer or device can receive data or information from the internet.



UPLOAD SPEED

is the rate at which data or information is transferred from a user's computer or device to the internet.







LATENCY

measures the reaction time of your connection—it's essentially how quickly your device responds after you send a request.



JITTER

is the variation in the time delay between a signal's transmission and reception over a network connection.

Provider Overview

To support planning and data collection efforts, the County conducted interviews with ISPs identified through data analysis and those the County learned have an interest in expanding service into the County. The County interviewed 11 ISPs in July and August 2023 that currently serve or are looking to serve Somerset County. The interviews, aided by non-disclosure agreements, helped the County better understand the companies' current footprint, existing pricing, and future projects. The comprehensive information, when coupled with the other data collected, provided the County with a well-rounded perspective of the current broadband landscape.

The County interviewed All Points Broadband, Armstrong, Breezeline, Comcast, Community Internet Solutions, Crown Castle, DQE, In the Stix Broadband, QCOL, Somerset Rural Electric Cooperative, Inc., and Verizon. The County asked each company to give insight to a uniform set of questions. Each ISP described its background, services, advertised speeds, and plan costs. The companies were asked about known areas lacking connectivity and perceptions of unmet customer needs. Future expansion plans and hurdles were also explored. A table capturing standard plan pricing, advertised speeds, and technical mode of transmission can be found in **Appendix D**.

One subject discussed during the conversations was areas of the County severely lacking connectivity. The ISPs identified several regions of the County with connectivity challenges. They generally acknowledged there are several unserved locations in the County and that most of the County has inconsistent connections, with the rural areas facing the most significant challenges.

In addition to the areas with connectivity issues, outstanding customer needs were considered. Numerous needs were discussed throughout the series of ISP interviews; however, several themes emerged from the conversations. It was clear that affordability, speed, availability, access, devices, and digital literacy are at the forefront of the County's current and potential broadband customers' needs.

Those in the County with no internet availability or with unreliable service are anxious for new broadband service opportunities. With that in mind, one of the topics explored was considerations taken into account when an ISP looks at expansion projects. Several ISPs mentioned density. However, the context differed throughout the conversations. Some ISPs look for areas with a high density of unserved areas when looking to expand service, and others are not deterred by the lack of home density. While the goal is to provide universal service to rural communities, other ISPs indicate it is not economically feasible to provide services to a small number of customers, and density was also referenced about seeking grant funding for expansion projects. Other relevant aspects mentioned included the cost and time associated with underground versus

overhead lines and physical infrastructure such as railroads, bridges, and poles, along with the challenges that may exist when trying to work with some jurisdictions.

External factors can also affect an ISP's decision to pursue a project. The trends that arose throughout the conversations parallel those occurring at the state level and throughout the country. The predominant issues mentioned included concerns with the supply chain and workforce. More specific issues were brought up numerous times about the workforce, including the challenge of finding qualified and trained workers and the cost increases brought on by the prevailing wage. Several local policy issues were part of the conversations about hampering project development, including cumbersome local ordinances, zoning requirements, right-of-way easement access, and pole accessibility. The other cost issues that came up included inflation, make-ready costs, and construction costs. The interview results were entered into the Broadband Availability Atlas, which is a data asset discussed in detail as part of The Current State of Broadband Connectivity section. The data also supported the strategic development of the EAP areas. Additionally, the ISP interviews provided an opportunity for the County to foster relationships and open channels of communication with providers.

Identifying the Unserved and Underserved

The current FCC standard for broadband internet is 25 Megabits per second (Mbps) download and 3 Mbps upload. A location is considered unserved if it does not have access to internet service that meets the 25 Mbps download and 3 Mbps upload threshold. Reaching unserved locations is a primary focus for the available federal funding. The secondary focus is underserved locations where services meet or exceed the FCC speed requirements for broadband but cannot access download speeds of 100 Mbps and upload speeds of 20 Mbps.

WHAT'S ON THE BROADBAND MAP?

The National Broadband Map consists of two datasets, both of which can be challenged.

FABRIC LOCATIONS

What is it?

The Fabric is a dataset of all locations in the United States and Territories where fixed broadband internet access service is or could be installed.

Who creates it?

The Fabric is developed by CostQuest in consultation with the FCC and in accordance with FCC rules.

Challenges and updates timeline?

The Fabric is updated twice per year. Fabric challenges are accepted on an ongoing basis and successful challenges will be reflected in future Fabric releases.

What's on the current map?

Version 3 of the Fabric is the base of the current map.

Source: FCC Broadband Data Collection, Rev. 11/30/2023, available at fcc.gov/BroadbandData



BROADBAND AVAILABILITY

What is it?

Broadband availability data show what broadband services, if any, are available at locations included in the Fabric, as reported by ISPs every 6 months.

Who creates it?

The ISPs report their availability data to the FCC every 6 months.

Challenges and updates timeline?

Broadband availability data is updated every 2 weeks to reflect challenge outcomes. Challenges are accepted and resolved on an ongoing basis.

What's on the current map?

The map shows availability data as of June 30, 2023 and reflects resolved availability challenges.

