UTAH BROADBAND CENTER
CONNECTING UTAH

SUMMIT COUNTY
LOCAL BROADBAND PLAN

Table of Contents

EXECUTIVE SUMMARY

VISION	Promote social and economic growth throughout Summit County by investing in broadband infrastructure that is accessible, modern, and scalable, and provides communities with opportunities to participate in the current digital economy.

KEY BARRIERS	Physical	Permitting	Climate Resilience
	Physical barriers that block the implementation of internet infrastructure, including terrain and local topography.	The process can be lengthy, complex, and costly.	Extreme weather events, such as snow conditions, often damage or destroy the physical infrastructure necessary for internet connectivity.

COVERED POPULATIONS	People who live in rural areas	Veterans	Individuals who are members of racial or ethnic minority groups	Low-income house holds	People with disabilities	Aging adults	Incarcerated individuals

GOALS	Expand broadband service	Reduce the digital divide by ensuring broadband services are accessible	Encourage innovation and economic growth by increasing access to high-speed broadband	Invest in broadband infrastructure that is scalable and future-proof

KEY STRATEGIES	Collaborative planning	Engage stakeholders	Utilize data	Maximize existing infrastructure
	Manage funding	Raise awareness		

1 OVERVIEW OF THE LOCAL BROADBAND PLAN

1.1 VISION

Connecting Utah is working to promote expansion of high-speed, affordable, and reliable internet access through broadband connectivity throughout Utah. To support statewide broadband planning efforts, Summit County must identify currently available broadband infrastructure, pinpoint infrastructure needs, and implement actionable strategies to help the communities within the county most impacted by the current digital and broadband infrastructure divide.

This vision includes broadband infrastructure that is accessible, modern, and scalable throughout Summit County, providing the communities with equitable opportunities to participate in the current digital economy to promote social and economic vitality. To accomplish this vision, a collaborative effort among Summit County, internet service providers (ISPs), and other private and public stakeholders along with clear goals and objectives will be imperative.

1.2 GOALS AND OBJECTIVES

Primary goals include addressing unserved populations within the Tollgate & Jeremy Ranch areas, as well as the rural eastern portion of Summit County. Any other concentrated areas of unserved residences will also be prioritized, along with any other unserved rural populations.

Reaching low-income individuals will also be prioritized to reduce the broadband gap and provide equitable access to these underserved populations.

2 BACKGROUND

On November 15, 2021, the Infrastructure Investment and Jobs Act (IIJA) was signed into law. This Act included a $65 billion investment in high-speed broadband internet infrastructure and efforts to close the digital divide to ensure that all Americans have access to reliable and affordable high-speed internet.

Included in the IIJA was the Broadband Equity, Access, and Deployment (BEAD) Program. The BEAD Program provides $42.45 billion to expand high-speed internet access by funding planning, infrastructure deployment and adoption programs throughout the United States.

Through this funding, the Utah Broadband Center (UBC) launched a grant program that will consist of two phases, with funding in each phase. The first phase is planning, and the second is implementation. The State of Utah was awarded $5 million to support both the creation of a

statewide Digital Connectivity Plan and provide funding for local communities to create local broadband plans.

The UBC awarded Summit County $30,000 to create a plan for broadband infrastructure deployment in the region. Summit County's broadband plan will be used to inform the statewide Digital Connectivity Plan that will determine Utah's broadband priorities over the coming years.

The local planning grant from the UBC was awarded on April 3, 2023, and the project kick-off meeting with the consultant team, Horrocks, began on April 12, 2023. The initial draft of this plan will be submitted on June 1, 2023, to the UBC and the final draft will be submitted on August 1, 2023.

2.1 SCOPE OF BROADBAND PLAN

Figure 1 shows the location boundaries for Summit County. A summary of the demographics of the area is outlined in **Table 1** below. These statistics reflect the most updated data from the United States Census 2020 for the State of Utah. **Figure 1** shows the Summit County boundaries.

Table 1: Demographic Information

|	KAMAS	COALVILLE	OAKLEY	PARK CITY	HENEFER	PEOA
Total Population	2,579	1,486	1,613	8,352	840	145
Median Household Income	$74,728	$80,447	$97,083	$121,701	$95,167	$102,014
Bachelor's Degree or Higher	27.7%	13.1%	26.5%	66.5%	35.6%	46.3%
Poverty	7.1%	7%	7.8%	7.4%	1.7%	N/A
Median Age	25.6	27.7	35.3	41.1	39.8	57.8
Land Area in Square Miles	3.7	6.2	7.1	20.4	2.5	3.5
RACE & ETHNICITY						
White	68.8%	45.7%	96.5%	78.9%	95.8%	95.2%
Hispanic/Latino	24.4%	50.1%	2.9%	15%	3.3%	4.8%
Black	0%	3.2%	0%	0.9%	0%	0%
All Others	6.8%	1%	0.6%	5.2%	0.9%	0%
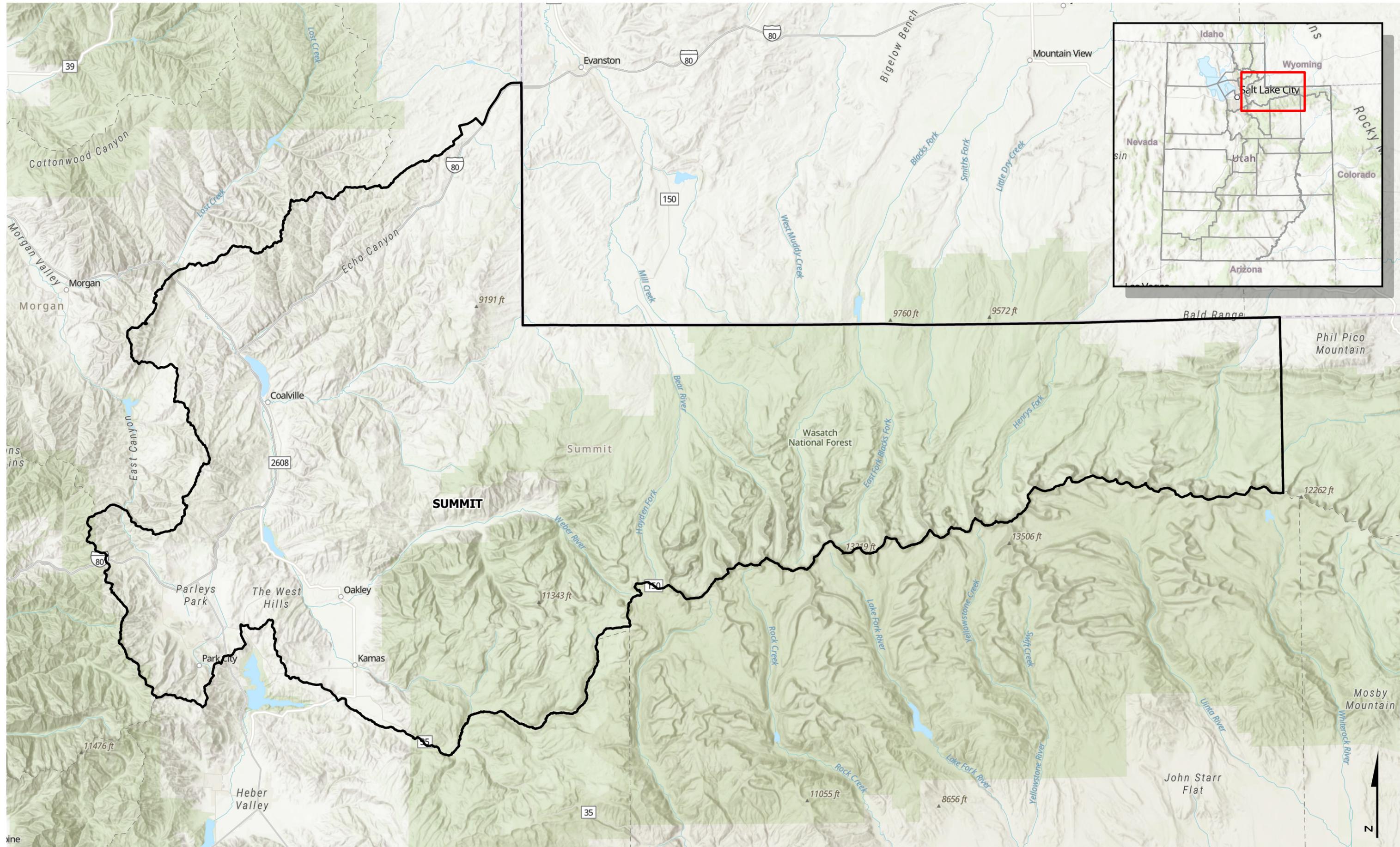
Figure 1: Boundaries of Summit County

2.2 WHAT IS BROADBAND?

Broadband is a dedicated connection to high-speed internet. The threshold for what speed is defined as high-speed internet changes according to the standards presented by the Federal Communication Commission (FCC). Currently, broadband is defined as any speeds above 25 megabits per second (Mbps) download speed and 3 Mbps upload speed (25/3 Mbps).[1]

The BEAD Program defines households with less than 25/3 Mbps as unserved locations and those with less than 100/20 Mbps as underserved locations.[2] Community anchor institutions with less than 1/1 gigabits per second (Gbps) speeds are also considered underserved, as defined by Section 60102 of the IIJA, which also sets forth the BEAD program[3].

2.2.1 Broadband Network Distribution

The infrastructure that data travels along is called a network. Like other public utilities such as roads or water pipes, the network infrastructure is carefully planned and then built according to how many people need to be served in both the present and the future. Within the network, data is carried across fiber, wires, or radio signals in the air (wireless). These various means of carrying data have different capacities and speeds. The part of the network used to transport data between cities or across cities is known as middle mile infrastructure. The middle mile network connects to hubs built throughout a city. The part of the network that connects from a hub to the end-user is called final mile or last mile infrastructure. End-users can be businesses, residential homes, or individuals connecting to cell service. In **Figure 2**, the blue lines connecting the city to the hubs represent middle mile infrastructure, and the orange lines connecting the hubs to the residential houses represent final mile (or last mile) infrastructure.

---

[1] FCC. (2015). Broadband Progress Report. https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2015-broadband-progress-report

[2] NTIA. Notice of Funding Opportunity - Broadband Equity, Access, and Deployment (BEAD) Program. Section I. Program Definitions, C. Definitions. Pages 16-17. https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf

[3] United States Congress. (2021). H.R. 3684- Infrastructure Investment and Jobs Act. 60401(e)(3)(C). https://www.congress.gov/bill/117th-congress/house-bill/3684/text
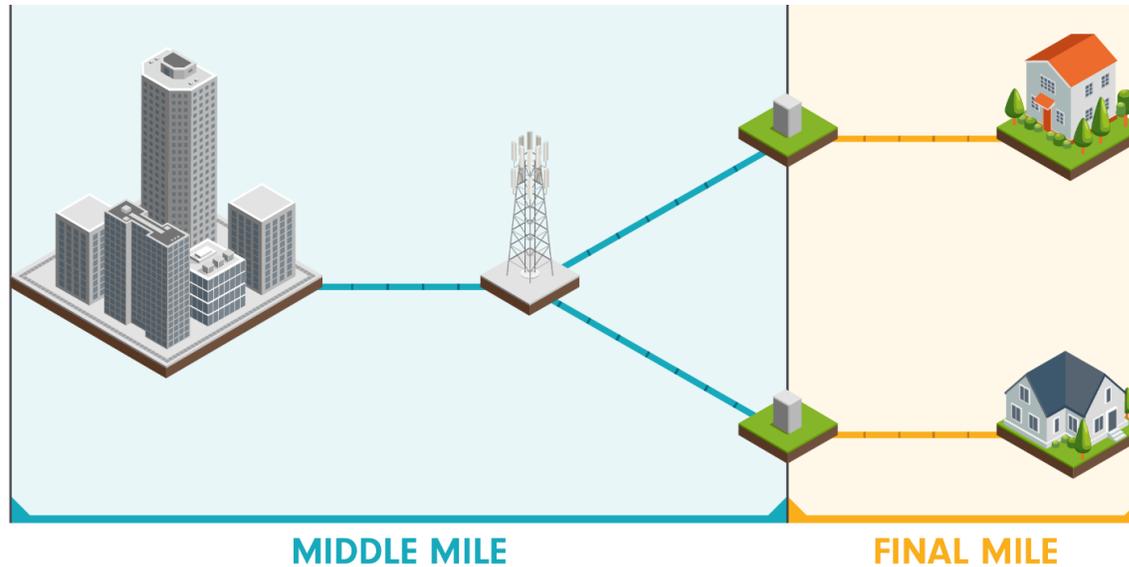
Figure 2: Middle Mile and Final Mile Infrastructure

2.2.2 Types of Broadband

There are various technologies that high-speed broadband internet can be served through, such as fiber optic, digital subscriber line (DSL), cable modem (Coax), and wireless technologies. Each form of technology has pros and cons.

2.2.2.1 Fiber Optic

Fiber optic technology sends data-carrying digital signals as light through cables made of glass fibers. It provides the fastest, most reliable networks. Because fiber is a newer technology, many areas do not have fiber networks developed, and this type of network can require building new infrastructure. Fiber optic cables can be placed on existing power poles or they can be placed inside conduit buried in the ground. If the network is designed and installed correctly, symmetrical speeds can be up to 400 Gbps; however, 400 Gbps speeds are typically only designed for and installed in the backbone/distribution cables of the network. **Fiber optic technology is the gold standard for high-speed broadband internet as it provides the fastest speeds and can support emerging digital technologies into the future.**

2.2.2.2 DSL

DSL uses existing copper telephone cables to transmit data. Speeds vary widely based on local providers, the condition of cables, the distance between homes, and the equipment at the primary connection point. Because of this, DSL speeds can be less than 1 Mbps or up to 100 Mbps. With maximum DSL speeds at 100 Mbps, DSL does not meet the ever-growing needs of future technologies, so it is not a preferred option when building modern broadband infrastructure.

2.2.2.3 Cable Modem (Coax)

Cable modem delivers increased speeds over DSL and transmits broadband data over the same coaxial cables that are used for cable televisions. Like DSL, it is not a preferred option when building new broadband infrastructure, but it can be used where existing infrastructure is in place. Cable modems use a protocol called Data Over Cable Service Interface Specification (DOCSIS). There are six versions of DOCSIS (1.0, 1.1, 2.0, 3.0, 3.1, and 4.0). The speeds range between 40 Mbps download and 10 Mbps for upload for version 1.0 to 10 Gbps download and 6 Gbps upload for version 4.0.

2.2.2.4 Wireless

Wireless broadband includes several technologies, including satellite broadband, Wireless Local Area Networks (WLANs), Wi-Fi, and cellular 4G, 5G, and LTE. These technologies use radio spectrum to transmit broadband data. Please note that BEAD funding can only be used to build wireless broadband technology when it is connected to a terrestrial Middle Mile network and cannot be used on satellite broadband technologies.

Satellite Broadband – Satellite internet involves satellites that orbit the earth while transmitting long-range signals to individual subscriber locations anywhere on earth with a clear view of the sky. It is primarily a middle mile wireless solution, but many people use satellite internet directly to their homes as well. Satellite connection speeds vary based on location, and weather and tree foliage can affect the signal. Typical connection speeds are 12-100 Mbps. However, satellite internet has a higher latency (a delay of transmission also known as lag), making video calls extremely "glitchy" on this type of internet. An acceptable range of latency is between 50-100 ms. Satellite connection latency typically falls within 594-624 ms.[4] For the BEAD program, the NTIA currently does not recognize satellite broadband technologies as a reliable wireless technology.

WLANs – WLANs are the Last Mile networks used at homes or businesses to distribute internet to phones, computers, and other devices through radio signals. Wi-Fi and hotspots are both examples of a WLAN. Connection speeds are dependent on the service provided at the access point.

Cellular 4G, 5G, and LTE – Cellular 4G, 5G, and LTE involve antennas mounted on cell towers transmitting radio signals, which are then received through the modems in cell phones, mobile routers, cellular antennas, or various signal boosters. Mobile carriers now offer residential fixed wireless broadband plans supported by their mobile towers. A middle mile fiber network connected to a tower will increase the network capabilities and provide a better final connection to the cellular user. The download speeds can often reach 600 Mbps if specialized equipment is used to boost the signal. This is usually the fastest high-speed broadband internet available for

---

[4] Cooke, K. (2023). Is Satellite Internet a Good Option? Pros and Cons of Satellite Internet Service. SatelliteInternet.com.
https://www.satelliteinternet.com/resources/satellite-internet-pros-and-cons

users who do not have access to fiber optic technology. This technology supports broadband speeds for mobile devices as well as fixed wireless broadband service to residences.

2.2.3 Benefits of Broadband

High-speed broadband internet has become an integral part of society. It is critical for work, education, telehealth, and the completion of everyday tasks.

High-speed broadband internet has transformed the way the world does business. There are few businesses that can operate today without the internet, and while some can get by with a low-speed connection, high-speed internet is becoming more and more necessary. A Pew Research Center survey conducted in April 2021 found that 90% of adults surveyed considered the internet "essential or important for them personally during the [COVID-19] pandemic."[5] High-speed broadband internet has allowed for remote work possibilities, which opens the possibility of highly skilled workers relocating to smaller communities and benefiting the economies of those communities. Readily available access to the internet has allowed businesses to widen their customer base to a global market. The primary business industries within the Summit County region include hospitality, professional services, education, and retail. Having reliable and high-speed broadband internet has become an important need not only for the family households but also for the main business sectors in Summit County. In today's world, broadband can grow the Summit County's economic outlook.

While high-speed broadband internet is benefiting many regions across the globe, it is important to ensure that Summit County does not get left behind. There is a growing digital divide where those that do not have access to the internet do not learn the digital skills necessary for high-paying jobs, pushing them further into poverty. Conversely, increasing high-speed broadband internet access increases economic opportunities for low-income families.

Developing digital skills at a young age has become increasingly important, as high-speed broadband internet is an integral tool in modern education and preparation for the future workforce. Access to online classes, homework submissions, and research opportunities can be lost if a reliable high-speed broadband internet connection is not secured. Many districts are also utilizing online learning on snow days and other times when it is not possible for students to gather at the school. Online classes can be made available for specialized subjects like foreign language or technological courses that do not have a local teacher available. Children without access to a broadband internet connection may be left out in these scenarios.

Other online resources are also becoming more important for communities. For example, telehealth is a tool that allows users to connect to doctors and medical providers online. Some of the benefits of telehealth include decreased health care costs, access to specialists not available locally, travel time reductions, and reducing the risk of exposing others to viral

---

[5] Pew Research Center. 2021. The Internet and the Pandemic. https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/

infections. High-speed broadband internet is necessary when completing a video call with a health professional.

High-speed broadband internet has become increasingly essential for daily tasks. High-speed internet is used when paying bills, accessing banks and retirement accounts, and applying and interviewing for jobs. High-speed broadband internet is also vital when enjoying modern-day entertainment, such as video streaming, watching live sports, or playing live video games. It is used when communicating with family and friends, especially when making a video call. Even using a smartphone with 4G or 5G service involves broadband technology.

3 CURRENT STATE OF BROADBAND AND DIGITAL ACCESS

3.1 METHODS TO DETERMINE THE CURRENT STATE OF BROADBAND

The planning team took several steps to determine the current state of high-speed broadband internet in Summit County. This planning team included the following individuals and/or organizations:

- Ron Boyer – Summit County IT

- Jeff Jones – Summit County Economic Development

- Horrocks

  - Eleise Lowe – Project Manager

  - Jason Libert – Technical Analysis

  - Jill Hagen – Technical Analysis

  - Aaron Clements – Technical Analysis

  - Katie Williams – Public Involvement

  - Brody Johnson – Public Involvement

The activities performed included:

- **Public Outreach:** Summit County conducted targeted public outreach to gather feedback from residents starting in April 2023 through July 2023. The purpose of this outreach was to learn about and understand regional broadband needs, and to identify gaps in broadband availability, accessibility, and affordability for residents. Summit County shared links to the Utah Internet Speed Test and the Summit County Broadband Survey on the Summit County Facebook page and Instagram page. Flyers with a QR code to take the survey were placed in all of the Summit County libraries. Summit County also created two targeted ads on Facebook.

  The Facebook ads received the following stats:

  - 1024 impressions, 983 reach, 21 engagements

  - 957 impressions, 903 reach, 13 engagements

- **Website:** A location-specific landing page was created and linked on all collateral created to capture public feedback and encourage involvement in the development of the local broadband plan.[6]

- **Public Surveys:** The Summit County outreach team created a survey using questions provided by the Utah Broadband Center to gather more quantitative data from the general public about their experience with internet connectivity. Questions in this survey covered topics such as residents' current internet connections, device accessibility, affordability options, connectivity for businesses, community internet needs, and voluntary disclosure of demographics.

  As of July 5, 2023, there were 234 completed for Summit County's broadband planning efforts. Specific survey findings and analysis can be found in Sections 3.4 and 3.5.

- **Community Partner Survey:** A community partner survey was provided to identified partners to help document existing broadband assets, initiatives, and priorities and plan for a future where every resident in the Summit County area has the tools necessary to successfully access affordable high-speed internet. The purpose of the survey was to take stock of partnering entities' current broadband planning, access, deployment, and digital access activities. The survey also captured data on challenges to local broadband expansion. The Summit County Community Partner Survey was completed by 8 entities. Specific findings from the Community Partner Survey are detailed in Section 3.4 Asset Inventory.

- **Internet Speed Tests:** Stakeholders' participation in the Utah Internet Speed Test, sponsored by the UBC, helped the team gather real-time internet upload and download speeds in the Summit County area. The outreach team advertised the Utah Internet Speed Test through the Summit County website and social media outlets to notify the public of Summit County's planning effort.

  As of May 12, 2023, there were 312 speed tests completed in Summit County. Specific results are found in Section 3.5.1.

- **Stakeholder Meetings and Workshops:** The UBC, as part of the statewide planning effort, conducted stakeholder workshops in each of the 29 counties in Utah. Participants of these workshops included community advocates, educators, public and elected officials, and industry leaders. During these meetings, participants engaged in in-depth discussion relating to broadband. Topics included education, economic impact, affordability, availability, barriers, and opportunities to expand access to high-speed internet. There were two workshops for Summit County held on January 17, 2023: one with local government officials and one with the general public. When asked about their priorities for broadband expansion, local government officials mentioned last-mile connections, increasing available ISPs, and a future where students have affordable

---

[6] https://www.summitcounty.org/2346/Community-Broadband-Plan-Goals

access to the internet in their home. Also emphasized were the gaps in coverage from the east to west side of the county. Several options for connectivity are available in Park City but the eastern side of the county is more rural with limited options for internet service. Top priorities mentioned by the general public included reaching the County's covered populations, as outlined in Section 3.5.2 Digital Access, with affordable high-speed internet, access to connected devices, and digital skills programs.

- **Meeting With Internet Service Providers (ISPs):** In March 2023, Summit County held a meeting with their ISPs to identify broadband needs in Summit County. Allwest, Comcast, and Lumen were in attendance. An additional meeting with Allwest was held, and Allwest shared specific expansion plans in Summit County.

- **Existing Assets Assessment:** Using data collected from state GIS mapping efforts, the FCC, the Utah Residential Broadband Map[7], surveys, meetings with stakeholders, and internet speed tests, the technical team created an asset inventory of all existing broadband assets within Summit County. The integration of GIS data into the assessment provided valuable insights into the existing broadband landscape, aiding in the development of targeted strategies for enhancing connectivity.

- **Disparity Analysis:** Analysis was conducted to identify and map areas within Summit County that are unserved and underserved. To further understand potential disparities in broadband access, socioeconomic and demographic variables were considered that could contribute to inequalities in broadband access between members of one group versus another. Examples of groups considered include Age 60+, Disabled Individuals, Veterans, Incarcerated Individuals, Non-White, and Rural Areas. This data was gathered from both public outreach efforts and the U.S. Census and analyzed. GIS mapping technology allows visualization of those areas that may require targeted intervention for digital inclusion efforts.

- **Research:** The team collected research from various sources and agencies regarding broadband infrastructure and deployment best practices, federal funding opportunity qualifications, all resources produced by the NTIA, and broadband outreach best practices.

  Additional research was conducted by utilizing the latest U.S. Census data to provide insights into an area's population and household data, geographic distribution, demographic information, socioeconomic information, internet adoption and usage, and commuting patterns. The information collected through these research methods enabled informed decision making for the development of effective broadband expansion strategies.

- **Geographic Information System (GIS) Mapping:** To visualize and analyze broadband coverage, gaps, and infrastructure locations in Summit County, GIS mapping technology

---

[7] UGRC. Utah Residential Broadband Map. https://broadband.ugrc.utah.gov/

was utilized. This mapping approach provided valuable insights into the current state of broadband connectivity, identifying areas of need, and assisting in the planning of future expansion.

3.2 EXISTING RESOURCES

Existing programs include all the programs and activities that Summit County currently performs. Summit County collaborated with the project team to produce this Local Broadband Plan which will inform Utah's statewide digital connectivity plan. Once federal funds are awarded, the state will allocate those funds based on areas with the most need.

Funding for the Summit County Local Broadband Plan was provided by the UBC, powered by the Governor's Office of Economic Opportunity, through a Local Broadband Planning Grant. A total of $942,738 grant funds were awarded to 28 organizations[8] across the state to build comprehensive plans relating to local broadband and digital access needs. Summit County was awarded $30,000 for broadband infrastructure planning. The Summit County Local Broadband Plan will be used to inform the statewide Digital Connectivity Plan that will determine Utah's broadband priorities over the coming years.

Table 2 and **Table 3** include details about broadband-related resources and funding.

Table 2. Current Broadband-Related Resources

ACTIVITY NAME	DESCRIPTION	INTENDED OUTCOME(S)
Summit County IT Department	Maintains the county computer systems, local area network, wide area network, GIS department, micrographics department, and county web pages.	Aims to ensure that Summit County residents are connected with broadband service.
Summit County Economic Development	Supports the creation of new businesses, the expansion and retention of existing businesses within Summit County, and the attraction of companies that offer high-impact jobs and share the County's values.	Wants to connect residents to broadband to support work-from-home and other business needs.
Park City IT Department	Supports Park City computer systems.	Aims to ensure that Park City residents are connected with broadband service.

---

[8] Clark, K.(2023) Utah Broadband Center Announces 2023 planning grant recipients
https://business.utah.gov/broadband/utah-broadband-center-announces-2023-planning-grant-recipients

Park City Community Foundation	Brings together local nonprofits, caring donors, and community leaders to contribute financial resources and innovative ideas to benefit all the people of Park City.	Can help enroll qualified Park City residents into ACP and Lifeline programs
Utah Education Network	Effectively streamline technology to and between Utah's public education and higher education systems	It provides broadband and broadcast infrastructure to all areas of the state, including Summit County, through networking, application, and support services.
Utah Education and Telehealth Network	Provides critical broadband infrastructure and services to education, health care, and broadcast sites throughout Utah	Connect people and technologies to improve education and health care in Utah.

Table 3. Broadband Funding

SOURCE	PURPOSE	TOTAL
Utah Broadband Center	Broadband infrastructure planning for Summit County	$30,000
Connect America Fund	Connect America has funded All West Communications to serve over 19,000 locations in Summit, Wasatch, and Rich Counties from 2019 through 2022.[9] Most locations were deployed at 1 Gbps/500 Mbps speeds. It appears that approximately half of the funded locations are within Summit County.	$33,600,000 (Includes funding to Summit, Wasatch, and Rich Counties)
Connect America Fund	Connect America has funded Viasat to serve approximately 1,300 locations in Utah in 2022 at 25/3 Mbps speeds.[10] 93 of these locations are in Summit County and are in the Tollgate Ranch / Jeremy Ranch location.	$312,000 (Includes funding for entire state)
Park City Chamber/Bureau	Grant for remote cameras at trailheads in Park City. [11] Allows visitors to see how busy a trail is before hiking and rangers to monitor parking and safety issues.	~$12,000

---

[9] Connect America Fund Broadband Map. https://data.usac.org/publicreports/caf-map/
[10] Connect America Fund Broadband Map. https://data.usac.org/publicreports/caf-map/
[11] Park Record. July 19, 2023. https://www.parkrecord.com/news/park-city-receives-funding-for-trailhead-cameras-providing-views-of-parking-and-congestion/

3.3 PARTNERSHIPS

This section identifies existing and potential partners and community anchor institutions that Summit County may engage for the development and implementation of the Local Broadband Plan. Such partners include organizations that are already engaged in issues related to broadband deployment and digital inclusion, such as local governments, college and university systems, school systems, faith-based organizations, foundations, chambers of commerce, and local internet service providers. Details about local community partners are outlined in **Table 4** and statewide entities are outlined in **Table 5**.

Table 4. Local Community Partners and Community Anchor Institutions

COMMUNITY PARTNER/ ANCHOR INSTITUTION	DESCRIPTION OF CURRENT OR PLANNED ROLE IN BROADBAND DEPLOYMENT AND ADOPTION
Business Centers (Park City Chamber & Visitors Bureau, Kamas Valley Business Association)	By leveraging resources, expertise, and influence, business centers can actively support Summit County's broadband planning efforts.
Local School Districts (North Summit, South Summit, Park City, and Charter Schools)	By implementing networks and compiling resources that allow all students access to quality, affordable broadband.
Summit County, Cities -Coalville, Henefer, Francis, Kamas, Oakley & Park City	By creating city/county broadband policies, providing and coordinating funding opportunities for broadband expansion efforts, and coordinating efforts for all broadband-expansion involved organizations.
Libraries – School District Libraries, County Library and Park City Library	By providing broadband resources and being digital navigators for the community.
Nonprofits – Christian Center of Park City, People's Health Clinic, Community Wireless	By advocating, spreading awareness, and facilitating resources for broadband expansion and affordability to the communities they serve.
John Adams	Forest Meadows HOA President
Scott Robertson (Park City IT)	Aims to ensure that Park City residents are connected with broadband service.
Stakeholder Groups	Joint coordination with stakeholders, Comcast, Lumen, and Allwest

Table 5. Statewide Partners

NAME	CONTACT INFORMATION	ROLE IN BROADBAND DEPLOYMENT AND ADOPTION
Rebecca Dilg	rdilg@utah.gov (801) 538-8681	Utah Broadband Center Director *Governor's Office of Economic Opportunity*
Claire Warnick	cwarnick@utah.gov (801) 450-6682	Utah Broadband Center Program Manager *Governor's Office of Economic Opportunity*
Teri Mumm	tmumm@utah.gov	Utah Broadband Center Digital Access Program Manager *Governor's Office of Economic Opportunity*
Lynne Yocom	yocom@utah.gov (801) 514-4565	Fiber Optics Manager *Utah Department of Transportation*
Vikram Ravi	vravi@ntia.gov	Federal Program Officer for Utah *National Telecommunications and Information Administration*

3.4 ASSET INVENTORY

Broadband assets include hard assets (e.g., towers, buildings, and utility poles) and soft assets (e.g., programs, activities, strategies, skills, people) that can be leveraged to close the digital divide. Hard assets in Summit County are described in section 3.4.1. Summit County's soft assets are described in sections 3.4.2 and 3.4.3.

3.4.1 Broadband Availability

Broadband availability relates to whether the physical broadband infrastructure is available in a region to support specific speeds. To deliver broadband speeds of at least 100/20 Mbps to the end-user, a robust network must be in place.

General Service Areas

Figure 3 and **Figure 4** below depict the wireline and fixed wireless broadband currently available in Summit County, Utah. ISPs are required to submit their corresponding service areas twice a year through FCC Form 477. ISPs are now required to submit service areas through the FCC webpage[12]. The accuracy of the service locations can be influenced by the optimism and interests of ISPs. These maps, part of the Utah Residential Broadband Map[13], provide specific upload and download speed information as well as fixed and mobile wireless data.[14] **Figure 3** shows service areas considered "served" which have at least 100/20 Mbps speeds. **Figure 4** shows service areas which have at least 25/3 Mbps speeds.

---

[12] Federal Communications Commission. December 2022. Information for Filers. https://www.fcc.gov/BroadbandData/filers
[13] UGRC. Utah Residential Broadband Map. https://broadband.ugrc.utah.gov/
[14] UGRC. Utah Residential Broadband Map. https://broadband.ugrc.utah.gov/
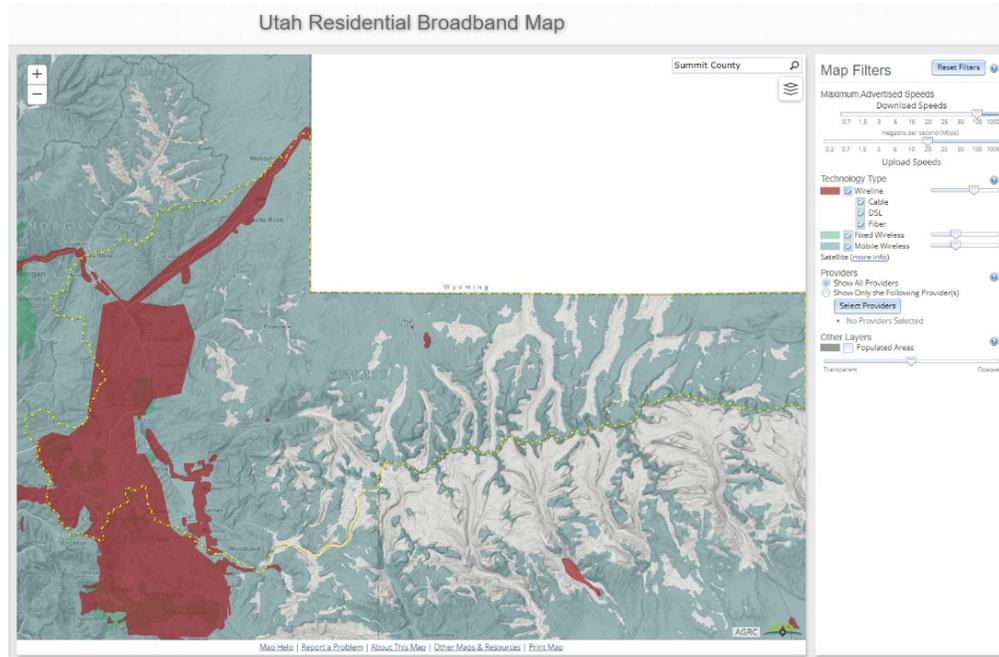
Figure 3: Broadband Coverage Area in in Summit County with 100/20 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)
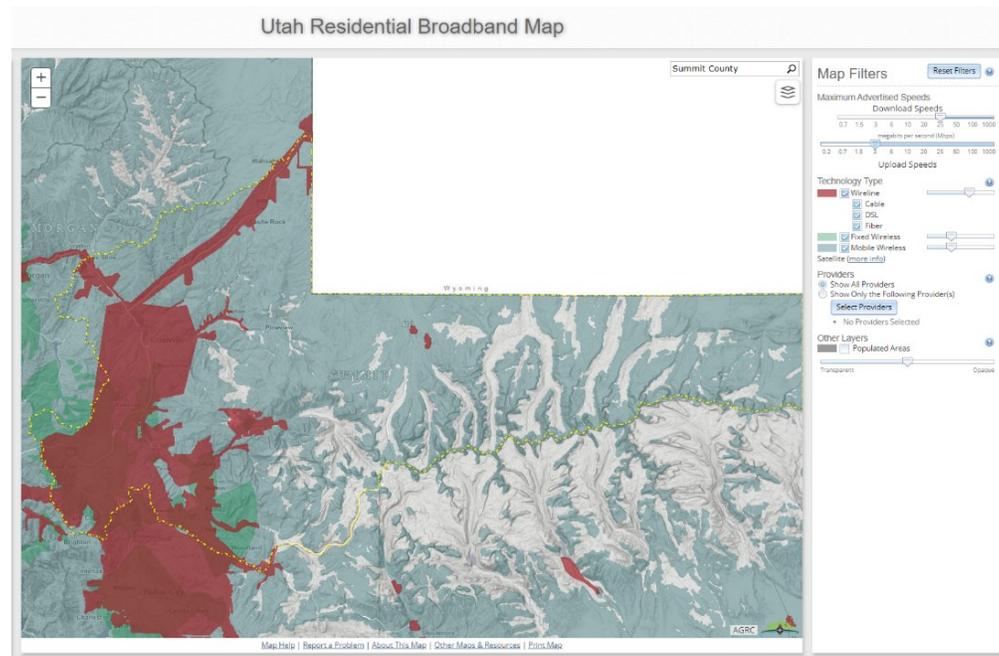
Figure 4: Broadband Coverage Area in Summit County with 25/3 Mbps Minimum Speeds (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)

Table 6 summarizes the availability of different internet technologies for the population of Summit County, including fiber, cable/DSL, licensed wireless, and unlicensed wireless for all available speeds. These numbers were obtained from GIS data as reported from FCC Form 477.[15] It is important to note that though providers are supposed to report where these technologies are available for the end user (as in fiber-to-the-home), it seems they are reporting all homes connected to these technologies even when the technology is only available as a middle mile option. Some providers only offer wireless services in the area, but are reporting fiber connection to all the homes within their coverage area.

Table 6: Technology Available to Summit County's Populations

CITY/COUNTY	PERCENT OF POPULATION			
	FIBER	CABLE/DSL	UNLICENSED WIRELESS	LICENSED WIRELESS
Summit County	91.0%	83.2%	97.8%	0.0%
Coalville	91.2%	87.2%	90.9%	0.0%
Francis	99.8%	100.0%	100.0%	0.0%
Henefer	86.9%	98.6%	99.4%	0.0%
Kamas	100.0%	23.9%	100.0%	0.0%
Oakley	92.2%	100.0%	100.0%	0.0%
Park City	100.0%	96.1%	100.0%	0.0%

The Summit County survey asked residents to indicate what type of internet connection they had. Of 219 respondents, only 18% percentage of respondents used a wired internet connection such as fiber, cable, or DSL. 64% of respondents utilize satellite, mobile, or other wireless connection, 11% of respondents indicated that they do not have internet available in their area, and 6% did not know. This data is detailed in **Figure 5** below. The survey did not ask residents why they utilize mobile/satellite internet service, however, due to the high number of respondents claiming there is no internet available in their area, it is highly likely that it is the only service option available for many residents.

---

[15] Federal Communications Commission. Fixed Broadband Deployment Data from FCC Form 477. https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477

Type of Internet Connection

- Wired: 18%
- Wireless / Satellite: 64%
- No Internet Connection: 11%
- Unknown: 6%
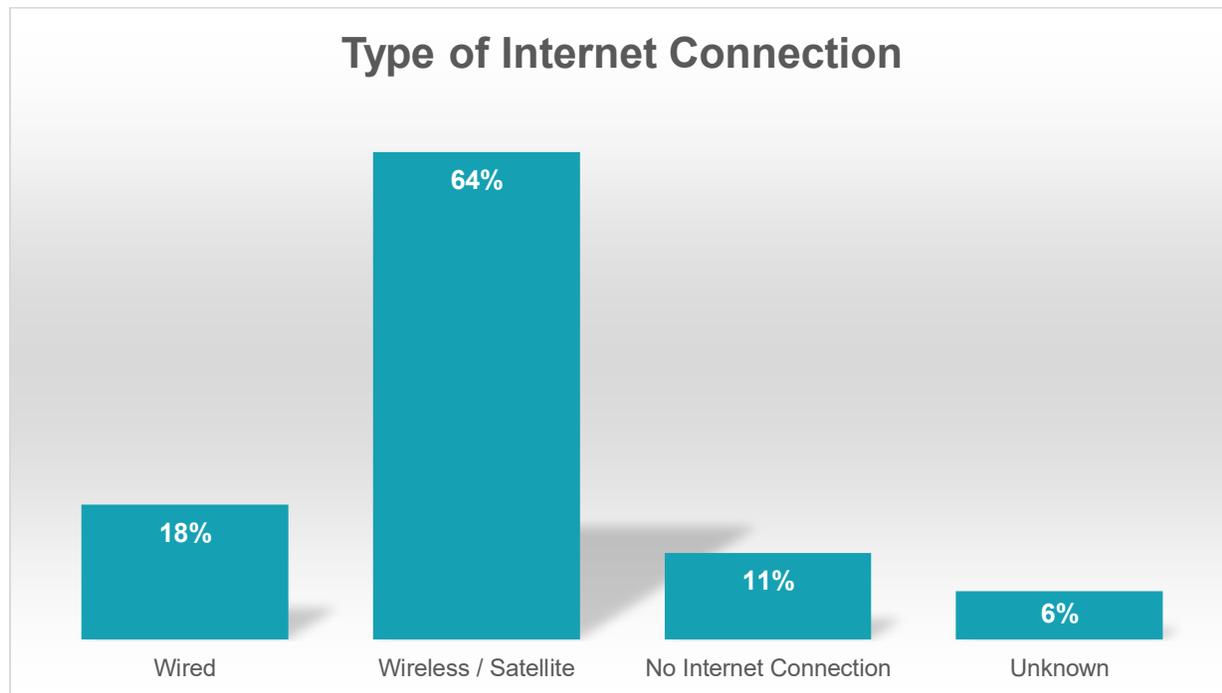
Figure 5. Type of Internet Connection from Survey Responses

Internet Service Providers (ISPs)

Private ISP companies provide internet service to residents and businesses and typically own the networks that distribute the broadband to their customers. Twice a year, ISPs report their service areas through FCC Form 477. In Utah, these coverage areas are mapped onto the Utah Residential Broadband Map[16], a state GIS map from the Governor's Office of Economic Opportunity. In Summit County, a range of ISPs cater to the diverse needs of residents and businesses.

Wired and Fixed Wireless ISPs currently serving Summit County are:

- All West Communications
- CenturyLink (Lumen)
- Comcast
- Keystone Solutions
- Utah Broadband
- Wicked Fast Internet

Figure 6, **Figure 7**, **Figure 8**, **Figure 9**, **Figure 10**, and **Figure 11** show the current coverage areas of each of the available Wired and Fixed Wireless ISPs in Summit County. Areas in red are wired service while areas in green are fixed wireless service. These coverage areas show any coverage available by the ISP, regardless of whether it is a high or low speed.