The FCC's National Broadband Map, which includes two datasets, is constantly being revised to improve its accuracy and can be reviewed by the public at www.fcc.gov/BroadbandData. The Fabric dataset consists of all locations where broadband internet service is available or could be installed, and the broadband availability data shows what broadband services, if any, are available at those locations. The FCC collects information from ISPs twice per year about where they offer internet access speeds exceeding 200 kilobits per second in one direction. The aggregate data reported to the FCC is incorporated into the National Broadband Map and published for public review, with government entities, consumers, and stakeholders able to review and challenge the validity of location and service availability data. Though this is an ongoing iterative process, the data is the most significant available resource.

The County reviewed current FCC data to provide a baseline understanding of areas where broadband service is currently available. The sections void of colored hexagons reflect locations,

such as state parks and unpopulated areas. The populated areas are categorized by yellow, orange, and red hexagons based on the level of available service. The FCC data show there are locations throughout the County where no fixed broadband service is available, and those populated locations are identified by the red hexagons. The locations classified as unserved are noted by the orange hexagons. Additionally,

BROTHERSVALLE NORTHAMPTON Speed Categories (Mbps) Underserved (<100/20) Unserved (<25/3 or no wireline connection) No Provider Available Municipality Boundary

SOMERSET

LINCOLN

EFFERSON

MIDDLECREE

CONEMATIGH

the FCC data indicate there are underserved locations in the southwestern portion of the County, which are shown by the yellow hexagons. The data show there are 7,014 households with no available provider or a connection equal to or less than 25 Mbps download and 3 Mbps upload, and 542 households that are currently underserved with internet connection speeds less than 100 Mbps download and 20 Mbps upload.

THE CURRENT STATE OF BROADBAND CONNECTIVITY

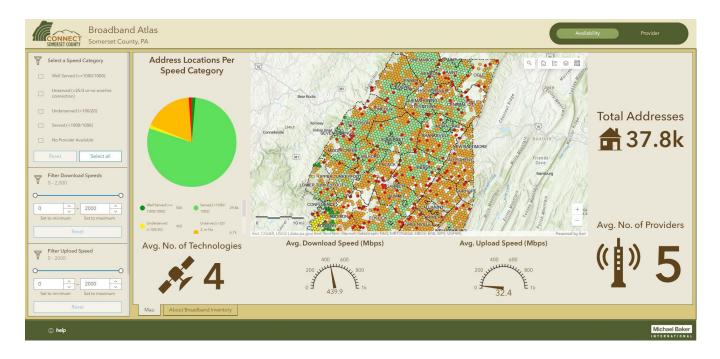
A multi-pronged approach was taken to assess the current state of connectivity in the County. The Somerset County Broadband Availability Atlas is a comprehensive snapshot of broadband that includes many data layers from several sources. The interactive platform provides the County with a visualization of current data, allowing the County to gain a more comprehensive insight into broadband availability and connectivity. The survey and speed test data were also an asset to the County, providing a real-time snapshot of respondents' service and sentiment. Data from the ISP interviews, surveys, and speed tests were also entered into the Broadband Availability Atlas as they became available. The data collection activities shaped the view of



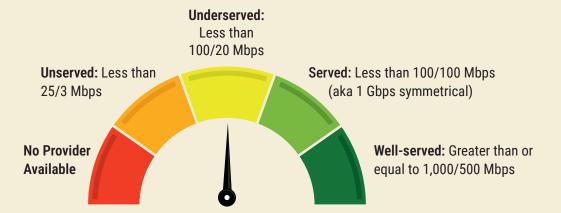
the County's connectivity, including the available service level, potential expansion projects, and the public's perspective of current service. The visualizations of data collected for the Broadband Availability Atlas and from the survey and speed test depict the County's broadband landscape the need to improve and enhance broadband availability.

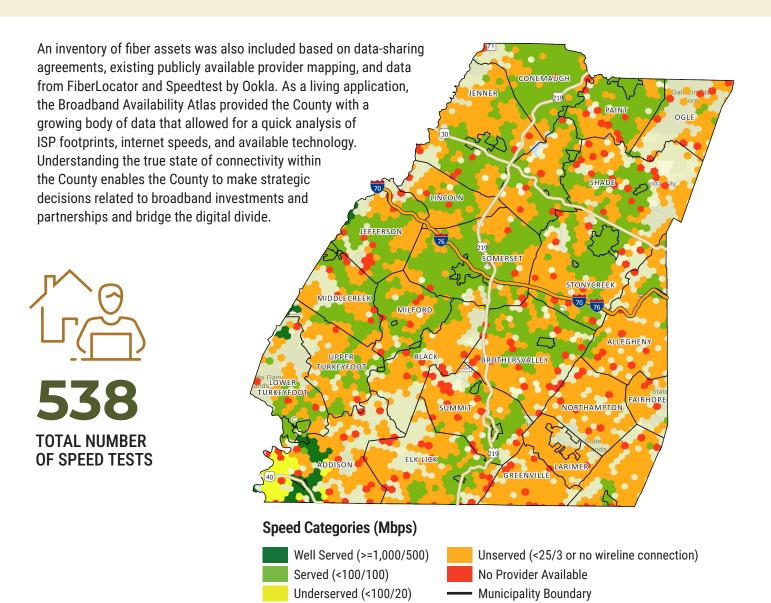
Broadband Availability Atlas

An online, interactive dashboard was created to help the County visualize broadband activity throughout Somerset County. The base of the Broadband Availability Atlas showed County data, such as County and municipal boundaries, address point data, streets and highways, and topography. The FCC data allowed the County to perform analyses to identify unserved, underserved, served, and well-served locations by identifying the fastest available speed in an area, provider footprints, and available technologies (i.e., fiber, cable, DSL). Additional datasets include vertical assets, such as cellular, land mobile broadcast, and private transmission towers.



SPEED CATEGORIES

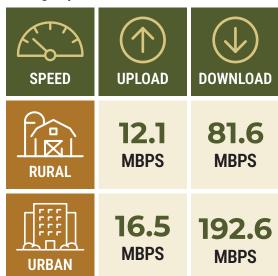


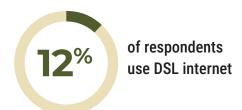


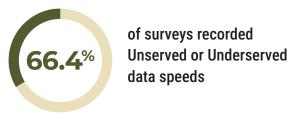
Survey and Speed Test Data

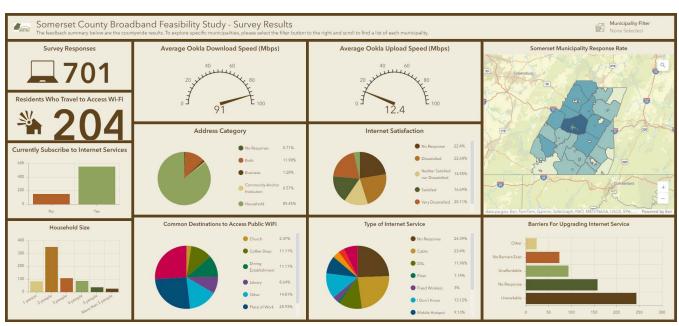
The survey and speed test were vital data collection mechanisms for Connect Somerset County. From September 25, 2023, through December 17, 2023, there were 701 responses, including 90 paper surveys, 611 online surveys, and 538 speed tests. A review of critical data points demonstrates the need to address connectivity issues in the County. For example, nearly 30% of respondents travel to access Wi-Fi, and the most common locations where Wi-Fi is accessed include the workplace, the home of a friend or family member, and a coffee shop or dining establishment. Meanwhile, over 42% of respondents indicated they are either dissatisfied or very dissatisfied with internet performance at the home or business where service is regularly accessed. Additionally, the lack of provider options was evident in the responses to a question related to barriers where the primary barrier identified for not upgrading internet service was that no other options were available. The online survey dashboard, an image of which can be seen here, was an asset to the County as it evaluated the response data with the visualization complementing the raw survey and speed test data.

Average Speeds











SOMERSET COUNTY'S NEXT STEPS

Advancing the County's broadband interests will require a sustained effort by local leaders to ensure projects are deployed to unserved and underserved areas. Whether it is time, human, or financial capital, the County's investments will benefit those seeking access to reliable high-speed internet service. To demonstrate its commitment to addressing broadband challenges, the County assessed the information and data collected throughout the project and considered numerous selection criteria to identify two potential projects to consider for immediate action. The County will focus on a deployment project in one of the areas in the immediate short term, and the EAP will have a measurable impact on the County's unserved areas. The EAP is one example of the broadband deployment projects anticipated for the County. Through the federal initiative to bring reliable high-speed internet to all Americans, the flow of federal funding through the Pennsylvania Broadband Development Authority (PBDA) brings the promise of new broadband service for unserved and underserved areas within the County in the coming years, starting with the hopeful funding of project applications through the Broadband Infrastructure Program, which are outlined below. To further guide the trajectory of broadband deployment, the County outlined a series of goals it will support as it continues pursuing broadband access on behalf of everyone in the County.

Early Action Projects

The County reviewed the quantitative and qualitative data to develop short-term projects focusing on currently unserved areas. The EAP areas were identified through a detailed scoring methodology to assess and prioritize unserved areas. The goal is for the County to seek targeted expansion, construction, and deployment of broadband infrastructure and service through a non-exclusive agreement with an ISP. Ultimately, the County prioritized two EAPs, with one in Middlecreek and Upper Turkeyfoot Townships and one in Jenner, Lincoln, Quemahoning, and Somerset Townships.

Selection Methodology

The County reviewed mapping data and validated survey responses to help form the basis for the EAP areas. Several criteria were identified, and weighted values were assigned to evaluate the areas. The County assessed the survey and speed test data to identify poor connectivity areas and overlaid additional data points, such as demographics, socioeconomic characteristics, broadband access, and infrastructure factors.