---

[16] UGRC. Utah Residential Broadband Map. https://broadband.ugrc.utah.gov/
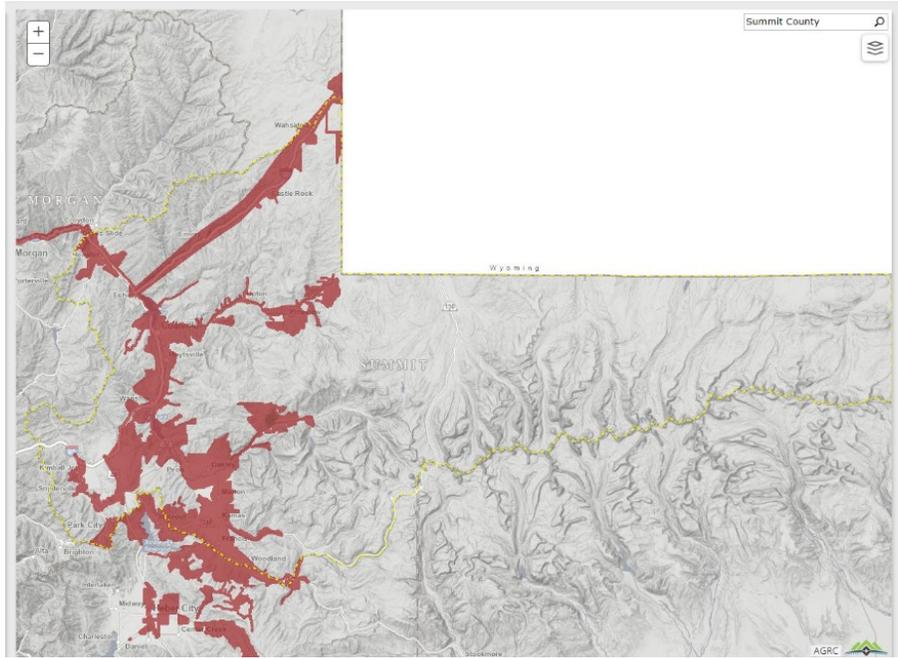
Figure 6: All West Communications Coverage Area (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)
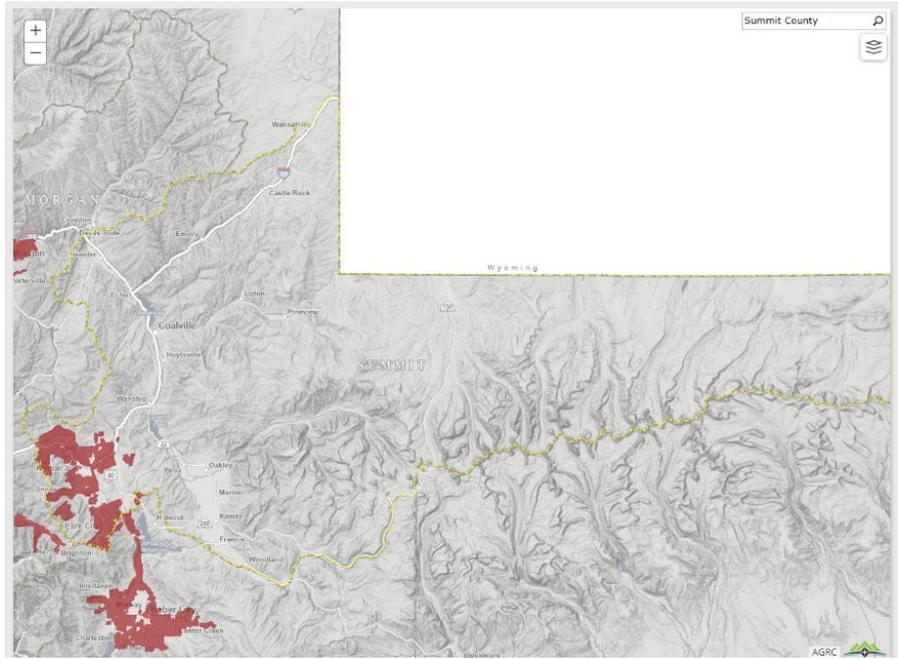
Figure 7: CenturyLink (Lumen) Coverage Area (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)
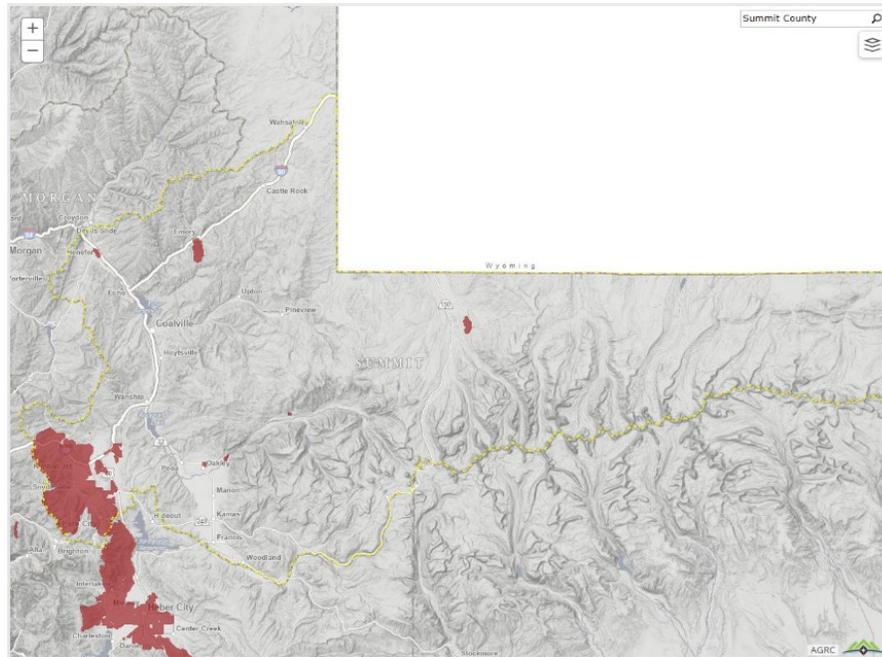
Figure 8: Comcast Coverage Area (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)
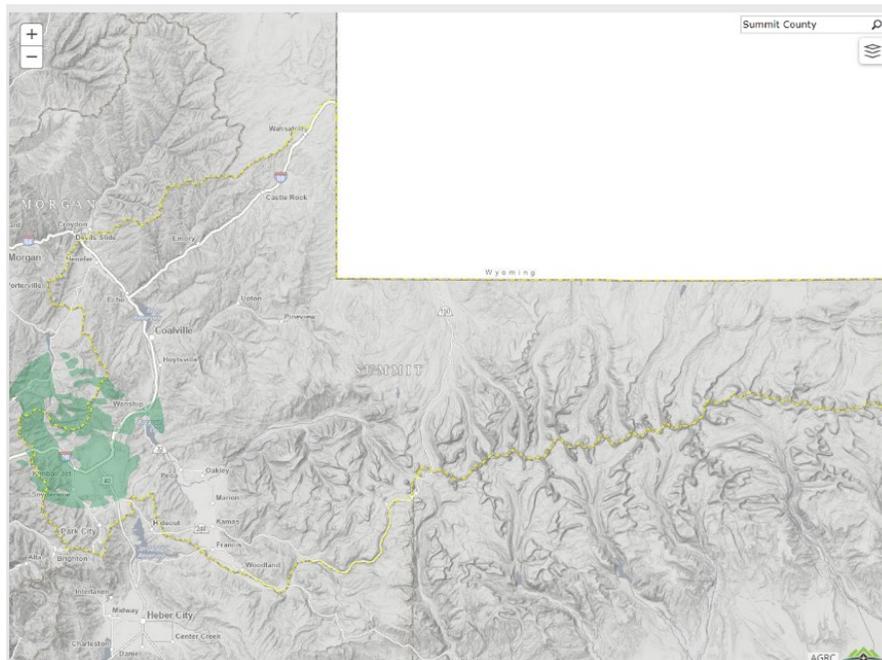
Figure 9: Keystone Solutions (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)
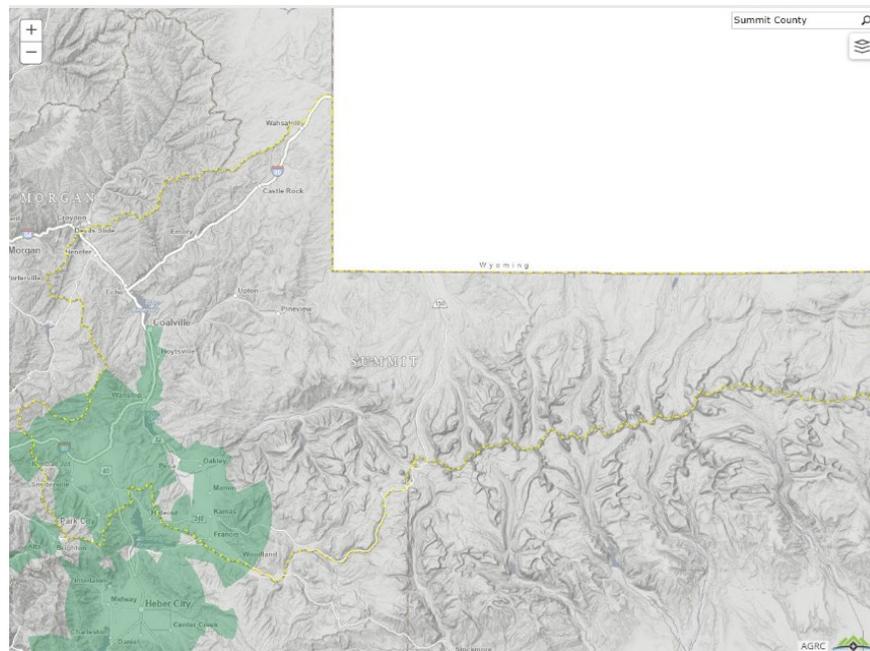
Figure 10: Utah Broadband Coverage Area (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)
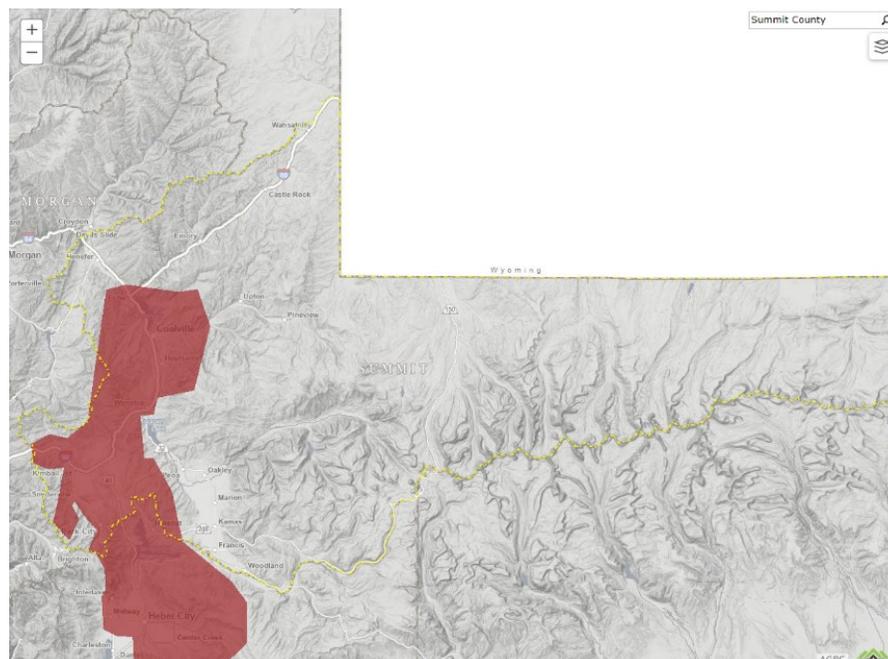
Figure 11: Wicked Fast Internet Coverage Area (Red Areas are Wired Service, Green Areas are Fixed Wireless Service)

Publicly Available Conduit

Tollgate HOA is currently building conduit in areas of new development. Internet service providers can utilize this conduit rather than installing new.

Wireless Towers

Point-to-point wireless towers, also known as microwave towers or wireless backhaul towers, are structures used in telecommunications to establish wireless communication links between two specific points. These towers facilitate the transmission of data, voice, or other forms of communication over long distances without the need for physical cables or fiber optic lines.

The primary purpose of point-to-point wireless towers is to establish a direct and dedicated connection between two locations. These towers are typically equipped with directional antennas, which transmit and receive signals in a focused beam, allowing for high-speed and reliable data transmission. **Figure 12** shows the location of cell towers within Summit County.

Date: 5/15/2023 9:33 AM
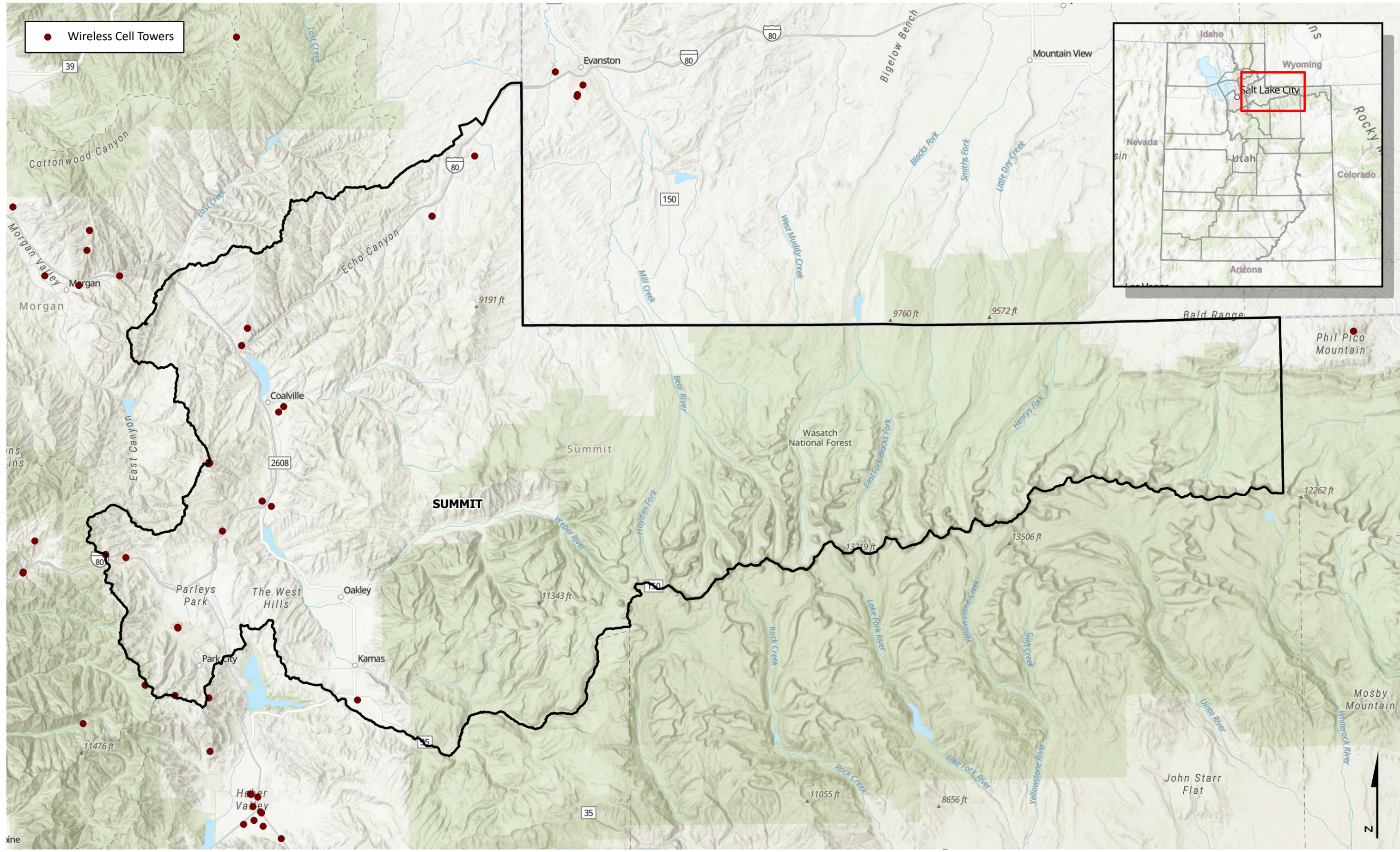
Figure 12: Wireless Cell Towers in Summit County

Horrocks.

Utah Department of Transportation (UDOT)

UDOT has been actively deploying fiber optic infrastructure along the state highway system for many years. This infrastructure includes conduit, fiber optic cabling, access points, distribution hubs, and communications equipment. This infrastructure is a publicly owned asset that UDOT uses to monitor traffic and other transportation-related activities and facilitate broadband deployment across state highways. Whenever UDOT builds or expands a roadway, their practice is to install fiber optic conduits as an incremental cost to the project. UDOT exchanges sections of their empty conduit to private ISPs to allow them to install their own cabling. In exchange, private ISPs provide their own empty conduit for UDOT to use in different locations. Often, an ISP that provides shared communications infrastructure, such as Crown Castle or Syringa, will own and manage the fiber in the conduit leased from UDOT. This network creates the primary middle mile fiber network throughout the region. The ISPs that provide final mile internet service to the end user can often start their build out from the nearest state road.

One of the advantages of using the UDOT fiber network for broadband is that it can reduce the cost and complexity of deploying new infrastructure. Rather than building new fiber optic cables, ISPs can lease or use existing UDOT fiber to provide broadband services to customers. This can make it more feasible for ISPs to offer high-speed internet service in rural areas where the population density may be lower and the cost of deploying new infrastructure is higher.

Figure 13 shows UDOT fiber network infrastructure in the region of Summit County, along with FCC unserved and underserved locations. The significance of these unserved locations will be discussed in Section 3.5.1.
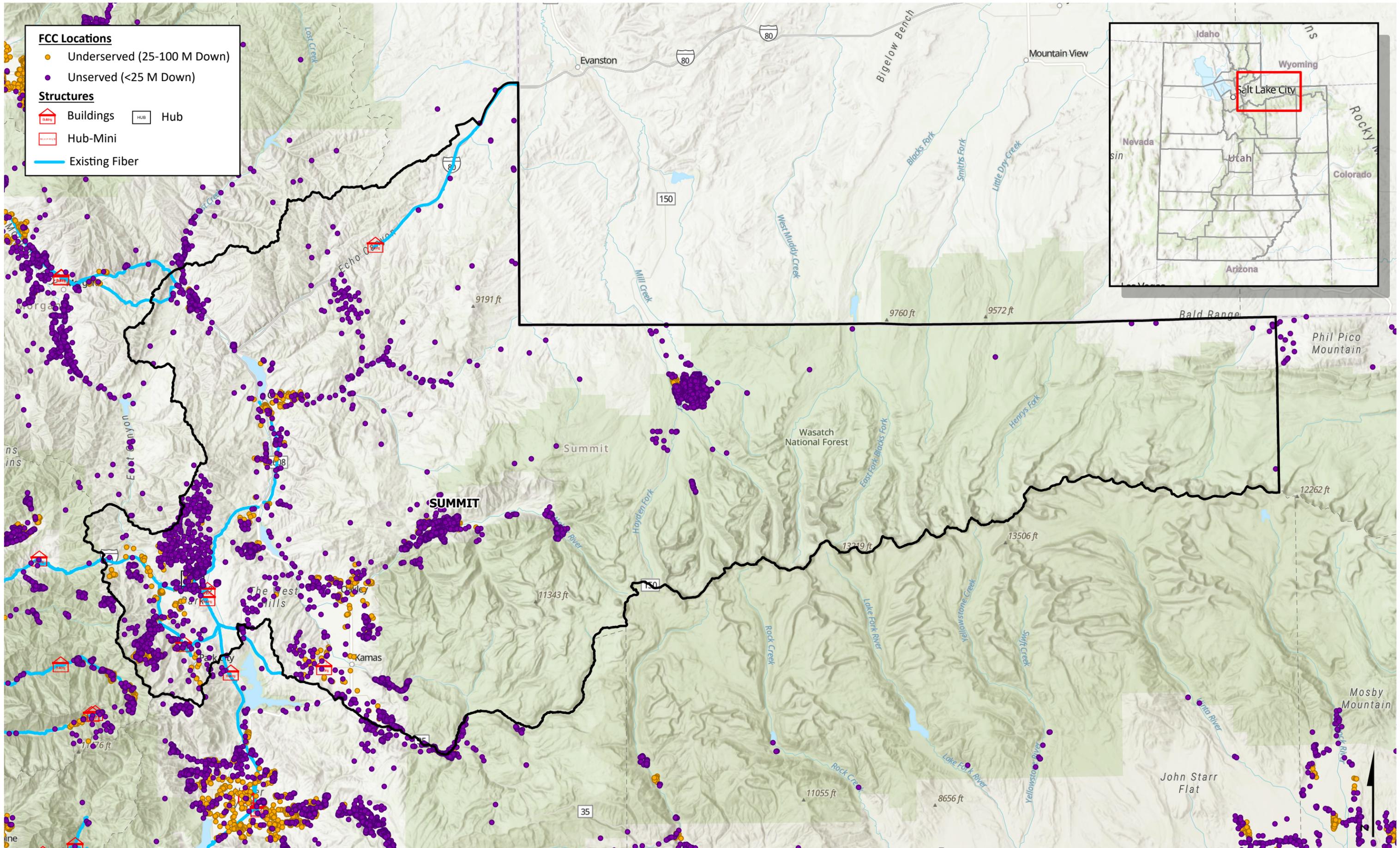
Figure 13: UDOT Fiber Network in Summit County

FCC Locations
- Underserved (25-100 M Down)
- Unserved (<25 M Down)

Structures
- Buildings
- Hub-Mini
- Hub
- Existing Fiber

3.4.2 Digital Access

Digital access refers to the ability of individuals to use and benefit from digital technologies, including high-speed internet. In addition to the availability of broadband infrastructure, digital access also depends on factors such as knowledge, skills, and personal hardware. As digital technologies continue to play an increasingly important role in our daily lives, the need for equitable access to high-speed internet becomes more pressing. Digital equity is an important aspect of this issue, as it refers to the fair and just distribution of digital resources and opportunities, particularly for covered populations (unserved, underserved, and underrepresented communities). In Summit County, ensuring digital access and digital equity for all residents is a critical part of building a thriving and inclusive community.

Public Wi-Fi Networks

Utah Communities Connect (UCC) developed an interactive map detailing public Wi-Fi locations in Utah as a response to the access needs brought on by the COVID-19 pandemic. This map documents Wi-Fi access points throughout Utah. In Summit County, there is one Wi-Fi access point documented, located at the Park City Public Library (see **Figure 14**).[17] Additional Wi-Fi is located at many private businesses throughout the county. The WiFi Map App[18] details many of these public locations.
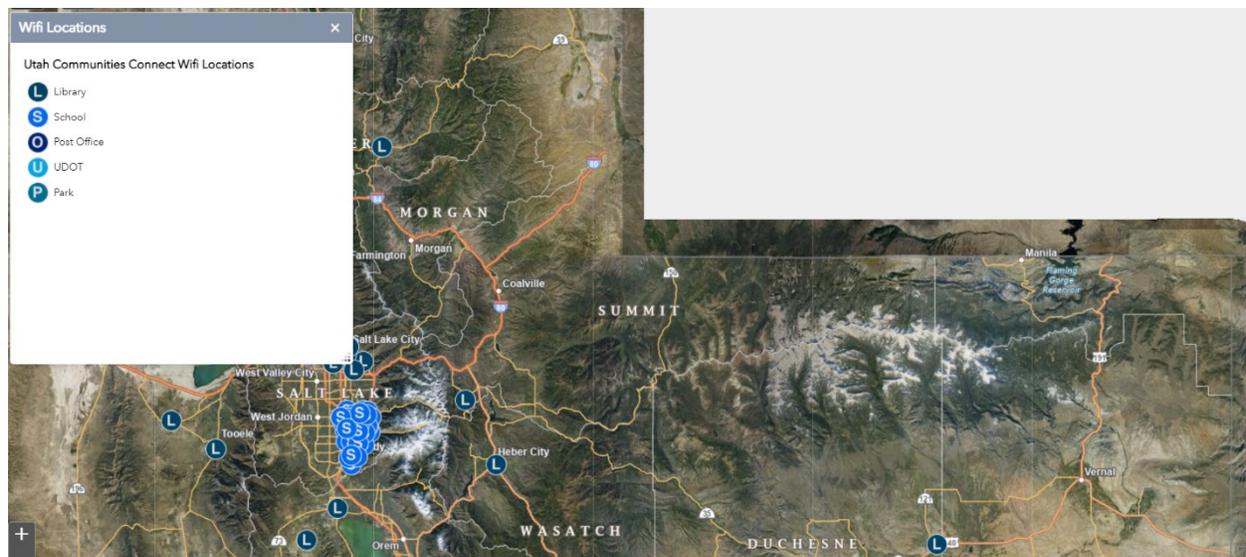
Figure 14: Utah Communities Connect (UCC)Wi-Fi Locations in Summit County

---

[17] Utah Communities Connect. Public Wi-Fi Access Points.
https://utah.maps.arcgis.com/apps/webappviewer/index.html?id=e463ba10af034b6e90a8d01b5c13ec55
(accessed May 9, 2023)
[18] WiFi Map. 2023. https://www.wifimap.io/234-united-states/3461-park-city

Wi-Fi Hotspot Loan Programs

The State Library Division has a program that provides free wireless hotspot devices to the public. Residents can check out a hotspot device to be able to connect online remotely at zero cost. There are four mobile hotspot devices available at the Coalville Library, six available at the Kamas Library, and seven available at the Kimball Junction Library[19].