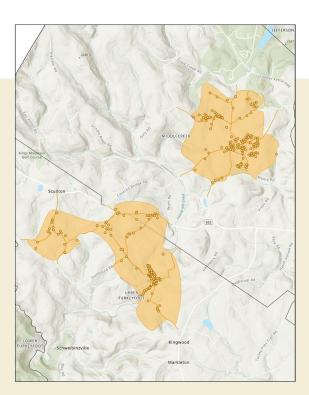
In addition to the data garnered from the survey and speed test, such as the average download and upload speeds, the EAP selection criteria included the total number of CAIs in the area, Census information on income, the total number of households, household density per square mile, and nearby fiber. Additional considerations included the estimated

total fiber build length, including and excluding laterals, and the household linear density based on the curb-only fiber length. Lastly, background history on the community and key demographic information were integrated into the scoring methodology to create a contextualized justification for broadband interventions.

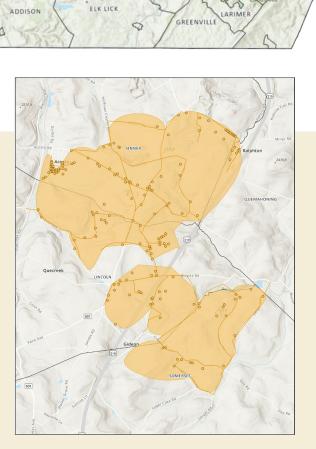
When viewed holistically, the data helped define the County's EAP areas. After the data was compiled and reviewed, the County narrowed the list of potential EAPs and identified two priority project areas.

Areas Identified

The first EAP would provide access to 258 homes identified in Middlecreek and Upper Turkeyfoot Townships, and the other would provide access to 188 homes identified in Jenner, Lincoln, Quemahoning, and Somerset Townships. The images below show the project areas and serviceable locations. The yellow shapes outline the project areas, and the identified addresses are noted by the dots within the project areas.



Early Action Project Area #1: Middlecreek and Upper Turkeyfoot Townships Number of Unserved Locations: 258



CONEMAUGH

SOMERSET

BROTHERSVALLEY

JEFFERSON

MILFORD

SUMMIT

MIDDLEGREE

OGLE

ALLEGHENY

NORTHAMPTON

FAIRHORE

Early Action Project Area #2: Jenner, Lincoln, Quemahoning, and Somerset Townships Number of Unserved Locations: 188



Project Selection Criteria

The taskforce reviewed the proposed EAPs, including the proposed areas and the number of serviceable locations. The County then assessed each EAP and evaluated several criteria to select one to pursue immediately. The scoring model included several factors intended to help identify the most impactful project, including considering ISPs that currently offer service in the County, active projects in the County, and possible future expansion opportunities.

The County ultimately selected Early Action Project Area #1. It will coordinate with a local ISP to make reliable, high-speed internet access available for 258 residences in Middlecreek and Upper Turkeyfoot Townships. The work is expected to be completed by the end of 2026 and will ensure a broadband network that brings internet access to residents, businesses, organizations, and local governments.

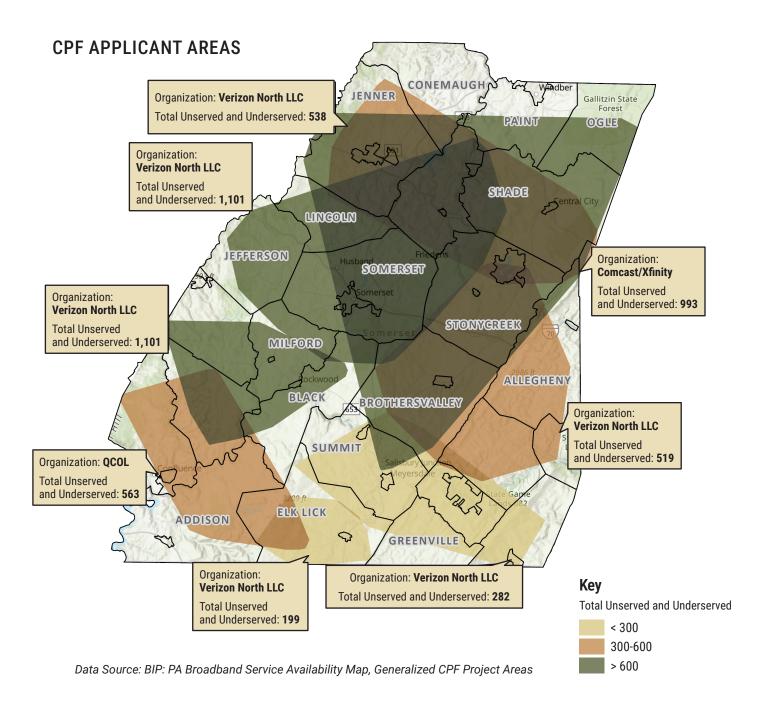
The County will retain the project data, including the second proposed EAP, to guide future discussions and decisions on broadband infrastructure investments and support the County's pursuit of additional deployment opportunities, including partnerships and projects.

Potential Broadband Infrastructure Program Projects

In June 2022, the PBDA allocated \$200 million of its federal Capital Projects Fund to develop the COVID-19 American Rescue Plan Act (ARPA) PA Broadband Infrastructure Program (BIP) to fund critical infrastructure projects. Eligible applicants include businesses, non-profits, local governments, and economic development organizations with the capabilities and expertise to design, build, and operate broadband infrastructure networks and services. The competitive grant program aims to provide service to currently unserved locations, prioritizing projects that involve broadband networks owned, operated by, or affiliated with local governments, non-profits, cooperatives, and those committed to serving entire communities.

There was significant excitement for the BIP in counties and communities throughout Pennsylvania, including Somerset County. Several ISPs approached the County to express interest in submitting applications for projects to improve broadband access in areas throughout the county and request letters of support for their specific projects. Three different ISPs submitted eight applications of varying sizes and scopes. The map on the following page shows the project locations, applicant, and number of unserved and underserved locations that would receive service as a result of the proposed project.

As of the date this report was prepared, the grant awards had not been announced. The PBDA is anticipated to award the funding before summer 2024. The County remains hopeful that one or more ISP applications will receive funding.





GOALS TO IMPROVE CONNECTIVITY OPPORTUNITIES

To continue pursuing reliable internet access for everyone, the County can undertake several activities to help close the digital divide. The County established several goals that will guide its work into and beyond the next phases of broadband investments and buildouts. Working towards these goals will complement the County's efforts to pursue broadband deployment project and investment opportunities. Achieving the goals will serve the broadband interests of the County's residents, businesses, organizations, and communities.



Identify and Pursue Partnership Opportunities

Opening communication channels and fostering relationships with stakeholders at the local, regional, and statewide levels is advantageous for the County. Partnerships assume various forms depending on the scope of the conversation, needs, and projects. Critical steps in identifying potential partnerships include identifying the intended outcomes, aligning objectives and understanding whether or not the potential partner's goals align with the County's, assessing the ability to support a partnership, and making a strategic, informed decision. The County's role could vary depending on the partnership, but identifying the opportunities will serve the long-term interests of broadband deployment in the County.



Support Strategic Investments

The County's work identifying broadband needs and gaps was an essential first step in addressing the digital divide. Being equipped with the data will allow the County to make informed decisions regarding strategic investments for its residents, businesses, organizations, and communities. Moving forward, the County may be asked to lend its support for ISP projects or local and regional strategic initiatives, and the County's project work will position leaders to make evidence-based decisions. The County can also use the data to assess broadband project funding opportunities and the associated viable project areas. Independently or cooperatively supporting investments based on their merits will allow the County to maximize its efforts.



Advocate for Streamlined Permitting and **Regulatory Processes**

Issues with regulations and permitting, which exist at all levels of government, are among the most significant challenges identified for accelerating broadband deployment. Awareness of these challenges will position the County to effectively advocate for improvement opportunities. Working within the County's government structure and entities, the County can support changes that will ease the burden of project implementation and encourage additional investments. The County's network of stakeholders and burgeoning partnerships will contribute to productive conversations, and the County can leverage its statewide presence and connections to advocate for regulatory and permitting modernizations that will benefit all Pennsylvania counties.



Champion Digital Equity, Inclusion, and Access Initiatives

Access to broadband services is just one part of the equation to closing the digital divide. Addressing digital equity, access, and inclusion are also factors in the County's work. To fully participate in the digital society, all individuals must have access to the technology, services, and supports to ensure barriers are reduced or eliminated and the necessary information technology capacity. Ensuring all people have access to devices and know how to use them is essential to ensuring broadband adoption and use once the infrastructure has been deployed. The County is positioned to develop and implement its own programs and services that provide digital education, information, and resources. The County can also support other local and regional program initiatives.





THE FUTURE OF CONNECTIVITY

After the disparity in broadband connectivity was exposed, the need to accelerate activities to address the voids in service availability became a reality. The Infrastructure Investment and Jobs Act set aside substantial funding for states to invest in broadband connectivity and digital equity, with \$1.16 billion allocated for Pennsylvania to expand access to reliable high-speed internet and additional funding coming for digital equity opportunities. Since the law was signed in November 2021, states have been working feverishly to evaluate the needs of their diverse populations, assess the gaps in broadband service, understand the issues and concerns of all stakeholders, and develop plans that outline their approach and goals for addressing the digital divide.

Pennsylvania's plans¹, several of which the National Telecommunications and Information Administration (NTIA) has accepted, will allow the PBDA to implement the funding. The County intends to monitor the PBDA website and participate in meetings to stay informed about program opportunities and statewide broadband activities. The PBDA program guidelines will provide insight into the appropriate project opportunities for the County to pursue. The data collected through Connect Somerset County and revisions to the FCC National Broadband Map will support resources to help evaluate opportunities, regardless of the funder.

With the variety of funding programs, it will be essential for the County to maintain open communications with the full spectrum of stakeholders. Working with the community to keep them informed and recognize their concerns will help the County ensure questions are addressed and that project work and timelines are understood. Additionally, the County will benefit from building its stakeholder network and coordinating with groups such as ISPs, organizations, and other local governments to identify opportunities to work cooperatively and improve broadband access for the unserved and underserved areas.

Though Somerset's connectivity issues will not disappear overnight, the County has a vested interest in working to minimize and ultimately eliminate the digital divide. There will be ample infrastructure investment and partnership opportunities in the coming years, and the County is positioned to make effective decisions. The work that contributed to this Report provided the County with data critical to strategically pursuing funding and implementing local programming. The future of connectivity in Somerset County will be fast and reliable.