Library Wi-Fi

The Utah State Library Division oversees and works with all public libraries within the state to ensure Wi-Fi is available to the public. All Summit County Libraries offer public Wi-Fi connectivity with great connection speeds.

Transit Wi-Fi

High Valley Transit[20] and Park City Transit[21] are Summit County's public transit agencies. They provide public Wi-Fi connectivity on their busses. These systems are open to the public and support moderate broadband speeds. Some hotspots are located at bus stations and transit centers as well. Residents of Summit County utilize the Wi-Fi on the transit systems to be more productive during their weekday commute times.

Mobile Wireless Access

Mobile wireless carriers provide strong coverage areas across Summit County. According to the data provided by the major mobile wireless carriers, there are only a few pockets where mobile wireless service is not available.[22] The areas that are not covered include locations that are extremely remote, or where the terrain is such that the wireless signal is impeded. For those locations that are covered by mobile wireless, most of the service that is offered supports the "served" threshold of 100/20 Mbps broadband speeds. See **Figure 15** for a mobile wireless coverage map of at least 100/20 Mbps speeds (data provided to the Utah Geospatial Resource Center). Blue areas represent areas of mobile wireless coverage of speeds at least 100/20 Mbps.

---

[19] Summit County Library Catalog. Mobile Hotspot. 2023. https://librarycatalog.summitcounty.org:8480/?config=ysm#section=resource&resourceid=196462918&currentIndex=0&view=allCopiesDetailsTab

[20] High Valley Transit. https://highvalleytransit.org/ (accessed May 19, 2023)

[21] Park City. Park City Transit. https://www.parkcity.org/departments/transit-bus (accessed May 19, 2023)

[22] UGRC. Utah Residential Broadband Map. https://broadband.ugrc.utah.gov/
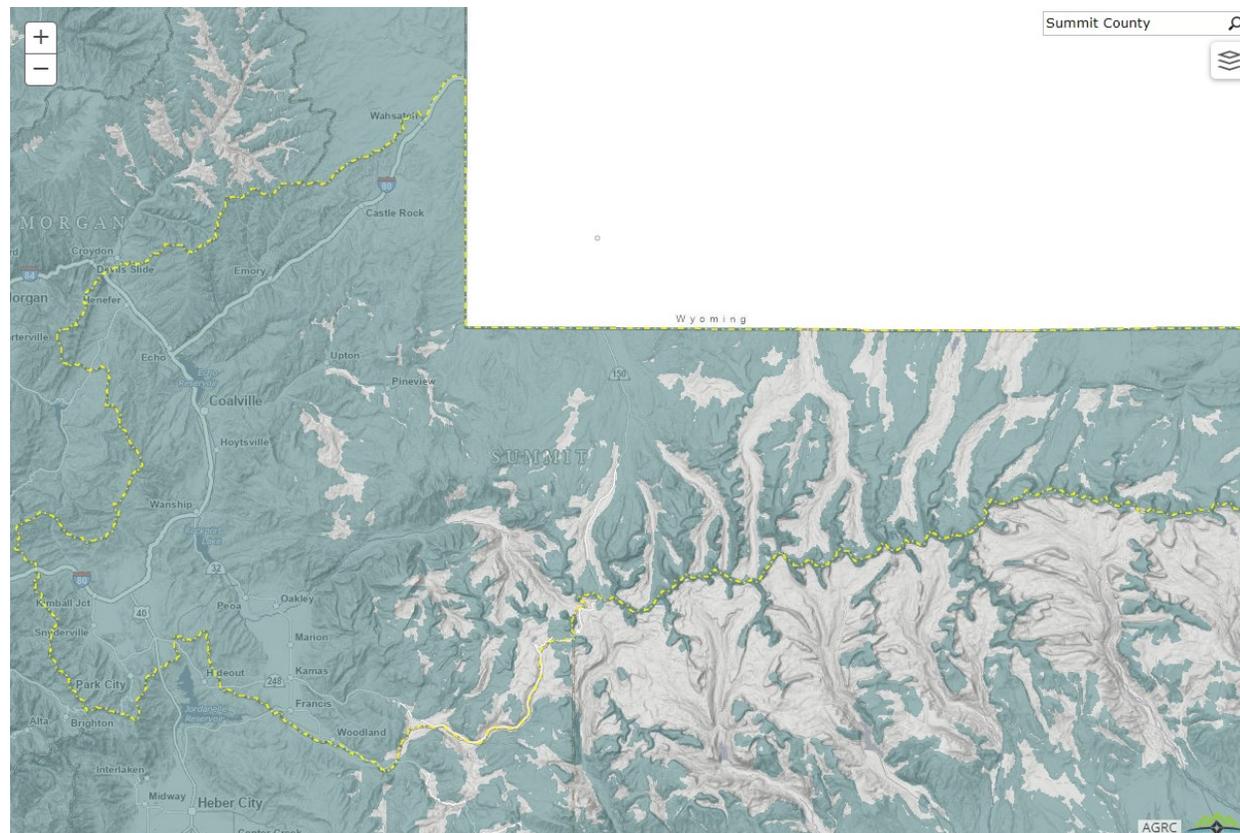
Figure 15: Mobile Wireless Coverage Area in Summit County (100/20 Mbps Minimum Speeds)

3.4.3 Broadband Affordability

Broadband affordability is a critical component of digital equity, as the cost of high-speed internet can be a significant barrier for many households. In Summit County, the economic affordability of broadband varies depending on a variety of factors, including the availability of affordable broadband service plans and discounted or subsidized broadband programs. While some ISPs offer competitive pricing and bundles that can make high-speed internet more accessible, others may charge higher prices for their services. Understanding the overall affordability of broadband in Summit County is essential for ensuring that all residents have access to the digital resources and opportunities they need to thrive.

Table 7 outlines the providers available in the area, as well as their respective costs, available speeds, and participation in the ACP. Participation in the ACP program is a requirement for ISPs to be awarded federal BEAD implementation funding.

Table 7. Providers and Prices

PROVIDER	PRICE	DESCRIPTION OF SERVICE TIER, ADVERTISED SPEEDS, AND AFFORDABILITY	PARTICIPATES IN THE AFFORDABLE CONNECTIVITY PROGRAM?
All West Communications	$59.95/month $89.95/month	300Mbps/300Mbps 1000 Mbps/1000Mbps	Yes
CenturyLink	$25-$175/month	10 Mbps - 1 Gbps	Yes
Comcast	$34-$289/month	10 Mbps - 1 Gbps	Yes
Keystone Solutions	Not Available	50 Mbps -1Gbps	No
Utah Broadband	$50-$150/month	10 Mbps – 10 Gbps	Yes
Wicked Fast Internet	$99.95/month $149.95/month 199.95/month	150 Mbps 500 Mbps 1 Gbps	No

There are various federal and state programs that aim to make broadband more affordable for low-income households, including the ACP, FCC's Lifeline program, the E-Rate program, and the Utah Universal Service Fund.

Affordable Connectivity Program (ACP)
The most impactful affordability asset currently available to residents of Summit County is the ACP. This federal benefit provides a service discount of up to $30 per month on a home internet plan, and households on Tribal lands are eligible for up to $75 per month to mitigate the higher cost of service in rural and remote areas. Unfortunately, the ACP is underutilized in Utah. Other assets include efforts to increase the awareness and use of ACP, such as grant-funded projects and the state-led Act Now campaign. According to metrics provided by the FCC,[23] there are 101 subscribers enrolled in the ACP program in Summit County as of April 1, 2023.

Lifeline
Lifeline is an FCC program that helps make communications services more affordable for low-income consumers. Lifeline provides a discount on qualifying monthly telephone service, broadband internet service, or bundled voice-broadband packages. The Lifeline program offers $9.25 per month to certain qualifying households and plans, and the state of Utah provides an additional $3.25 per month. In Summit County there are 36 subscribers to the Lifeline Program.

E-Rate
The Schools and Libraries Universal Service Support Program, commonly known as the E-rate program, helps schools and libraries to obtain affordable broadband. The E-rate program is

---

[23] FCC. April 2023. Affordable Connectivity Program Providers. https://www.fcc.gov/affordable-connectivity-program-providers

administered by the Universal Service Administrative Company (USAC) under the direction of the FCC. USAC is responsible for processing applications for support, confirming eligibility, and reimbursing service providers and eligible schools and libraries for the discounted services. USAC also ensures that the applicants and service providers comply with the E-rate rules and procedures established by the FCC. Four service categories are eligible for E-rate funding: telecommunications, internet access, internal connections, and basic maintenance of internal connections.[24]

The Utah Education Network (UEN) is the E-rate consortium lead in applying for and implementing E-rate funds received in Utah. UEN helps schools and libraries apply for discounts on broadband services through the E-rate program. This program utilizes Utah Universal Service Funds (UUSF), which are collected through fees on consumers' phone bills.

Utah Universal Service Fund
The Utah Universal Service Fund (UUSF) enables rural customers to have access to the same quality of service as urban customers at a reasonably comparable price. Enacted in 1997 and governed by Utah Administrative Rule R746-8,[25] funding from UUSF is used to support programs that advance and maintain telecommunication networks and services in rural areas. This program provides rural telecommunication providers a rate-of-return to advance the operation and maintenance of rural networks.

---

[24] Universal Service Administrative Co. Eligible Services List. https://www.usac.org/e-rate/applicant-process/before-you-begin/eligible-services-list
[25] Utah Office of Administrative Rules. (January 2022). Rule 8: Utah Universal Public Telecommunications Service Support Fund. https://adminrules.utah.gov/public/rule/R746-8/Current%20Rules?

3.5 NEEDS AND GAPS ASSESSMENT

The needs and gaps assessment in this plan ensures that all residents of Summit County have access to high-quality broadband internet. This assessment will identify gaps between the current state of broadband deployment and the needs of residents, businesses, and institutions. Through needs identification, data collection, and analysis, policymakers and community leaders can develop and implement strategies that address these gaps, ensuring that all residents have access to the digital resources necessary for success in today's economy.

To gather more qualitative data from the public about their experience with internet connectivity, a survey was created and distributed to the public. Questions in this survey covered topics such as residents' current internet connections, device accessibility, affordability options, connectivity for businesses, community internet needs, and voluntary disclosure of demographics.

3.5.1 Broadband Availability

The ability to interact with friends and family, access educational and health care resources, and fully engage in the digital economy are all made possible by having access to high-speed broadband. However, not every part of Summit County has access to dependable and reasonably priced broadband connectivity.

The primary metric by which broadband availability is evaluated is what speeds are available to residents and businesses throughout Summit County. The BEAD program aims to provide service of 100/20 Mbps speeds to every household. Serviceable locations with speeds under 25/3 Mbps are considered unserved locations that are given the top priority for broadband funding. Locations with speeds less than 100/20 Mbps are considered underserved locations and are the second priority for BEAD funding.

Figure 16 below shows the unserved areas where there is no wired or fixed wireless service above 25/3 Mbps.

No provider reports broadband services at 25 Mbps
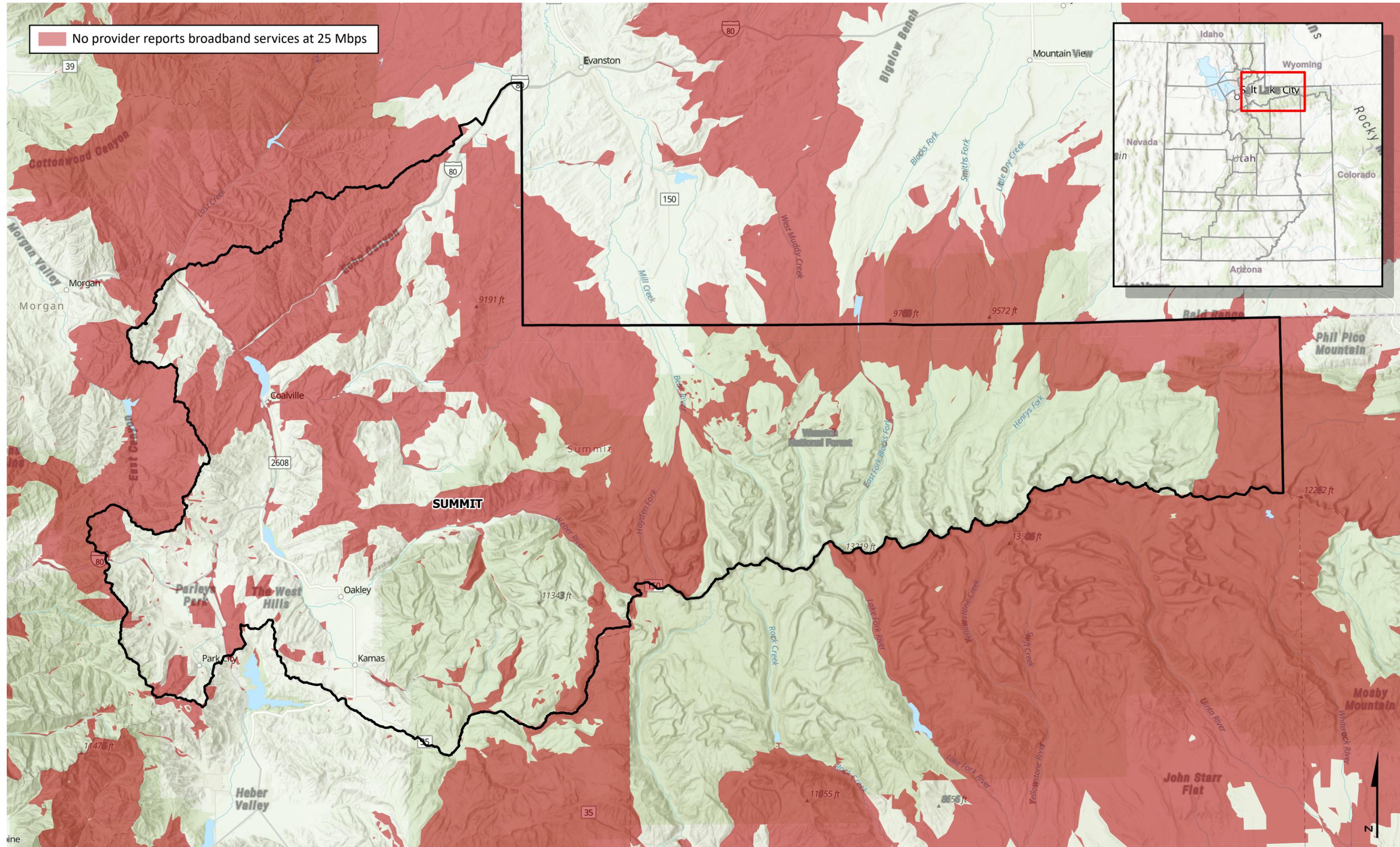
Figure 16: Areas with No Services at 25 Mbps Summit County

Horrocks.

0   7.5   15
Miles

FCC Service Locations

The FCC has created a map that shows the service availability at each broadband serviceable location.[26] Residences and businesses that are classified as unserved or underserved will qualify for BEAD funding. The data within the other sections of 3.5.1 generally support FCC service designations.

Table 8 is the number of FCC locations that fall within each speed tier in Summit County. **Figure 17** shows all FCC servicable locations while **Figure 18** shows only the unserved and underserved locations.

Table 8. Broadband Speeds Available

COUNTY OR MAJOR CITY	UNSERVED (BELOW 25/3 MBPS)		UNDERSERVED (BELOW 100/20 MBPS)		SERVED (ABOVE 100/20 MBPS)		TOTAL FCC LOCATIONS
	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	NUMBER OF LOCATIONS	%	
County							
Summit	3,235	14.4%	821	3.6%	18,476	82.0%	22,532
Major City							
Coalville	18	2.8%	88	13.5%	548	83.8%	654
Francis	18	3.2%	4	0.7%	549	96.1%	571
Henefer	90	26.9%	41	12.2%	204	60.9%	335
Kamas	0	0.0%	2	0.2%	831	99.8%	833
Oakley	26	4.0%	86	13.4%	531	82.6%	643
Park City	78	1.3%	29	0.5%	5,679	98.2%	5,786

---

[26] FCC. National Broadband Map. https://broadbandmap.fcc.gov/home (accessed May 17, 2023)

FCC Locations
- Served (>100 M Down)
- Underserved (25-100 M Down)
- Unserved (<25 M Down)
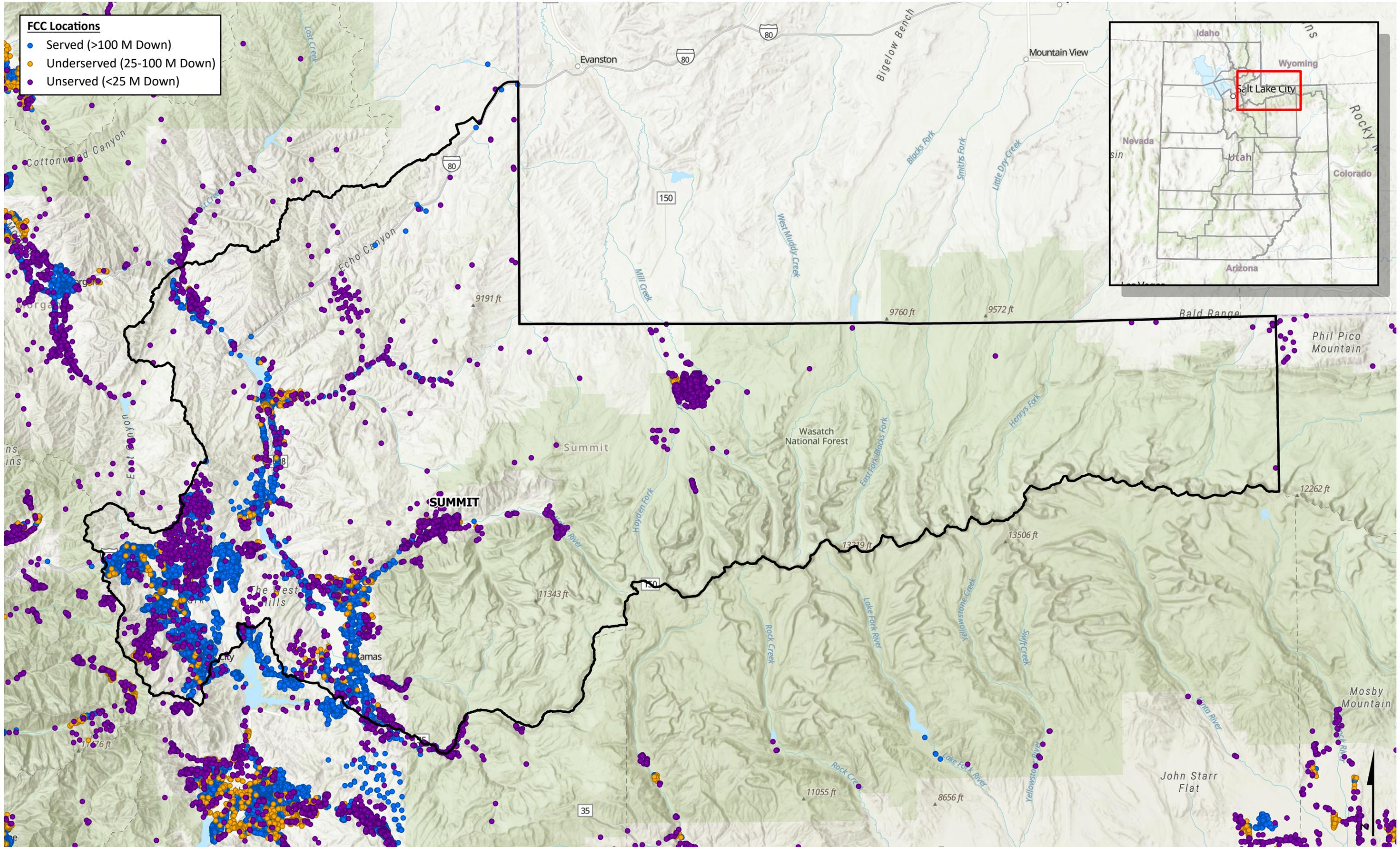
Figure 17: FCC Service Locations in Summit County

Horrocks.