¹Connecting the Commonwealth: A 5-Year Strategy Toward Internet for All: https://broadband.pa.gov/wp-content/uploads/2024/02/BEAD-5-YearStrategyReport_2023.pdf

Broadband, Equity, Access, and Deployment: Initial Proposal Volume I: https://www.broadband.pa.gov/wp-content/uploads/2024/03/BEAD-Volume-I_2024.pdf

Broadband, Equity, Access, and Deployment: Initial Proposal Volume II: https://broadband.pa.gov/wp-content/uploads/2024/03/Full-Draft-IPV2.pdf

Connected and Empowered: A Digital Equity Plan for the Commonwealth of Pennsylvania: https://www.broadband.pa.gov/wp-content/uploads/2024/03/DigitalEquityPlan_02-26-2024_NTIA_Approved_optimized.pdf

APPENDICES

Appendix A: Taskforce Members

Appendix B: Glossary of Common Terms and Acronyms

Appendix C: Broadband Expansion Study Survey

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Appendix E: ISP Pricing Plans

THANK YOU TO THE TASKFORCE MEMBERS FOR YOUR TIME, ADVICE, AND STRATEGIC RECOMMENDATIONS ON HOW TO IMPROVE BROADBAND SERVICE IN SOMERSET COUNTY.

Alyssa Bandzuh

Director

Somerset County GIS Department

Randy Biestel

Somerset Twp. Supervisor Somerset County Township Supervisors Association

Colleen Dawson

County Commissioner

Somerset County Commissioner (2023)

Brian Fochtman

County Commissioner

Somerset County Commissioner

Mitchel Henderson

Southwest PA Regional Representative

U.S. Senator John Fetterman

Patrick Joyal

Southwest Region Director

Governor Josh Shapiro

Irv Kimmel

County Commissioner

Somerset County Commissioner

Robbie Matesic

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Cheryl Morgan

Director

Somerset County Federated

Library System

Steve Nunez, Ed.D

President

Pennsylvania Highlands

Community College

Samuel Romesberg, Ed.D

Shanksville Stonycreek School District

Somerset County

Superintendent's Association

Fred Rosemeyer

Somerset Borough Mayor

Somerset County Boroughs Association

Andy Rush

President

UPMC Somerset

Morgan Simmons

IT & Facilities Coordinator

Mary S. Biesecker Public Library

Pat Stefano

Senator

State Senator Pat Stefano

Linda Thomson

President/CEO

Johnstown Area Regional

Industries (JARI)

Pamela Tokar-Ickes

County Commissioner

Somerset County Commissioner

Glen Wagner

Director

Somerset County IT Department

Gerald Walker

County Commissioner

Somerset County Commissioner (2023)

Carl Walker Metzgar

PA State Representative

PA State Representative Carl Walker

Metzgar

Harvey Wetzler

Addison V.F.D.

Emergency Responder

Sara Youngdahl

District Director

U.S. Representative Guy Reschenthaler

Brad Zearfoss

Director

Somerset County Planning Commission

Appendix B: Glossary of Common Terms and Acronyms

Broadband	Refers to high-speed internet access that is always on and faster than traditional dial-up access, delivered through fiber optic, fixed antenna wireless, satellite, mobile and cable modem technology.		
Connectivity	Ability to link to and communicate with other computer systems, electronic devices, software, or the internet.		
Community Anchor Institutions (CAIs)	Organizations that facilitate a greater use of broadband service in their local communities and economies, e.g., libraries, schools, health centers, and government buildings.		
Digital Divide	The gap that exists between those who have affordable access, skills, and support to effectively engage online and those who don't.		
Digital Equity	A goal to ensure that everyone has equal access to technology tools, devices, and the internet, and has the knowledge and skills to use them effectively.		
Digital Literacy	Refers to the ability to use information and communication technologies to find, evaluate, create, and communicate information.		
Digital Subscriber Line (DSL)	A communication medium that is used to transfer internet through copper wire telecommunications line.		
Download Speed	The rate that data can be received by a user's computer or device from the internet (receiving information).		
Fiber	A flexible, hair-thin glass strand that is capable of transmitting large amounts of data at high transfer rates as pulses or waves of light.		
Fixed Wireless	The operation of wireless devices in fixed locations such as homes and offices.		
Internet Service Providers (ISPs)	Companies that provide users with access to the internet and related services.		
Jitter	The variation in the time delay between a signal's transmission and reception over a network connection.		
Latency	Measures the reaction time of your connection (how quickly your device response after you send a request).		
Mbps	Megabits per second are units of measurement that refer to upload and download speeds to measure the file size of data transferred per second over a channel and are used to show how fast a network connection is.		
Mobile Wireless Carriers	Carriers that use fourth and fifth-generation (4G and 5G) wireless technology to provide an internet connection through a network of cell towers.		
Middle Mile Providers	Providers that connect "last mile" networks and other network suppliers with the internet through middle mile infrastructure, which ties the core network to the local network plant.		
Network	A system that connects two or more computing devices for transmitting or sharing information.		
Served	Locations that have access to high-speed internet as is currently defined by the FCC: 100 Mbps download / 100 Mbps upload.		