0   7.5   15 Miles

FCC Locations
- Underserved (25-100 M Down)
- Unserved (<25 M Down)
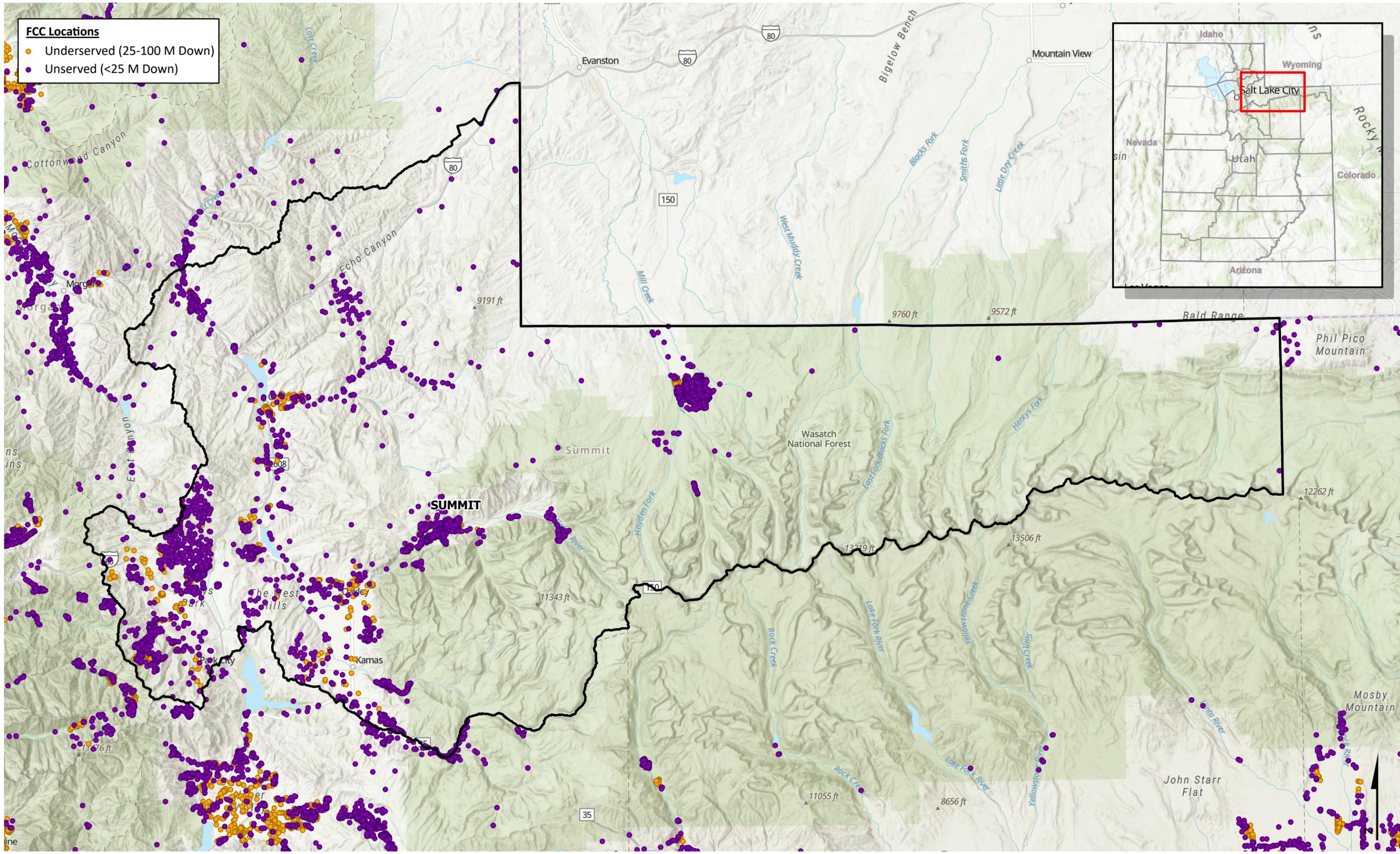
Figure 18: FCC Underserved/Unserved Service Locations in Summit County

Horrocks.

0   7.5   15 Miles

Survey Results

The Summit County survey asked respondents to indicate if they had a household internet connection. Of 72 respondents, 55 responded, "Yes, I have an internet connection at my residence" and 17 responded "No, I don't have an internet connection at my residence." This data is detailed in **Figure 19** below.

Internet at Residence

76.39% — Yes, I have an internet connection at my residence.

23.61% — No, I don't have an internet connection at my residence.
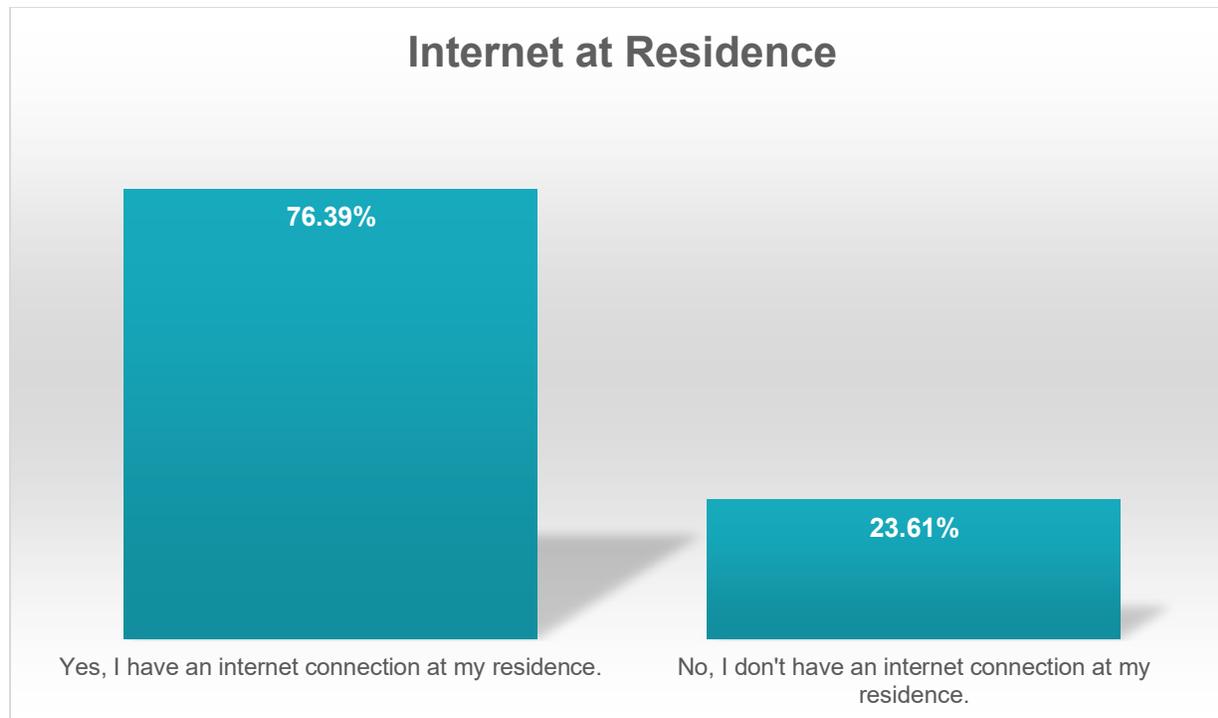
Figure 19. Percentage of Survey Respondents with a Household Internet Connection

Internet Speed Test

In order to gauge the accuracy of FCC broadband data and ISP coverage areas, Summit County and the State of Utah held a speed test campaign[27] throughout the region. Residents could test the current speeds that their device was experiencing at the time of the test. Speed tests provide insight of additional unserved and underserved locations, showing gaps and discrepancies beyond the information provided by ISP data and FCC broadband data. These real-time internet download and upload speeds, while beneficial, did not come without limitations. For example, residents may be experiencing lower speeds because they are paying for a slower speed tier, which indicates an affordability issue. In addition, slower speeds may be due to personal hardware that has been installed incorrectly, which would be a digital access

---

[27] https://business.utah.gov/broadband/speed-test

issue. The speed test cannot show if these other factors are happening, so it is best used to assess general trends.

Table 9 shows the results of the speed test. Out of the total 312 tests taken, nearly 45.2% (141) of the locations classify as unserved (download speeds below 25 Mbps). **Figure 20** shows the locations and results of the speed tests**. Figure 21** shows the speed tests locations along with the FCC unserved and underserved locations. While several residences have sufficient internet speeds, the distribution of results indicate many in rural areas do not.

Table 9. Speed Test Results

DOWNLOAD SPEED	NUMBER OF TESTS
No Service	1
Below 10 Mbps	57
Below 25 Mbps	83
Below 500 Mbps	168
Above 500 Mbps	3
Total Locations	312

Speed Test Results
- ● No Service
- ● <10 M down
- ● <25 M down
- ● <500 M Down
- ● >500 M down
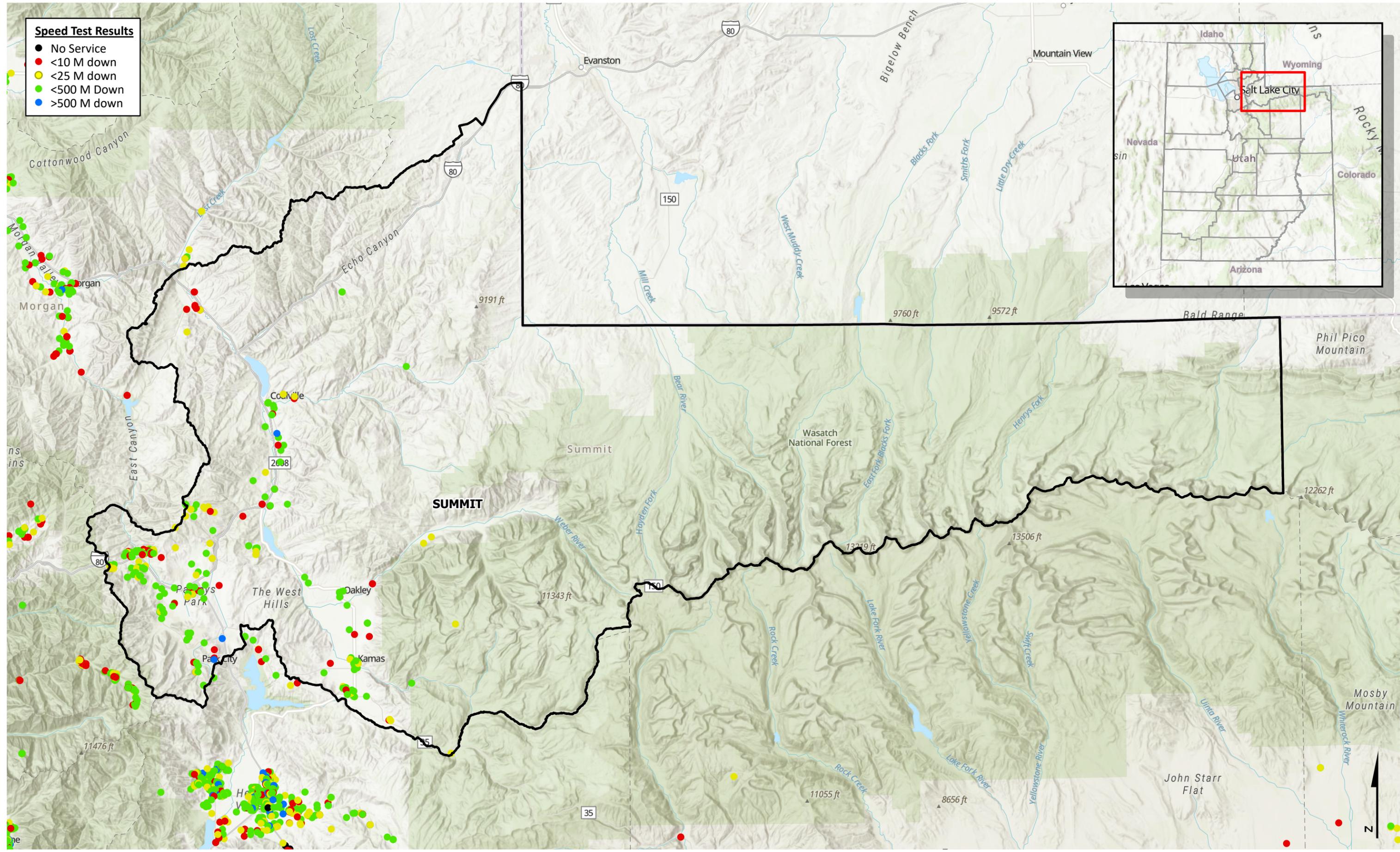
SUMMIT

Figure 20: Speed Test Results for Summit County

Horrocks.

0   7.5   15
Miles

Date: 7/21/2023 3:50 PM

FCC Locations
- Underserved Location (25-100 M Down)
- Unserved Location (<25 M Down)

Speed Test Results
- No Service
- <10 M down
- <25 M down

Figure 21: Unserved Speed Test Results and Underserved/Unserved FCC Locations in Summit County

Horrocks.

0   7.5   15 Miles
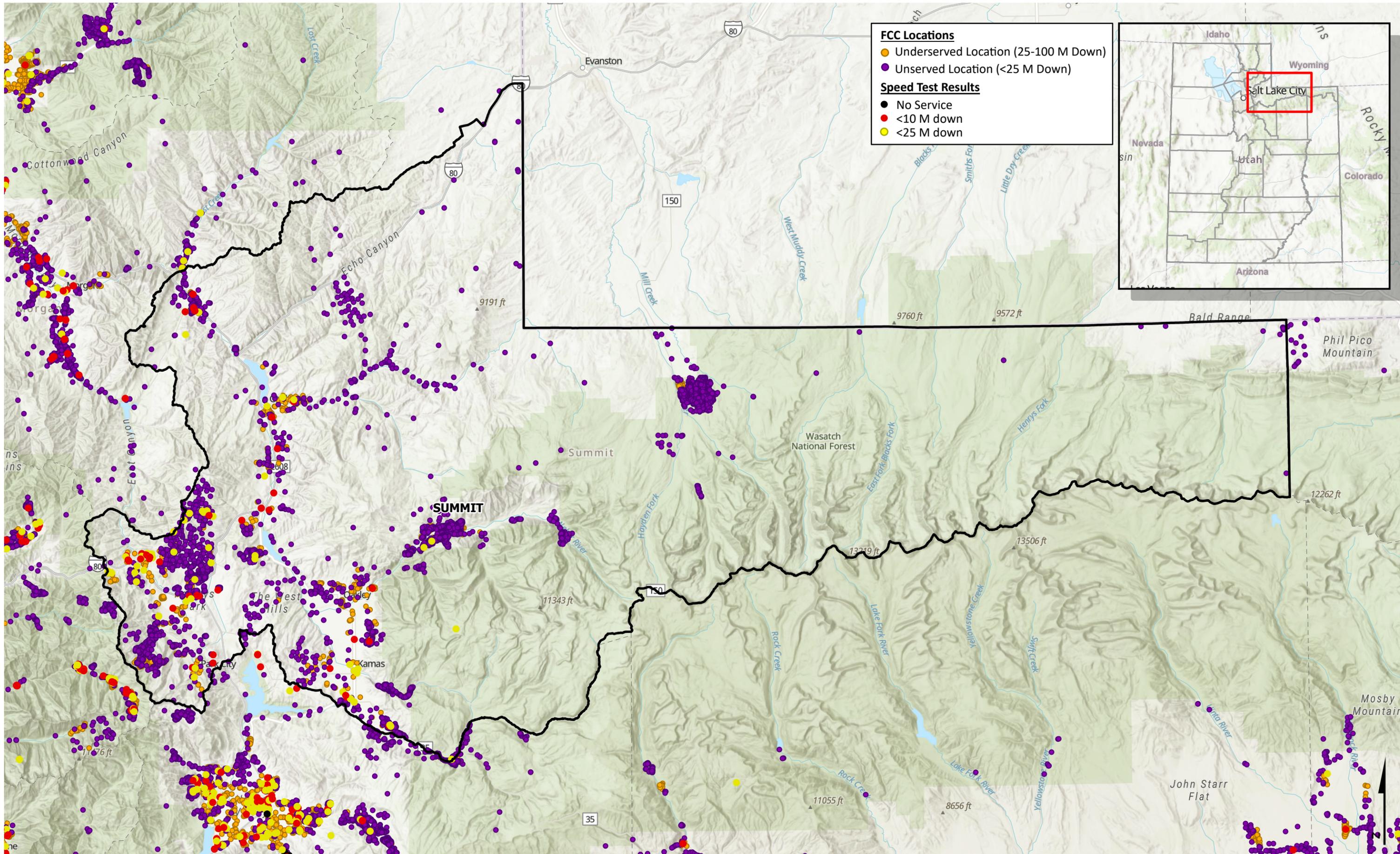
Middle Mile

The UDOT fiber network is the primary statewide fiber network. State highways that do not yet have UDOT fiber in them often do not have any fiber in them due to their remote locations.

On the UDOT fiber map, sections of highway are marked if they are a priority area UDOT wishes to run fiber through or if they are segments of road that have projects or funding for deploying fiber soon. **Figure 22** shows the current UDOT fiber network, along with future needs projects and FCC unserved and underserved locations. Fiber needs can be observed along I-80, I-84 (north of Echo), SR-32, SR-224 (south of Park City), SR-248, SR-150, and the far east portion of SR-35 near Francis.

Date: 7/3/2023 12:48 PM

FCC Locations
- Underserved (25-100 M Down)
- Unserved (<25 M Down)

Grant Requests
- Capital Relief Grant
- IIJA Grant
- Existing Third Party Connections
- Fiber Needs

Structures
- Buildings
- Hub
- Hub-Mini
- Existing Fiber

Figure 22: UDOT Fiber Network with Fiber Needs and Grant Requests in Summit County

Horrocks.
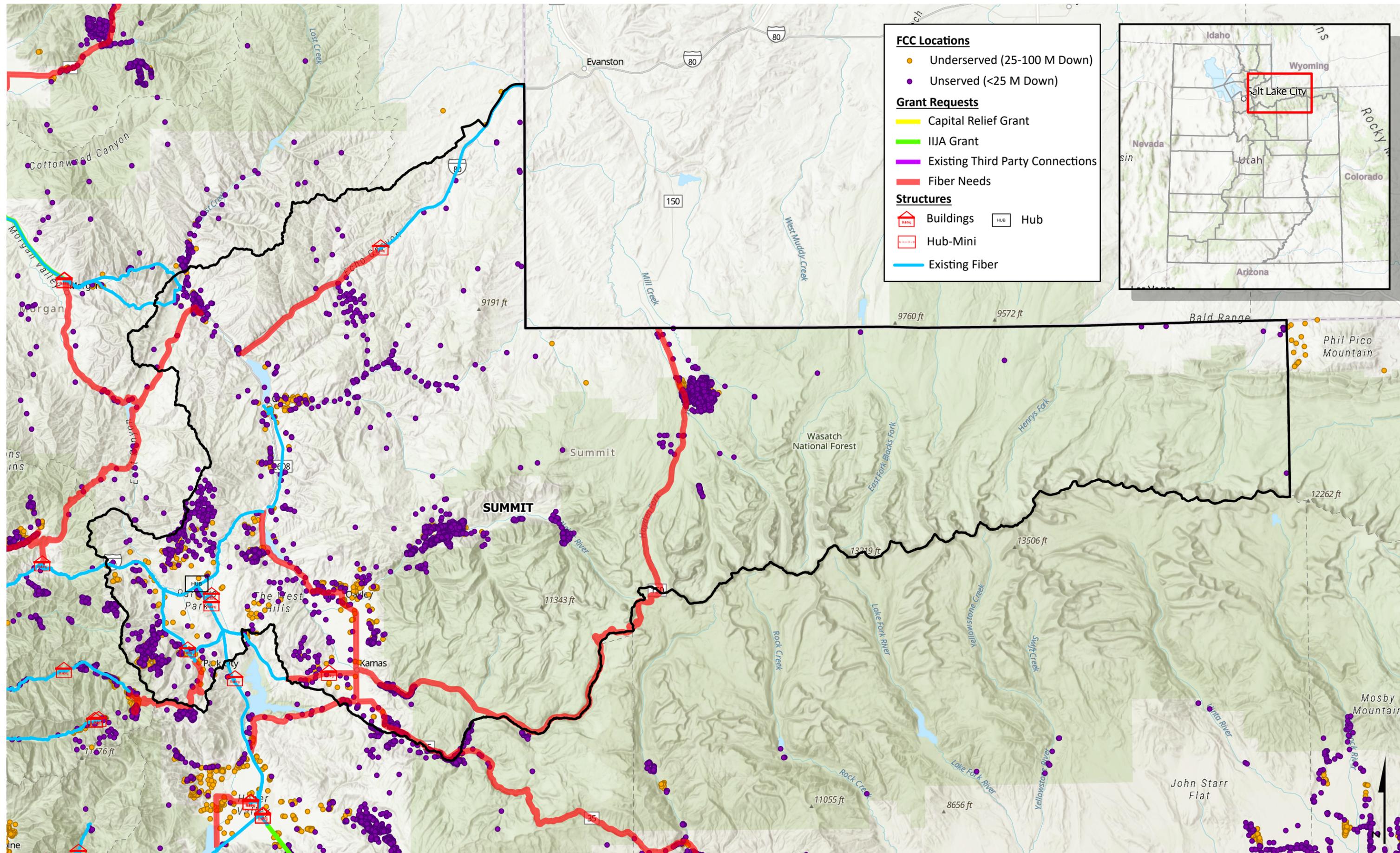
Projected Growth in Summit County

Summit County is renowned worldwide for its exceptional skiing and abundant outdoor recreation opportunities. The county attracts a multitude of individuals for various reasons, particularly in recent times with the rise of remote work culture during the COVID-19 pandemic. As communication becomes more accessible even in the remote areas of the county, an increasing number of people are choosing to relocate there. Consequently, Summit County has experienced significant growth and continues to observe a steady rise in its population.

As per the latest U.S. Census data, Summit County's estimated population in 2023 stands at 44,166, reflecting a growth rate of 1.38% over the past year. In terms of size, Summit County ranks as the tenth largest county in Utah.[28]

The Kem C. Gardner Policy Institute at the University of Utah predicts a 66% population increase for Utah over the next four decades, projecting a population of 5.5 million by 2060. In line with this trend, Summit County is expected to experience a population growth of 40.6%, reaching a total of 59,603 residents by 2060.[29] **Figure 23** shows the 10-year growth estimates from the U.S. Census, known as Traffic Analysis Zones (TAZ)[30].

According to the Summit County Economic Director, Jeff Jones, there are plans for new developments to be placed along US 189 / US 40 between Silver Summit Parkway and Kearns Blvd (UT-248).