Symmetrical	Having the same upload and download speeds.
Telehealth	The use of high-speed, high-capacity internet to support long-distance healthcare services, patient and provider education, and enhanced healthcare administration.
Underserved	Locations that have access to high-speed internet as is currently defined by the FCC: 100 Mbps download / 20 Mbps upload.
Unserved	Locations where internet service is at or above the FCC threshold: 25 Mbps download / 3 Mbps upload.
Upload Speed	The rate that data is transferred from a user's computer or device to the internet (sending information).
Well-served	Broadband speeds greater than or equal to 1,000 Mbps download / 500 Mbps upload.
Wi-Fi	Short for Wireless Fidelity, W-Fi is the radio signal sent from a wireless router to a nearby device, which translates the signal into data you can see and use. The device transmits a radio signal back to the router, which connects to the internet by wire or cable.

Acronyms

ARPA	American Rescue Plan Act
BIP	Broadband Infrastructure Program
CAI	Community Anchor Institutions
CPF	Capital Projects Funds
DSL	Digital Subscriber Line
EAP	Early Action Project
FCC	Federal Communications Commission
ISP	Internet Service Provider
NTIA	National Telecommunications and Information Administration
PBDA	Pennsylvania Broadband Development Authority

Table of Units:

Bit	Smallest unit of digital information
Byte	Equal to 8 bits
Bps	Bits per second
Kbps	Kilobits per second (1000 bits per second)
Mbps	Megabits per second (1 million bits per second)
Gbps	Gigabits per second (1 billion bits per second)
Tbps	Terabits per second (1 trillion bits per second)

Appendix C: Broadband Expansion Study Survey



MICHAEL BAKER INTERNATIONAL

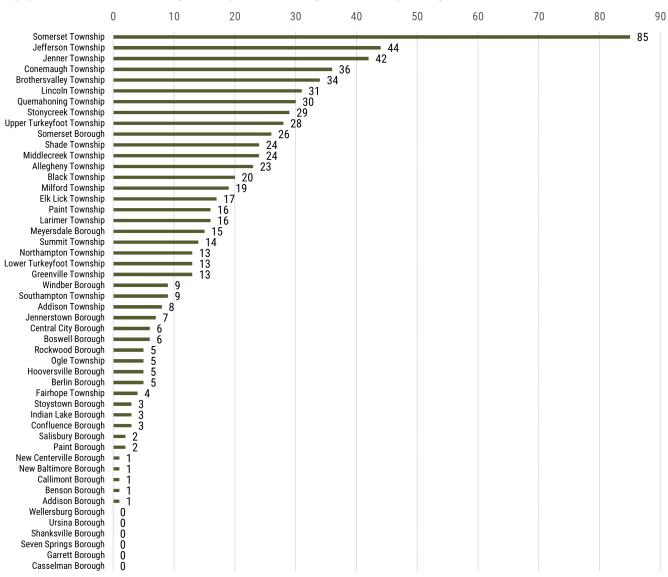
BROADBAND EXPANSION STUDY SURVEY

FOR **SOMERSET** COUNTY

earn about residents' access to high-speed, affordable internet. This s xpansion and digital inclusion. We need your help to ensure all parts	survey will help identify gap areas in the county for future broadband sof the county are verified. <i>Survey closes on December 15, 2023.</i>
lease enter your physical address:	
ame (optional):	
ddress 1:	
ddress 2:ity:	
tate: Date: Age: What m	unicipality do you reside in?:
p: Email (for mailing list):	
. Is the address above a household, business, or community anchor institution? Check one: Household Community Anchor Institution	 4. Approximately what download speed do you subscribe to? Note: You may need to review your monthly Internet bill to assist in answering this question. Less Than 25 Mbps 25 – 50 Mbps
Business (i.e., school, library, church, police, fire, etc.) Both Household & Business	☐ 51-100 Mbps ☐ 101 Mbps – 1 Gbps ☐ I Don't Know
If other lease specify:	5. Approximately what upload speed do you subscribe to? Note: You may need to review your monthly Internet bill to assist in answering this question. Less Than 3 Mbps 4 - 20 Mbps
If other, please specify:	21 - 100 Mbps
If a business, do you offer free public Wi-Fi? Yes No	6. What devices do you use to connect to the Internet? (Select all that apply)
If Community Anchor Institution, please provide the name:	☐ Smart Phone ☐ Gaming Computer/Consoles ☐ Tablet ☐ Smart TV (Roku, Firestick)
Do you have Internet service at the above address? No	☐ Laptop Computer ☐ Other smart devices (e.g. security devices, voice assistants, thermostats, etc.) ☐ Other (Please specify)
a. If yes, who is your Internet service provider?	7. Overall, how satisfied are you with the performance of the
b. What type of service do you have? Please select one.	internet you primarily use at your home or business?
☐ Cable ☐ DSL(Digital Subscriber Line) ☐ Fiber ☐ Fixed Antenna Wireless ☐ Satellite ☐ Mobile Hotspot	☐ Very Satisfied☐ Satisfied☐ Dissatisfied
☐ Mobile Phone Plan ☐ I Don't Know ☐ Other (Please specify)	8. What is the reason you/your household connect to the Internet? Please rank the order of importance. (1-9 with 1 being most important to you)
c. If you answered 'No,' why? Please select one.	EducationShopping/Product Information
☐ Too Expensive ☐ No Service Available In My Area ☐ IDon't Need/Want ☐ IDon't Know How to Use It ☐ Other (Please specify)	Work/BusinessCommunication with OthersHealthcareInternet BrowsingFinance/BankingEmergency/Evacuation/Entertainment Public Safety Information
. Do you travel to a different location to use public Wi-Fi?	Other
Yes No If yes, please check all that apply: □ Place of Work □ Community/Rec Center	9. Which situations below currently apply to members of your household for work or school? (Select all that apply)
□ Library □ Church □ School/College □ Coffee Shop □ Relative/Friend Home □ Dining Establishment	☐ Fully virtual (at home every day) ☐ Hybrid (in-person some days, at home some days) ☐ Fully in-person
Uther (Please specify)	☐ Nobody in the household does this
	Survey Continued on Back Michael Baker