---

[28] U.S. Census Bureau. (2021). https://data.census.gov/profile/Summit_County,_Utah

[29] Kem C. Gardner Policy Institute. (2022). Utah Long-Term Planning Projects: A Baseline Scenario of Population and Employment Change in Utah and its Counties. https://gardner.utah.edu/wp-content/uploads/LongTermProj-Jan2022.pdf?x71849&x71849

[30] Traffic Analysis Zones. July 2023.
https://www.arcgis.com/home/item.html?id=81adbf0ae9eb47a89a9e0cf569010e16

Projected 10 yr Population Growth

- -321. - 0
- 0.1 - 111
- 111.1 - 369
- 369.1 - 810
- 810.1 - 1645
- 1645.1 - 4203
- 4203.1 - 9308
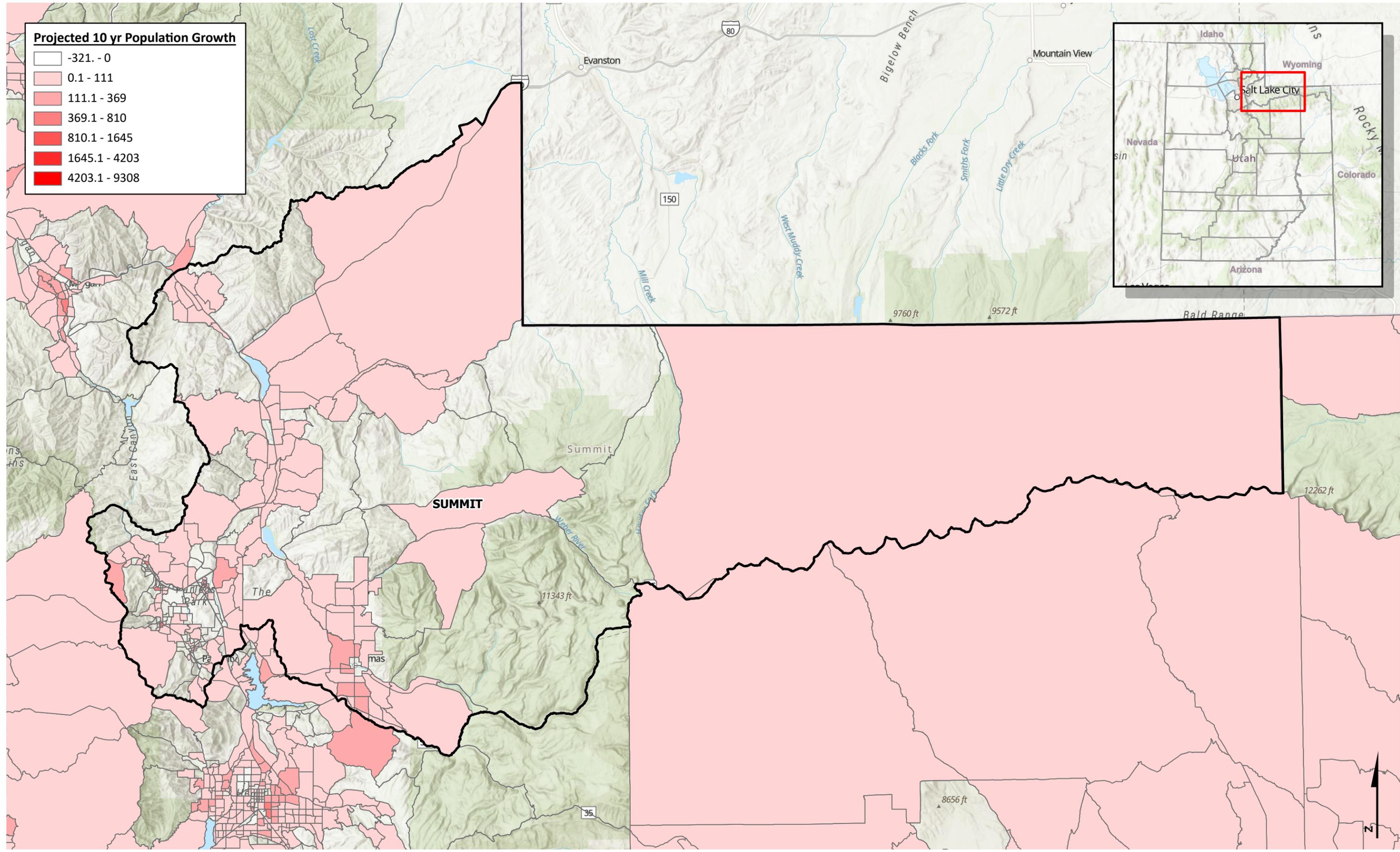
SUMMIT

Figure 23: Projected 10 Year Population Growth of Summit County

Horrocks.

0   7.5   15
Miles

The Summit County Broadband Survey asked respondents what company they use for internet service. There were 130 responses to this question with 25% of respondents indicating that Utah Broadband was their ISP. This data is detailed in **Figure 24** below.

Current Internet Service Providers (ISP)

■ All West ■ CenturyLink ■ Starlink or HughsNet ■ Utah Broadband ■ Wicked Fast ■ Other
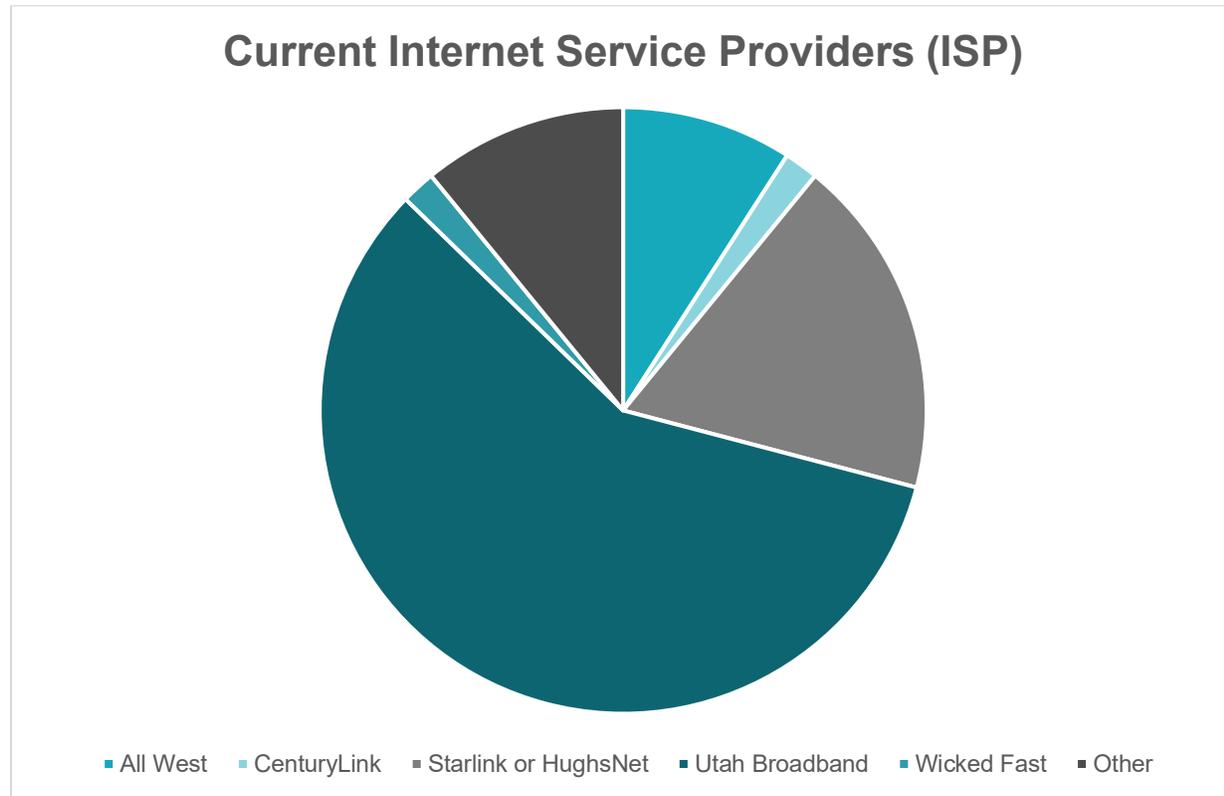
Figure 24. ISP's in the Summit County Area

Survey respondents who answered "No, I do not have internet connection at my residence" were directed to a follow-up question about why internet is not available for them. Of 17 respondents, eight people shared they did not have connectivity because internet is not available in their area. Seven respondents answered with other reasons including high monthly charges for good service (3 responses), homes have not yet been built (3 responses), and they have chosen not to have internet access in their summer home (1 response). More information is detailed in **Figure 25** below.

Why don't you have internet access at your residence?

Initial connection fees are too expensive	I have physical limitations	An internet connection isn't available in my area	Other
5.88%	5.88%	47.06%	41.18%
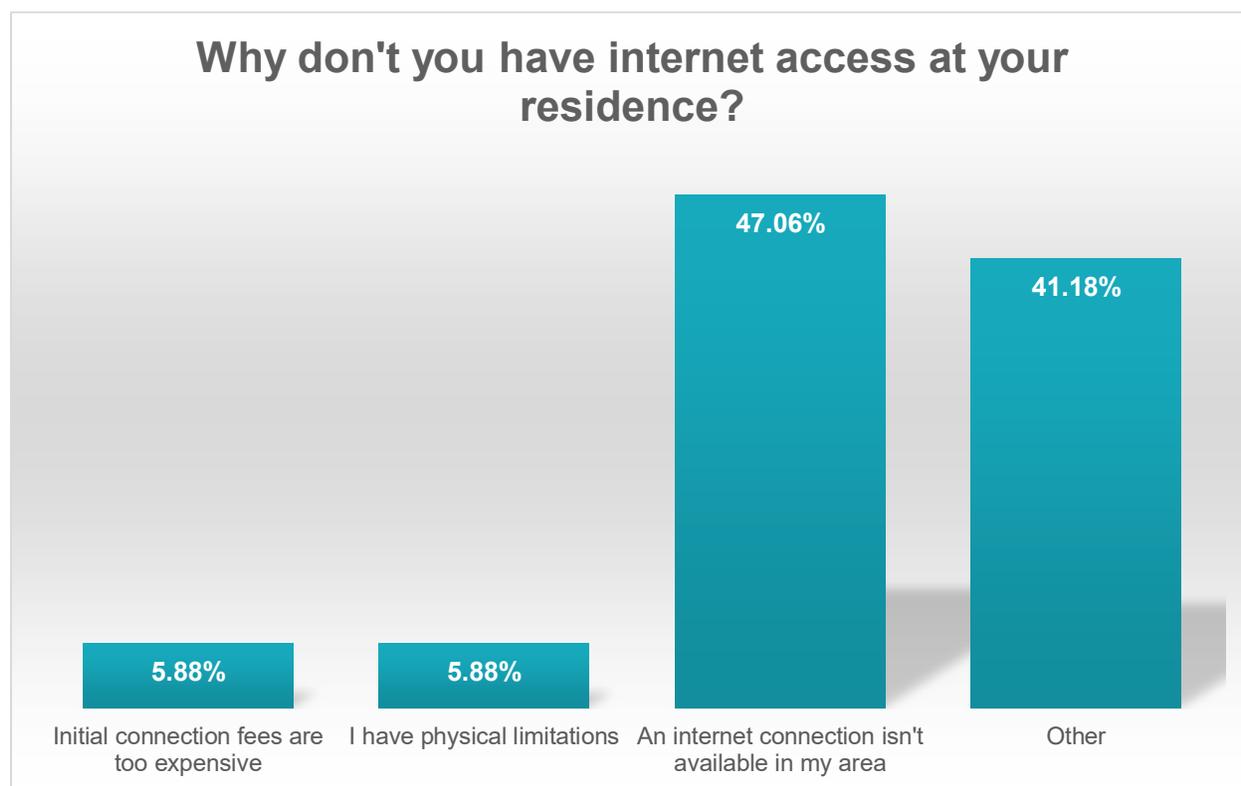
Figure 25. Common Reasons Residences Don't Have Internet

3.5.2 Digital Access

There are many barriers to digital access in Summit County which have made it difficult for residents to access high-speed broadband internet. These barriers include affordability, digital literacy, lack of devices, and language barriers. To address these needs, it is important to prioritize initiatives that improve digital literacy and provide affordable access to high-speed internet, particularly in underserved areas of Summit County.

Covered Populations

A covered population refers to a group of individuals who are eligible for a particular program or intervention based upon economic or socioeconomic factors. The goal of defining a covered population is to target resources and focus them on those who are most in need.

Covered Populations in Summit County include:[31]

- Veterans
  - 4.60%
- Individuals who are members of racial or ethnic minority groups
  - 16% (includes all individuals who are non-white)
- Individuals who live in low-income households
  - 5.3% (persons in poverty)
- Individuals with disabilities
  - 4.5% (under the age of 65)
- Aging individuals
  - 14.7% (65 and above)
- Incarcerated individuals, other than individuals who are incarcerated in a federal correctional facility
  - 2.11%
- Individuals who reside in rural areas
  - 53.6%

According to the U.S. Census Bureau (2021), the total population of Summit County is 42,156 people. In addition to margin of error estimates, categories are not mutually exclusive; as such, percentages do not total 100.

Internet Subscription Rates

Summit County recognizes the vital role that broadband internet plays in the community. Census data provides valuable insights into the adoption and accessibility of broadband services among the population. This data assists in identifying areas of opportunity and addresses existing gaps in broadband access. **Table 10** lists the internet subscription rates within Summit County.[32]

Table 10: Internet Subscription Rates

COUNTY	TOTAL HOUSEHOLDS	HOUSEHOLDS WITHOUT AN INTERNET SUBSCRIPTION	% WITHOUT AN INTERNET SUBSCRIPTION
Summit	13,475	866	6.4%

---

[31] U.S. Census Bureau. (2021). U.S. Census Bureau QuickFacts: Summit County, Utah. https://www.census.gov/quickfacts/fact/table/summitcountyutah,US/PST045222

[32] U.S. Census Bureau. (2021). American Community Survey 5-Year Estimates. S2801 - Types of Computers and Internet Subscriptions. https://data.census.gov/table?q=internet+utah&tid=ACSST5Y2021.S2801&moe=false

Survey Data

The Summit County broadband survey asked respondents what they use internet for at their household. There were 55 responses to this question, and most respondents indicated they were using the internet for entertainment, remote working/learning, shopping, and video conferencing. This data is detailed in **Figure 26** below.

Current Internet Use

- Gaming 6%
- Other 2%
- Remote working 17%
- Remote learning 17%
- Remote health care/telehealth 8%
- Video conferencing/chatting 15%
- Entertainment/streaming services 20%
- Shopping 15%
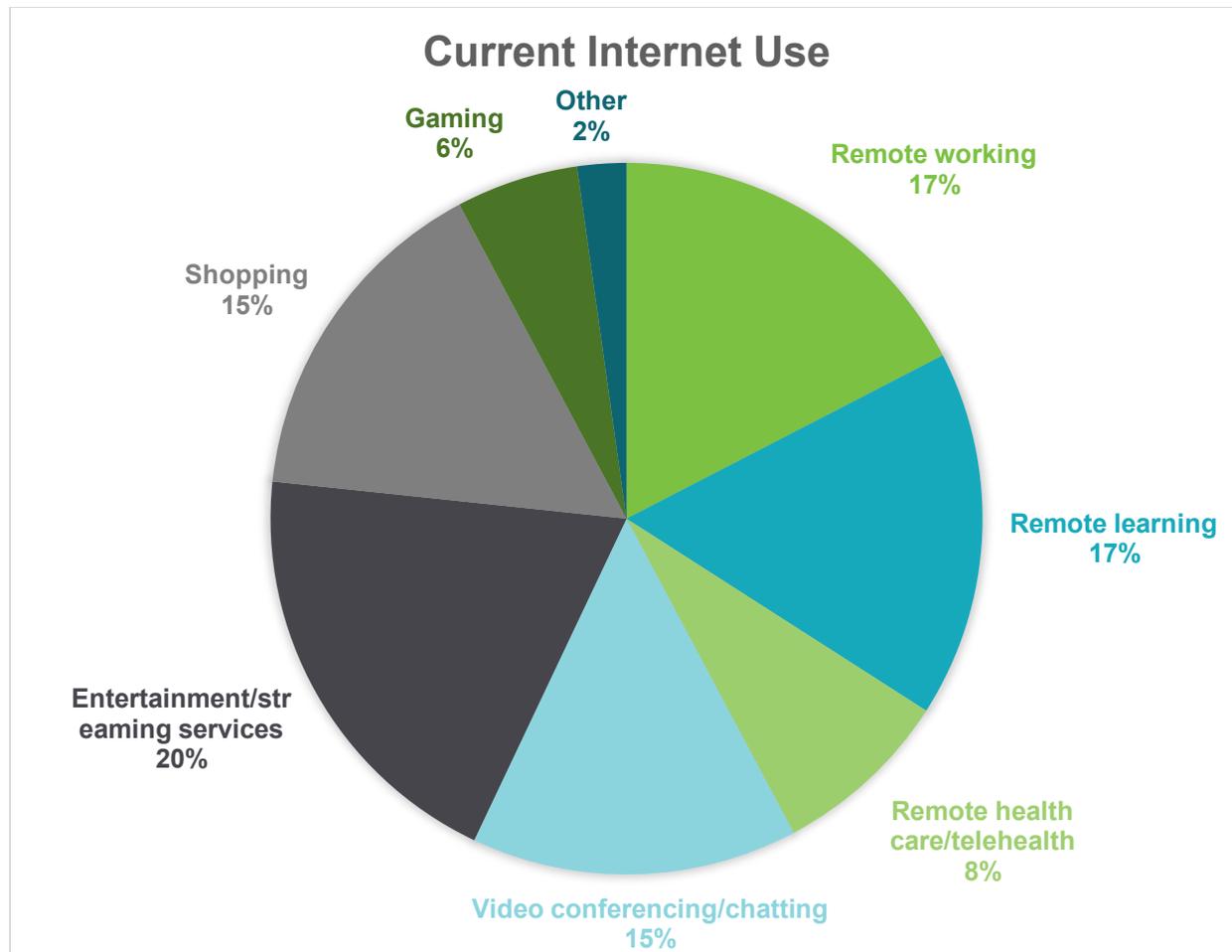
Figure 26. Household Internet Uses

3.5.3 Broadband Affordability

Affordability is a significant barrier to broadband access in Summit County. While access to high-speed internet has become increasingly important for education, health care, and business opportunities, many residents are unable to afford the cost of broadband services. To address these needs and gaps in broadband affordability, it is important to develop initiatives that provide affordable broadband options for low-income households, increase competition among broadband providers, and address the root causes of broadband affordability challenges.

Survey Data

The Summit County Broadband Survey included a question about what the monthly charge is for respondents' household internet service. There were 49 responses to this question, with nearly 30% of respondents indicating they pay between $70.01 to $80 for monthly internet service and more than 20% indicating they pay more than $100.01. This data is detailed in **Figure 27** below.
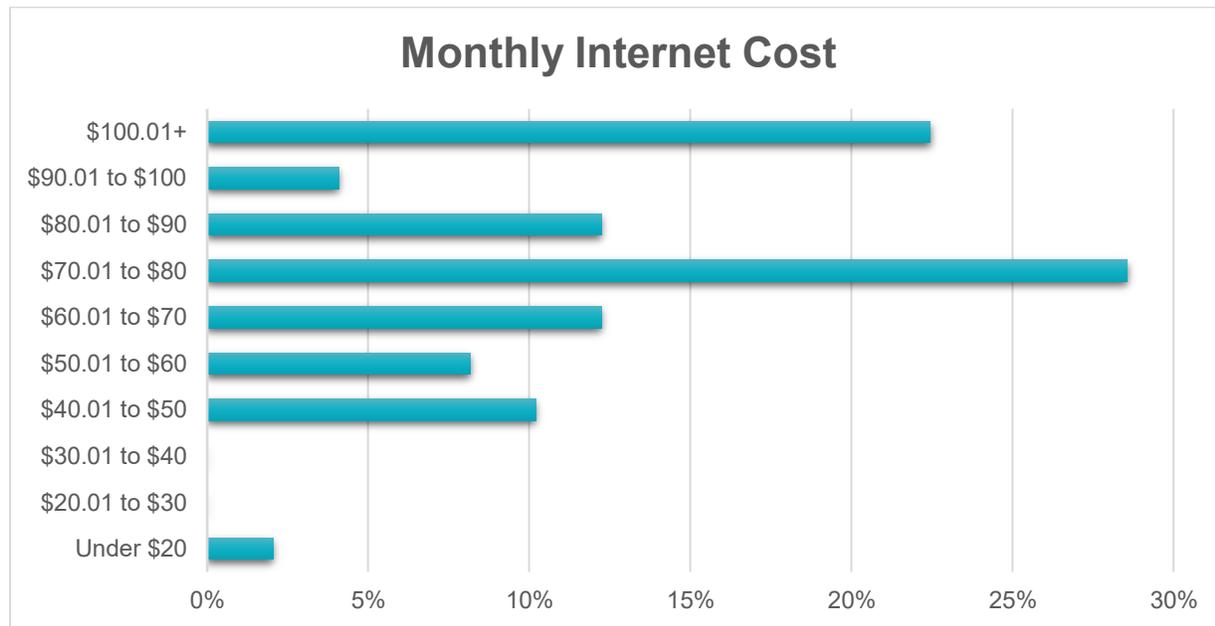
Figure 27. Monthly Household Internet Cost

Survey respondents were also asked about their awareness of the Affordable Connectivity Program (ACP). Of 71 responses to this question, 34 people shared they were not aware of the ACP. Information is detailed in **Figure 28**.

Affordable Connectivity Program Awareness

1.41%	25.35%	73.24%
Yes, I participate in the Program.	Yes, I am aware of the Program, but do not participate in it.	No, I am not aware.
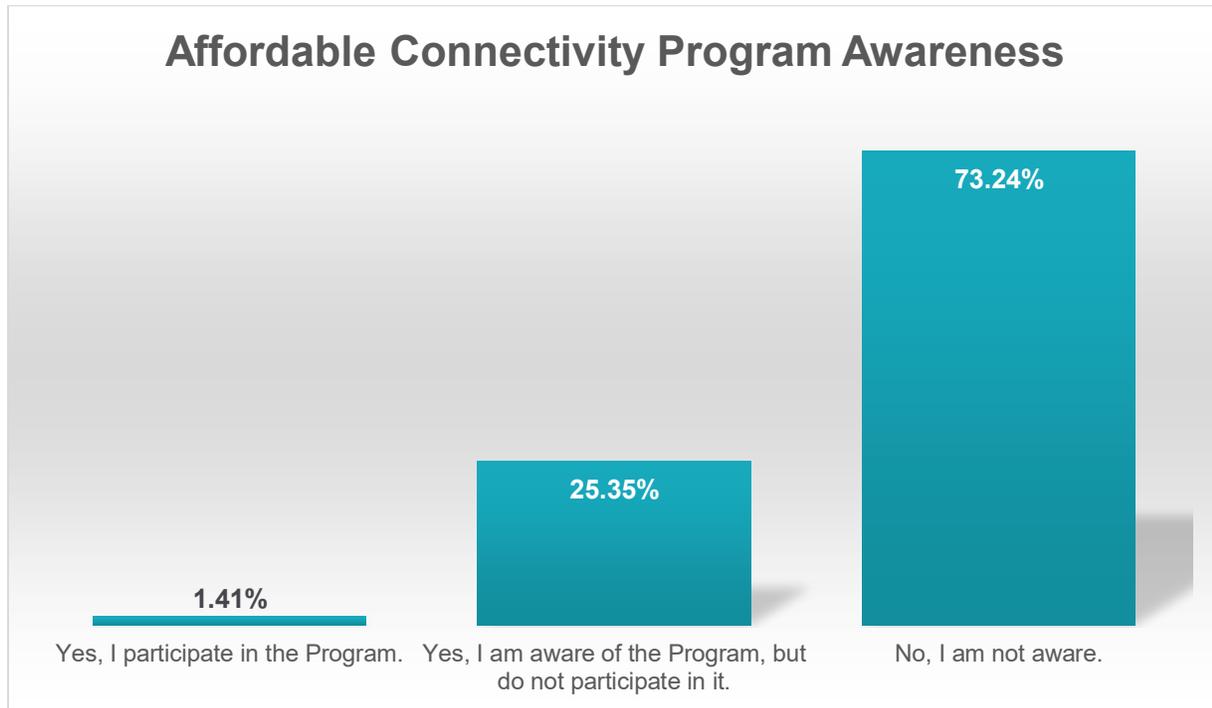
Figure 28. Affordable Connectivity Program Awareness

4 OBSTACLES OR BARRIERS

The project team has identified various obstacles related to broadband deployment and adoption within Summit County. Specific obstacles related to high-speed broadband internet availability, digital access, and affordability are identified below.

Physical Barriers
Summit County faces challenges in implementing internet infrastructure due to physical barriers within its geographic properties. One such obstacle is the presence of bedrock in the ground, which makes it difficult to install high-speed broadband internet lines. Topographical features such as hills, valleys, and mountains can prevent line-of-sight from fixed wireless connections when wired connection is not available. These physical barriers hinder the availability of high-speed broadband internet and digital access for all individuals. Addressing these challenges is essential to ensure equal participation in the digital age.

Financial Constraints to Deploying Broadband Internet Projects
Companies deploying broadband infrastructure may face financial limitations in funding broadband projects, particularly in remote areas. If the cost to install infrastructure is above $5,000 per subscriber, ISPs often do not want to invest in building without supplemental funding. The perceived return on investment in such areas may be considered less promising, posing a hurdle to the deployment of broadband services.

Regulatory and Policy Challenges
Navigating complex regulatory frameworks and obtaining necessary permits for infrastructure development can be a significant barrier. Summit County must address and overcome these challenges to facilitate the smooth deployment and adoption of broadband services.

Fear of Documentation and Privacy Concerns
Undocumented individuals may face concerns related to documentation and privacy when accessing broadband services. Fear of providing personal information online, including identification documents or address verification, can deter their participation in broadband adoption efforts. Ensuring the privacy and security of their data and addressing these concerns is vital to building trust and encouraging their engagement with broadband services.

Language Barriers
English proficiency can be a significant barrier for individuals who use English as a second language. Understanding and navigating broadband services, including signing up for plans, troubleshooting technical issues, or accessing online educational and health care resources, can be particularly challenging. Limited availability of broadband information and support in multiple languages adds to the difficulties faced by these individuals.

Permitting and Right-of-Way.
It is important to obtain various permits at the earliest stages of implementation. This includes coordinating with utilities; addressing canal and waterway crossings; securing railroad permits;

obtaining federal, state, and local permits in the right-of-way; and obtaining easements when broadband equipment encroaches land outside of the public right-of-way.

Table 11 shows many of the permitting entities within Summit County with longer lead times. **Figure 29** shows land ownership throughout the region, which informs permitting. In Summit County it can take up to 180 days to receive all relevant permits. Initiating the permitting application process promptly is essential to meet any of the funding opportunity's implementation deadlines. It is important to note that this list is not an exhaustive list and may evolve between the publication of this plan and the construction phase.

Table 11: Potential Permitting Entities within Summit County

LEVEL	APPROXIMATE TIMEFRAME FOR PERMITTING	ENTITY
Local	30 Days	Summit County Engineering
State	30 Days	State Parks and Recreation
State	30 Days	State Trust Lands
State	30 Days	State Wildlife Reserve
State	30 Days	UDOT
Federal	180 Days	Bureau of Indian Affairs
Federal	180 Days	Bureau of Land Management
Federal	180 Days	National Park Service
Federal	180 Days	U.S. Corps of Engineers
Federal	180 Days	U.S. Forest Service
Utility	45 Days	Electrical Company
Utility	45 Days	Gas Company
Utility	45 Days	Other Telecom
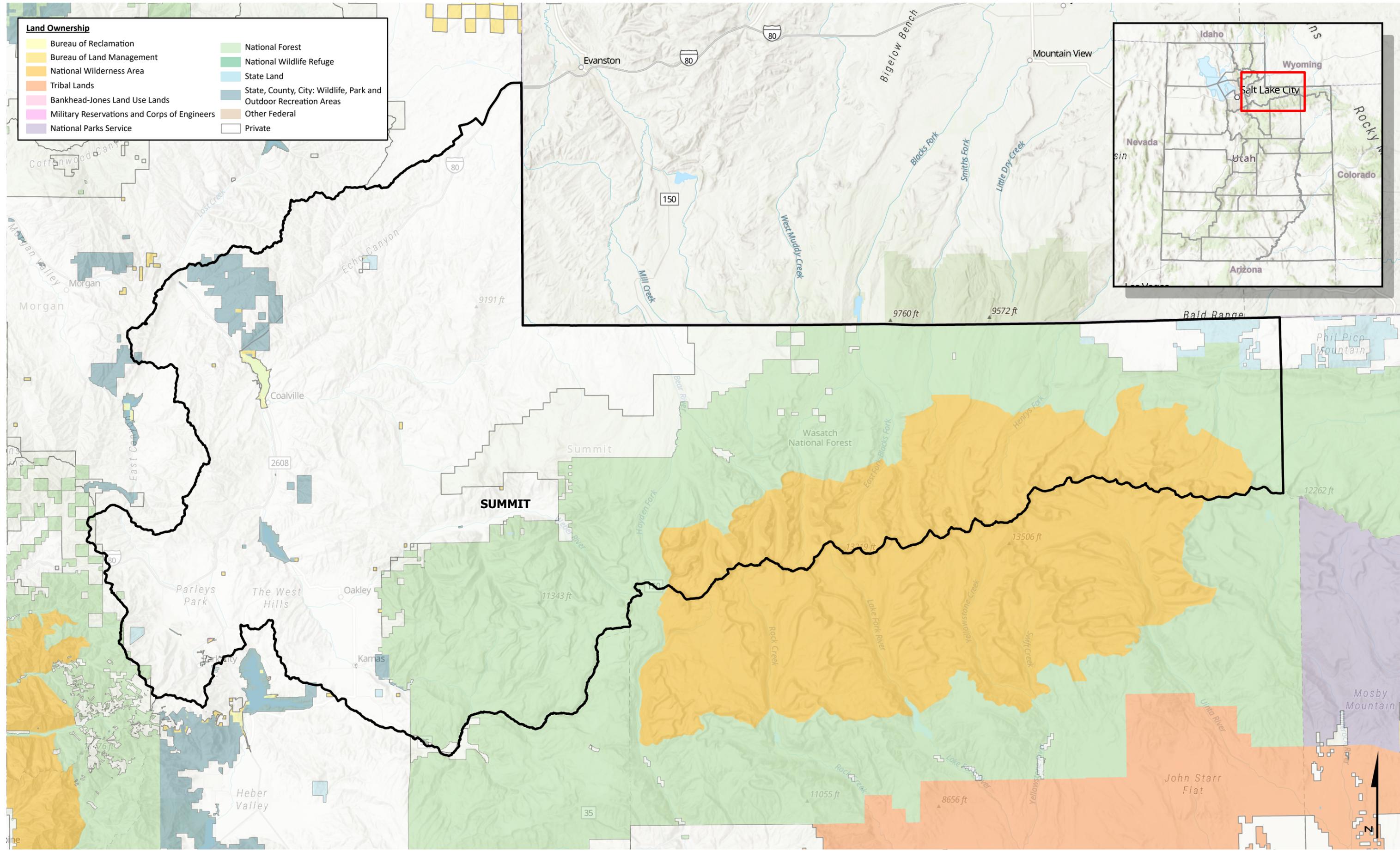
Figure 29: Land Ownership in Summit County

Land Ownership

- Bureau of Reclamation
- Bureau of Land Management
- National Wilderness Area
- Tribal Lands
- Bankhead-Jones Land Use Lands
- Military Reservations and Corps of Engineers
- National Parks Service
- National Forest
- National Wildlife Refuge
- State Land
- State, County, City: Wildlife, Park and Outdoor Recreation Areas
- Other Federal
- Private

Date: 6/30/2023 10:33 AM

Horrocks.

5 IMPLEMENTATION PLAN

The deployment of broadband infrastructure and expanded digital access throughout Summit County follows the priorities, actions, strategies, and stakeholder involvement set forth in the implementation plan. With an emphasis on addressing the identified needs and gaps in broadband availability, affordability, and adoption, the plan lays out a roadmap for achieving universal access. The plan includes a projected timetable and cost as well as planned activities, key strategies, and stakeholder engagement. This implementation plan ensures that access to the possibilities and resources that come with dependable broadband infrastructure and connection are available to residents of Summit County. The implementation plan seeks to build a more connected community with a strong commitment to stakeholder involvement and collaboration.

5.1 PRIORITIES

The priorities defined in **Table 12** act as the foundation for executing Summit County's broadband plan to ensure that the plan is in line with the community's vision for broadband infrastructure and digital access. Together with the stakeholders, the Summit County community can concentrate efforts on attaining the most crucial broadband goals and objectives.

Table 12. Priorities for Broadband Deployment and Digital Access

PRIORITY	RANKING	DESCRIPTION
Establish high-speed internet in all unserved areas.	High	Establish connection to areas that need a greater level of service.
Establish high-speed internet for all underserved areas.	High	Establish connection to areas that need a greater level of service.
Partner with ISPs to ensure they serve the entire county and towns and make fiber available to every home.	Medium	Three ISPs that have franchise agreements with the County, which allowing for right-of-way access.
Ensure that critical infrastructure is connected to fiber.	Medium	This infrastructure includes city buildings, schools, hospitals, and facilities for first responders' , etc.

5.2 KEY EXECUTION STRATEGIES

Drawing on the vision and goals in Section 1, this section explains the specific strategies that Summit County will undertake to realize those goals.

GOAL 1: Explore Partnership with ISPs

OBJECTIVE	STRATEGY

Understand existing infrastructure	Understand infrastructure challenges and barriers to success, map key focal points and overlapping systems
Establish ongoing collaboration & build trust	Schedule quarterly meetings. Understand ISPs evolving needs, act on opportunities to streamline development processes, and align interests transparently. Notify ISPs when roads will be under construction.
Review permitting and regulations, identify areas of improvement	Explore the risks and benefits of micro-trenching, gather perspectives from other agencies, identify limits and close policy gaps

GOAL 2: Review Broadband Permitting and Regulations

OBJECTIVE	STRATEGY
Look at broadband the same way as other utilities such as water	Outline policy language establishing the critical importance of broadband infrastructure to support modern society, from development to ongoing maintenance.
Install County-owned broadband infrastructure when County-roads are under construction. Allow local governments to install equipment such as cameras and traffic counters to assist with data collection	Coordinate building efforts across different departments of Summit County. Determine specifications for broadband equipment such as fiber, conduit, and pull boxes. Determine who will own and maintain broadband infrastructure. Determine agreement structure for allowing ISPs to utilize County-owned broadband infrastructure.

GOAL 3: Marketing Broadband Services and Programs

OBJECTIVE	STRATEGY
Broaden access by leveraging established and growing business demand	Understand and utilize growing digital expectation by business community and need for elevated communication redundancy to trailblaze and improve pathways. Give platform for ISPs to market premium products through Chamber of commerce
Ensure that residents know the internet coverage options available to them.	Provide information on the County website that helps residents identify what ISP providers are available in their area. Create new surveys to continue to identify what options are available to County residents.

5.3 PLANNED ACTIVITIES

The purpose of this section is to outline activities that will support universal service, identify key players responsible for implementing these activities, specify funding sources, and highlight the expected outcomes in terms of broadband availability, digital access, and broadband affordability. Universal service is the principle that all Americans should have access to both telecommunications and high-speed internet at just, reasonable, and affordable rates.

Table 13. Broadband Availability

PLANNED ACTIVITY	KEY PLAYERS	FUNDING SOURCES	TIMELINE	EXPECTED OUTCOMES / $$
Review permitting and regulations Consider adding language for new developments to add HDPE conduit, pull boxes, wireless for fiber during new builds, and installation methods such as micro trenching and aerial	Community Development Public Works Engineering IT Economic Development	County Government	Jan 2025	Some new developer resistance to additional cost. Improved consumer/business access. Expanded access nodes for adjacent properties.
Identify standards used by ISPs (Comcast & Allwest) and UDOT	Broadband taskforce	N/A	September 2023	Adoption of shared standards for new development; lower cost & faster deployment of fiber.
Dig-once, install conduit with road construction	Community Development Public Works Engineering	Grant Funding, General Fund, County Government, Private Contractors, City Governments, Special Service District, Trade agreements	July 2024	Common map view for all projects, present and future. Deeper collaboration between stakeholders, regional policy changes.

Installing City/County owned fiber for smart city applications such as ITS cameras, buildings, cameras at recreation areas, SCADA systems, wildfires	Regional IT, Engineering, and Transit groups	City/County stakeholders	Ongoing	Communication platform for automation, traffic management, smart city applications. County readiness for innovation, and Olympics. Crime information, where people spend money, smart city applications
Map assets of any conduit and broadband resources built	Engineering Private Companies GIS Department		Ongoing	Broader intelligence for better decisioning and investment
Map roadway improvement schedule	Engineering Planning	City/County Developers	December 2024	In conjunction with "dig-once", provide baseline for higher efficiencies
Create email list to inform utility/broadband companies when roads will be under construction	County Engineer City Engineer	City/County	November 2023	Improved efficiency and road stability, lower PW expenditures and resource demand
Get buy-in from other county officials on conduit	County Council, County Manager, Public Works Director & County Engineer	County	March 2024	Proactive governance to maximize resources and citizen opportunity
Work with ISPs to identify 5-10 year build out plans	City/County, ISP partners	City/County Providers	August 2024	Allow better planning for providers
Identify areas with year-round trash pick-up as areas with year-round residents	Summit County GIS and Republic Services	Summit County	December 2023	Identify potential market for providers
Tollgate HOA exploring installing conduit in their road improvements	Tollgate HOA All West	HOA, All West, County	December 2024	Potential for grant and increase availability

Encourage broadband supportive language to community master plans	Planning Departments	City/County	December 2024	Reduce costs of building broadband in the future
Identify additional funding sources (such as the USDA Rural Broadband Fund)	City/County Economic Development, IT, Engineering, HOAs, Providers		Ongoing	Bridge gap for expensive builds

Table 14. Digital Access

PLANNED ACTIVITY	KEY PLAYERS	FUNDING SOURCES	TIMELINE	EXPECTED OUTCOMES
Classes: internet safety, how-to to use internet, cybersecurity	Senior Center Resources on County Website	County	Ongoing	Educate public and create demand for providers
Develop a strategy for community Wi-Fi hotspots	School Districts, City/County Libraries, HOAs, Tranist	Grants, Local Government budgets		Provide access

Table 15. Broadband Affordability

PLANNED ACTIVITY	KEY PLAYERS	FUNDING SOURCES	TIMELINE	EXPECTED OUTCOMES
Raise awareness of programs such as ACP and Lifeline	Comcast, City/County, School Districts, Community Organizations			Seek 3% increase in regional internet adoption, adding leverage for ISP demand.

5.4 ONGOING STAKEHOLDER ENGAGEMENT

Continued stakeholder engagement is vital to the success of Summit County's broadband deployment strategies. Summit County will continue to build strong relationships with community partners and key stakeholders as this plan is implemented. The success of getting all residents connected to reliable high-speed internet will be dependent on the ability to continually coordinate efforts with local community partners.

Key initiatives to support continued engagement include:

- **Create a Broadband Working Group:** This working group should be diverse and represent a variety of roles. Important representation in this group includes municipal officials, educators, community influencers, business leaders, technical experts, and organizations that represent the covered populations. A broadband working group will ensure that there is county-wide support for resulting broadband projects.

- **Meet with Internet Service Providers:** Building a relationship with an internet service provider (ISP) can be beneficial for both Summit County and the ISP. By working together, Summit County can help to ensure that their residents have access to high-quality, affordable broadband internet.

  The following strategies promote the establishment of a collaborative partnership with local ISPs:

  - IMPORTANT: Only meet with one ISP company at a time. Ask them to share their future build-out plans for Summit County. They are more willing to share information when their competition is not in the room.

  - Streamline permitting and processes: Review and streamline the permitting and approval processes for ISPs to facilitate efficient infrastructure deployment.

  - Create incentives: Offer incentives such as tax breaks or expedited permit processing for ISPs that invest in broadband infrastructure.

  - Foster public-private partnerships: Explore opportunities for public-private partnerships with ISPs to leverage resources, expertise, and funding.

  - Collaborate on funding opportunities: Work together with ISPs to identify and pursue available funding sources, grants, or subsidies for broadband projects.

  - Share infrastructure resources: Explore possibilities for sharing existing infrastructure, such as utility poles or conduit, to reduce costs and deployment timelines.

  - Regular communication and updates: Establish regular communication channels to keep ISPs informed about city initiatives, policies, and upcoming projects related to broadband infrastructure.

- **Continue Stakeholder Communication:** Stakeholder communication that is frequent and transparent helps build and maintain community support. Summit County should aim to educate, garner support, and celebrate accomplishments through stakeholder communication. Tactics for communicating with stakeholders should be varied and represent traditional and virtual engagement. Specific tactics to continue stakeholder communication include:

  - Meet and coordinate regularly with local ISPs to understand and encourage expansion priorities and track progress of ongoing projects.

- o Engage the public, community partners, and businesses in Summit County to perform their own Internet Speed Tests and FCC Map Challenges.

- o Highlight the concerted and ongoing effort by the Summit County Commission Broadband Subcommittee to expand affordable and reliable high-speed broadband.

- **Identify and Update Community Priorities**: Each community within Summit County has unique needs, resources, technologies, financing, and partnership options. Reevaluation of priorities will be required to keep community members engaged, achieve a local vision of connectivity, and increase broadband utilization. Updates to the Local Broadband Plan may become necessary through the process of planning, implementing, and evaluating success.

  - o Continue gathering input and perspectives through a year-round, publicly available local broadband survey. As projects and initiatives are implemented, the survey may be adapted to measure the success of that programming.

- **Understand Regional Context:** By establishing and strengthening working relationships with a variety of stakeholders, Summit County may identify additional opportunities, barriers, or initiatives. Continued coordination with key stakeholders will allow Summit County to clearly communicate the benefits of connectivity, empower local entities to advocate for broadband initiatives and build enthusiasm and support for projects. This may be accomplished through:

  - o Continued engagement with local businesses, nonprofits, civic organizations, and the public in Summit County to understand priorities, opportunities, and offer a coordinated approach to project implementation.

  - o Coordination with the school district and library within Summit County to educate residents and students about benefits of connectivity, and better understand their needs.

- **Advertise and Continue to Increase Enrollment in the Affordable Connectivity Program.** The ACP is an FCC benefit program that helps ensure that households can afford broadband. The benefit provides a discount of up to $30 per month toward internet service for eligible households.

  - o Expand awareness of ACP benefits to rural community members and households with school aged children.

  - o Identify ACP champions and explore options within organizations to include ACP information and enrollment assistance to those in need.

5.5 ESTIMATED TIMELINE FOR UNIVERSAL SERVICE

Universal service is the goal of providing broadband service to every resident of Summit County. Achieving this goal depends upon receiving sufficient funding for broadband infrastructure projects, the timeline by which ISPs build at, and the timeline by which the BEAD program is administered by. Due to this timeline being determinant on external elements, Summit County intends to communicate closely with all ISPs building in the area and follow the state timeline as listed in the statewide Digital Connectivity Plan. The state aims to provide universal broadband service for all Utahns by December 31, 2028. The timeline more specific to items relevant to summit County officials are listed in Section 5.3 of this plan.

Individual Broadband Project Minimum Timeline

It will be up to the ISPs to carry out the design and construction of broadband infrastructure projects within Summit County, however, a sample broadband project timeline is listed here for reference. An estimated timeline concerning activities necessary to implement broadband services include the following:

Table 16. Broadband Infrastructure Project Design and Build Phase Estimated Timeline for ISPs

STEP	DESCRIPTION	TIMELINE
High-Level Design (HLD)	Create a preliminary FTTP (Fiber to the Premise) design before fielding and jurisdictional research	30-60 Days
Low-Level Design (LLD)	Create a FTTP design that is constructable using fielding data and jurisdictional research	60-90 Days
Permitting	Get approval from the appropriate jurisdictions for construction	Up to 180 Days
Construction	Build a functioning FTTP network	90-180 Days
Project Audit	Review construction documents, conduct AARs, create audit documentation	Up to 90 Days

Note that some of these phases may overlap, while others must be completed sequentially. Unforeseen circumstances or delays might impact the overall timeline.

Minimum duration: 30 days (HLD) + 60 days (fielding and LLD) + 180 days (permitting) + 90 days (construction) = 360 days (about 1 year) for full turn-key implementation.

If some phases can be completed concurrently, the duration could be shortened. For example, construction can be started on certain segments of the broadband build that have approved permits much sooner than the predicted 180 days, shortening the original estimate for the overall project duration.