10. In a typical day, about how many hours are members of your household accessing the internet? Including hours used for work, school, streaming music or TV content, or other uses. 0 1-4 Hours 5-8 Hours More than 8 Hours AFFORDABILITY 11. Approximately how much does your household or business pay PER MONTH for your Internet service (not including cellular, cable TV, or landline phone service)? Note: You may need to review your monthly Internet bill to	COMMUNICATION PREFERENCES 15. How do you most often get local news and community information? (Select all that apply) Radio Docal TV Social media National TV Print media (e.g., Newspapers) 16. Do you have children under 18 in your household? Yes No Prefer not to answer 17. Do you have adults over 65 in your household?
assist in answering this question. Free \$61 to \$80 \$1 to \$20 \$81 to \$100 \$21 to \$40 More than \$100 \$41 to \$60 I dont know 12. How do you currently pay for the internet service you primarily use when at home? Select the option that	Yes No Prefer not to answer 18. How many people currently reside in your household? 1 3 5 or more 2 4 19. Does any disability, handicap, or chronic disease keep you from participating fully in using the internet?
best describes you. I have a regular subscription I pay for service as needed ("Pay as you go") Other (Please specify)	☐ Yes ☐ No 20. What is your current housing situation? ☐ Own a Home ☐ Retirement Community/Home ☐ Rent a Home ☐ Unhoused or no Fixed Address ☐ Rent an Apartment ☐ Other (Please specify)
13. Would you be willing to pay more for faster, more reliable home internet service if it were available to you? Yes No If 'No': Why would you not be willing to pay more for a faster, more reliable home internet service if it were available to you? Select all that apply. My current level of internet service fits my needs I cannot afford to pay more I don't think faster internet is worth paying more money for I'm worried about losing the value of my bundled services Internet service is not very important to me Other (Please specify) If 'Yes': How much more per month would you expect to pay for a faster internet service that meets your needs? Select the option that most closely matches your expectation. \$5 more \$75 more \$10 more \$55 more More than \$100	21. Which of the following best describes your 2022 household income? Less than \$25,000 \$75,000 to \$99,999 \$25,000 to \$49,999 \$100,000 or more \$50,000 to \$74,999 Prefer not to answer 22. How do you identify yourself? Select all that apply. American Indian or Alaska Native Hispanic/Latino/a/x Hispanic/Latino/a/x Middle Eastern or North African Native Hawaiian or Pacific Islander Other (Please specify) Prefer not to answer THANK YOU FOR TAKING THE TIME TO COMPLETE THE SURVEY For questions or comments, please contact us at
□ \$50 more	feedback@connectsomersetcounty.com or call 724-495-4304
14. What barriers exist for upgrading internet service? (Select all that apply) I can't get a faster connection at my home/business I can't afford a faster connection at my home/business	COMMENTS
No barriers exist Other (Please specify) Michael Baker INTERNATIONAL November 2023	Please drop off or mail completed surveys to: Attn: S. Ziegler Somerset County Commissioners Office 300 North Center Ave., Suite 500 Somerset, PA 15501

Appendix D: Survey Responses by Municipality



Appendix E: ISP Pricing Plans

ISP	TECHNOLOGY	LOWEST PRICE PLAN	SPEED
All Points Broadband	Fiber	\$59.99/month	100 Mbps symmetrical
Armstrong	Hybrid Fiber Coaxial; Fiber	\$34.95/month	25/3 Mbps
Breezeline	Hybrid Fiber Coaxial	\$9.99/month	15/1 Mbps
Comcast	Hybrid Fiber Coaxial	\$29.95/month	20 Mbps symmetrical
DQE	Fiber	\$49.99/month	250 Mbps symmetrical
In The Stix Broadband	Fixed Wireless	\$44.95/month	10/5 Mbps
QCOL	Fiber	\$65.00/month	50 Mbps symmetrical
Verizon	Fixed Wireless	\$80.00/month	300 Mbps symmetrical





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