It is crucial to account for potential delays and other factors that may affect the project schedule. Regular communication with relevant stakeholders and close monitoring of progress can help mitigate risks and keep the project on track.

5.6 ESTIMATED COST FOR UNIVERSAL SERVICE

An estimated cost for the project is calculated using GIS analysis and incorporating data from various sources such as the State of Utah's roads layer and address points as well as FCC data on served, underserved, and unserved points. The length attribute from the roads layer is used to determine the distance, considering several key parameters including aerial percentage, aerial cost, and underground cost (can vary based on the location geology).

The estimated cost for materials, design, and installation can vary. Costs for aerial fiber hung on power poles can range up to $10/FT. Underground fiber costs range from $30/FT when installing in easy-to-bore areas, up to $35-$60/FT when boring in rocky or hilly areas.

The formula for calculating the total cost of construction is as follows:

Total Cost of Construction = ((Road Length * Aerial Cost * Aerial Percentage) + (Road Length * Underground Cost * (1 – Aerial Percentage)))

For this estimate, the following numbers were used:

Aerial Cost: $10/FT

Underground Cost: $30/FT

Aerial Percentage: See **Table 17** below

To obtain the cost per passing, the total cost of construction is divided by the count of address points (in some instances FCC points) within a defined geographic area, as determined by a polygon selection. This methodology ensures that the estimated cost is derived from reliable data sources and considers the specific characteristics of the project area, providing an accurate and comprehensive financial projection for the implementation of universal services.

Table 17 provides in detail the cities in Summit County and their respective costs. **Figure 30** shows each of Summit County's underserved and unserved polygon areas.

Table 17: Estimated Cost for Broadband Deployment in Summit County

AREA	TOTAL LENGTH (MILES)	% AERIAL	TOTAL COST (DOLLARS)	COST PER PASSING (DOLLARS)	# OF LOCATIONS	UNDER-SERVED	UN-SERVED	COST FOR JUST UN-SERVED & UNDER-SERVED
Coalville	336.57	99%	18,659,617.72	7,460.86	2,501	188	400	$4,386,985.68
Echo	13.66	99%	757,216.21	22,271.06	34	20	2	$489,963.32
Henefer	72.17	99%	4,001,329.49	8,284.33	483	49	42	$753,874.03
Kamas	267.24	99%	14,815,895.07	4,614.11	3,211	535	865	$6,459,754.00
Oakley	26.55	99%	1,471,779.09	2,404.87	612	25	42	$161,126.29
Park City	439.42	99%	46,402,294.87	2,318.49	20,014	208	824	$2,392,681.68
Peoa	39.89	99%	2,148,353.52	7,307.32	294	13	85	$716,117.36
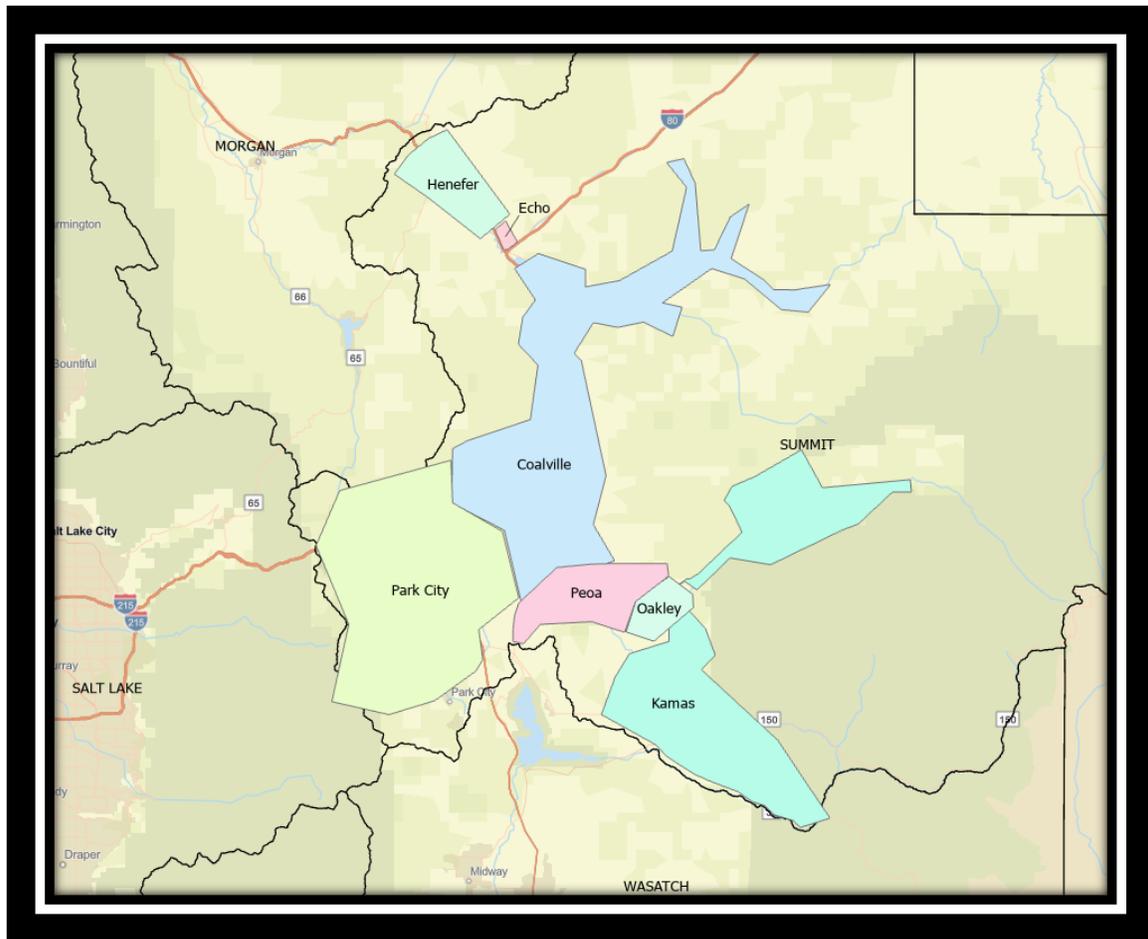
Figure 30. Summit County Identified Polygon Areas

5.7 ALIGNMENT

The Summit County Local Broadband Plan is closely aligned with the community's local broadband priorities, which include establishing high-speed internet in all unserved areas and underserved areas and further addressing the need for more reliable infrastructure and connectivity. By partnering with ISPs, Summit County aims to ensure comprehensive coverage throughout the entire county and bring fiber-to-the-home connectivity.

The Local Broadband Plan emphasizes the importance of connecting critical infrastructure to fiber, enhancing the reliability and resilience of essential services. By prioritizing the deployment of fiber optic networks, Summit County seeks to strengthen the broadband infrastructure and support future growth and technological advancements.

Summit County aims to build upon existing initiatives and leverage partnerships to maximize available funding and resources. It seeks to collaborate with ISPs to close the digital divide and ensure equitable access to high-speed internet for all residents, businesses, and institutions in the community.

In alignment with these priorities, the Local Broadband Plan emphasizes the need for comprehensive coverage and connectivity, targeting unserved and underserved areas. It also recognizes the importance of reliable infrastructure and connectivity, addressing the specific needs of this area. By coordinating efforts and avoiding duplication, the plan ensures a strategic allocation of resources to meet these priorities effectively.

Through the alignment of priorities and the strategic execution of the Local Broadband Plan, Summit County is committed to establishing high-speed internet in all unserved areas, bringing connectivity to underserved areas, providing reliable infrastructure, and partnering with ISPs to serve the entire county and ensuring critical infrastructure is connected to fiber. This comprehensive approach will drive equitable access, economic growth, and enhanced quality of life for all residents of Summit County.

5.8 TECHNICAL ASSISTANCE

The successful implementation of the local broadband plan in Summit County requires support and technical assistance from the Utah Broadband Center. These items include:

- Grant support

- Verifying that ISPs are building what they promised with the grant money they receive

- Answering questions such as:

    o Are lien wavers involved? Have they been signed off? (County doesn't want to be sued)

6 CONCLUSION

In conclusion, the Local Broadband Plan outlined above serves as a comprehensive road map for maximizing the potential of broadband technology to drive economic growth, enhance connectivity, and foster innovation. By expanding infrastructure, affordability, reliability, and accessibility, the Plan aims to connect households and create a more prosperous Summit County. Through collaboration among government entities, private sector partners, agencies, and community stakeholders, this Plan establishes a solid foundation for harnessing the transformative power of high-speed internet to empower individuals, businesses, and communities alike.

Priorities
The top priorities of this Plan include establishing high-speed internet connection in all unserved areas throughout the community. Once every unserved area is covered, then the next priority will be to get connection to underserved areas. The goal is to make sure all Summit County residents have equal access and opportunity to connect to the digital world. Other priorities in this plan include partnering with ISPs to ensure service to the entire county and ensure all homes and critical infrastructure are connected to fiber. These priorities were informed by stakeholder input and technical analysis. As the Plan is implemented, other strategic focus areas may arise, and this plan may be updated to meet that need.

Expected Outcomes
Successful implementation of this Plan will depend on the ability of Summit County, ISPs, local community organizations, and residents to come together to promote and establish broadband expansion throughout the entire county.

Broadband accessibility is becoming more of a necessary utility rather than a nonessential luxury. Having the infrastructure, tools, and education to access high-speed internet is the modern-day societal equalizer. Not only do broadband services allow residents access to essential services like online banking, telehealth, and employment, but they can connect communities, provide entertainment, and provide endless resources and information. Many Summit County businesses, non-profits and social resources viability depend on reliable and high-speed connectivity.

In the Summit County Broadband Survey, residents were asked to share how access to high-speed internet would improve their quality of life. Many residents responded that the ability to work from home is critical to providing for their families. Numerous respondents stated that they can work from home, but the current lack of reliable connectivity prevents that opportunity. Respondents overwhelmingly stated the top priorities for this plan should be affordable and reliable high-speed internet for every household and business in Summit County. This Plan establishes a path forward to accomplish the Summit County vision: broadband infrastructure that is accessible, modern, and scalable throughout the county, providing the rural community with equitable opportunities to participate in the current digital economy to promote social and economic growth.

Appendix A: Survey Data

The following pages include the individual responses from surveys gathered as part of the Summit County local broadband planning outreach. Survey responses gathered as part of the Connecting Utah statewide survey in the Summit County area are also included as part of this appendix.

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/1/2023 13:37	Own	Yes, I have an internet connection at my residence.	Other: DSL	10 Mbps or less	All West	60	Yes	Remote working Remote learning|Entertainment/streaming services|Shopping|Other: monitoring power and garage door				No, and I am not interested.	White	English	$100,000-$149,999	21-30|51-60	Yes	Adult education or technical training	Master's degree or doctorate
5/4/2023 11:56	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	$90	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	21-30|31-40	No		Bachelor's degree
5/4/2023 12:25	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	79	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.			$100,000-$149,999	31-40	No		Bachelor's degree
5/4/2023 12:28	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Starlink or HughsNet	130	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	0-10|31-40	Yes	Elementary school (kindergarten to 6th grade)	Career or technical education certificate
5/4/2023 13:51	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	70	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	Other: Russian	$150,000 or more	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/4/2023 14:44	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: This is a summer home area. I don't need internet. Nor do I want to pay for other's access.	0		Yes, I am aware of the Program, but do not participate in it or am not eligible.	Multiple ethnicity / Other	English	$75,000-$99,999	51-60	No	Adult education or technical training	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/4/2023 14:48	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	$120	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$150,000 or more	11-20|41-50	Yes	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/4/2023 16:08	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	120	No	Remote working Remote learning|Entertainment/streaming services|Shopping|Gaming|Other: Use to conec5 to system I maintain				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	61-70	No		Bachelor's degree
5/4/2023 16:59	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	All West	$71	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	0-10|31-40	No		Master's degree or doctorate
5/4/2023 18:44	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Other:	unknown	Yes	Entertainment/streaming services|Shopping				No, and I am not interested.	Multiple ethnicity / Other	English	$50,000-$74,999	61-70	No	Adult education or technical training	Some college but no degree
5/4/2023 20:14	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	80	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$75,000-$99,999	51-60	No		Master's degree or doctorate
5/4/2023 20:31	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	$90	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$50,000-$74,999	61-70	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/5/2023 8:15	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$100 to $125 per month	We are part time residents at this location but spend a full six months of the year in this home. One of us is a writer and does extensive research via the internet for books and articles. Using a hot spot is not condusive to extensive research activities. We would also like to stream various entertainment and other internet based activities but are unable to do so effectivly.	Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	61-70|71 or older	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/5/2023 9:46	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband		No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	41-50	No		Bachelor's degree
5/5/2023 10:45	Own	Yes, I have an internet connection at my residence.	Wireless|Satellite or mobile	Up to 100 Mbps	Utah Broadband	$50	No	Remote working Remote learning|Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	61-70	No	Adult education or technical training	Master's degree or doctorate
5/5/2023 12:23	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	All West	$115	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	51-60|71 or older	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/6/2023 11:21	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Other: Tmobile	$45.00	No	Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/7/2023 0:31	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	79.95	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/7/2023 2:02	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 1 Gigabit	Starlink or HughsNet	120$	Yes	Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	21-30|41-50	No	High school (9th grade to 12th grade) College or university	High school diploma or equivalent (GED)
5/7/2023 6:28	Own	Yes, I have an internet connection at my residence.	Wireless|Other: Broadband - from Utah Broadband, have the fastest package they offer	I do not know (you can test your internet speed at speedtest.utah.gov)	Utah Broadband	$89.95	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	61-70	No	Adult education or technical training	Master's degree or doctorate
5/7/2023 6:36	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$75	Allow to conduct work	No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	61-70	No		Bachelor's degree
5/7/2023 6:41	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Utah Broadband	80	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				No, and I am not interested.	White	English	$150,000 or more	0-10|11-20|31-40	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/7/2023 6:42	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	50	No	Remote working Remote learning|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$75,000-$99,999	21-30|41-50|51-60	No		

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/7/2023 6:42	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	120	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	51-60	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/7/2023 6:47	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	90	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	0-10|31-40	No		Master's degree or doctorate
5/7/2023 7:11	Own	Yes, I have an internet connection at my residence.	Wireless|Other: Verizon hot spot	10 Mbps or less	Other: Verizon	$45 for very limited data	No	Remote working Remote learning|Other: security system				No, and I am not interested.		English	$100,000-$149,999	61-70	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/7/2023 7:40	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: Broadband tower not in line of site and can't afford satellite	50$	Work school everything	No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	0-10|11-20|41-50	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/7/2023 7:42	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Utah Broadband	65	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	61-70	No		Master's degree or doctorate
5/7/2023 7:48	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Other: Straight talk wireless hot spot	$15.00	No	Other: Security cameras.				No, and I am not interested.	White	English	$150,000 or more		No		Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/7/2023 7:55	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Wicked Fast	100	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.		English	$150,000 or more	41-50|61-70	Yes		Master's degree or doctorate
5/7/2023 8:19	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Utah Broadband	80	No	Entertainment/streaming services				No, and I am not interested.	Multiple ethnicity / Other	English	$150,000 or more	11-20|51-60	Yes	Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	High school diploma or equivalent (GED)
5/7/2023 8:50	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: Monthly charges for ""good"" internet service are too expensive and the internet service that is less expensive are not good enough for what I need.	$50	I would be able to work at our home with high-speed internet service as I do in the valley. I would be able to work and enjoy the mountain with high-speed internet which would be more relaxing which is the reason to get to the mountain.	No, and I am not interested.	White	English	$100,000-$149,999	61-70	No		Master's degree or doctorate
5/7/2023 8:56	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	$70	No	Remote working Remote learning|Entertainment/streaming services				No, and I am not interested.	Multiple ethnicity / Other	English	$100,000-$149,999	31-40	No	Adult education or technical training	Master's degree or doctorate
5/7/2023 9:28	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Utah Broadband	69.95	No	Remote working Remote learning|Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	71 or older	No		Master's degree or doctorate
5/7/2023 10:23	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$60-80 Depending on speed	It is a necessity of life.	No, and I am not interested.	White	English	$50,000-$74,999	61-70	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/7/2023 10:50		No, I don't have an internet connection at my residence (if selected, skip to question 10).																	

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/7/2023 11:06	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: We currently do not have our home built yet, and will be doing so this year.	$80	Having a high-speed internet connection on our rural property would be a great utility service for those wishing to work remotely and also have the modern connection to streaming services, home security and other amenities requiring an internet connection.||As more young people move to places like Tollgate Canyon it will become increasingly important to have that stable internet connection to the outside world despite our location in a	Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	31-40|41-50	No		Master's degree or doctorate
5/7/2023 11:17	Own	Yes, I have an internet connection at my residence.	Other: Utah broadband line of sight	Up to 100 Mbps	Utah Broadband	$89	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	41-50|51-60	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/7/2023 11:35	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 1 Gigabit	Other: I tried HughsNet and it was the slowest I have ever seen.	$110	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	51-60	No	High school (9th grade to 12th grade) College or university	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/7/2023 11:35	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Initial connection fees are too expensive	$25	Stay connected	Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$25,000-$49,999	61-70	No		Bachelor's degree
5/7/2023 12:48	Own	Yes, I have an internet connection at my residence.	Satellite or mobile		Utah Broadband	$59.99	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	41-50	No		Bachelor's degree
5/7/2023 13:09	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	50$		No, and I am not interested.	White	English	$100,000-$149,999	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
5/7/2023 13:27	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Starlink or HughsNet	109	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.		English	$150,000 or more	31-40|41-50	No		Some college but no degree
5/7/2023 13:27	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: currently building a house	150	You can't live with internet! Business, information access!	Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
5/7/2023 13:33	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Utah Broadband	$80.00	No	Remote working Remote learning|Remote health care/telehealth|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Multiple ethnicity / Other	English	$150,000 or more	71 or older	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/7/2023 13:44	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	Looks like internet acces in the city runs from 25 to 60.	. If we had a reliable high speed connection my husband could work remotely from the cabin	Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	61-70	No		Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/7/2023 14:27	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Utah Broadband	Unknown	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.							
5/7/2023 14:59	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	$79	No	Video conferencing/chatting|Entertainment/streaming services|Shopping|Other: Browsing and Email				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	61-70	No	Adult education or technical training	Bachelor's degree
5/7/2023 15:50	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 1 Gigabit	Starlink or HughsNet	$120	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$75,000-$99,999	31-40	No		Master's degree or doctorate
5/7/2023 16:24	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	$97	No	Remote working Remote learning|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	11-20|21-30|41-50	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
5/8/2023 0:51	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Other: AT&T Cell Phone Data	Unknown	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	Multiple ethnicity / Other	English	$100,000-$149,999	31-40|61-70	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Some college but no degree
5/8/2023 7:27	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Utah Broadband	$65	No	Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	51-60	No	Adult education or technical training	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/8/2023 7:28	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$0.00	Having internet access would benefit me if in the future I were to place a permanent dwelling on my property. Currently my property is undeveloped and all needs have been adequately provided through a cellular data plan. For a permanent dwelling cellular data plans would be inadequate as they are inconsistent and often times limited or financially unviable.	Yes, I participate in the Program.	White	English	$50,000-$74,999	21-30|41-50|51-60	Yes	Adult education or technical training	Master's degree or doctorate
5/8/2023 8:22	Own	Yes, I have an internet connection at my residence.	Other: Utah Broadband	Up to 25 Mbps	Utah Broadband	$80/month	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	31-40|51-60	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Associate degree
5/8/2023 8:51	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: I recently purchased this property, but plan on building a home and will need internet at the property by 2024.	75		No, and I am not interested.	White	English	$100,000-$149,999	11-20|31-40	Yes	Middle school (7th grade to 9th grade)	Bachelor's degree
5/8/2023 8:58	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	$75	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	51-60|61-70	No		Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/8/2023 9:15	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Starlink or HughsNet	Unknown		Entertainment/streaming services|Shopping|Other				No, and I am not interested.	White	English	$100,000-$149,999	51-60	No		Master's degree or doctorate
5/8/2023 9:18	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	79.95	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	21-30	No		Bachelor's degree
5/8/2023 9:22	Rent	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Utah Broadband	$65	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	21-30	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/8/2023 10:03	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$60	It would be helpful for effective work-from-home, streaming services, security monitoring, home automation, physical environment monitoring and notification (e.g., water leaks, temperature, power on/off, etc.).	No, and I am not interested.	White	English	$150,000 or more	21-30|51-60	Yes	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/8/2023 10:41	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	80	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$75,000-$99,999	51-60	No		Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/8/2023 11:39	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	60	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	Hispanic/Latino or Spanish Origin	English	$25,000-$49,999	31-40	No	Adult education or technical training	Bachelor's degree
5/8/2023 12:05	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	$120	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	0-10|31-40	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Associate degree
5/8/2023 19:38	Own	Yes, I have an internet connection at my residence.	Other: Utah broadband	Up to 100 Mbps	Utah Broadband	89.95	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$100,000-$149,999	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/8/2023 20:16	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Utah Broadband	50	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	0-10|31-40			Master's degree or doctorate
5/9/2023 12:32	Rent	Yes, I have an internet connection at my residence.	I do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	Unknown	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Career or technical education certificate
5/9/2023 13:34	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other:	$100		No, and I am not interested.	White	English	$100,000-$149,999	41-50	No	High school (9th grade to 12th grade) College or university	High school diploma or equivalent (GED)

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/11/2023 10:27	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	$69.95	No	Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.		English	$75,000-$99,999	61-70	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/11/2023 13:59		Yes, I have an internet connection at my residence.	Wireless|Fiber optics	Up to 25 Mbps	All West	$81	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	51-60	Yes	Elementary school (kindergarten to 6th grade)|Adult education or technical training	Master's degree or doctorate
5/11/2023 14:38	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Xfinity	UnKnown cause its in a bundle with TV package through Park Avenue Condominiums xfinity Package.	Yes	Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English			No		
5/11/2023 14:44	Own	Yes, I have an internet connection at my residence.	I do not know	Up to 25 Mbps	Comcast	90	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$150,000 or more	61-70	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/11/2023 17:39	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Xfinity	Unknown	No	Remote working Remote learning|Video conferencing/chatting				No, and I am not interested.		English					
5/11/2023 18:57	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	120	I am a software engineer, and my children do part of their school work at home. Having an internet connection at this address would be very helpful.	Yes, I am aware of the Program, but do not participate in it or am not eligible.	Asian	English	$150,000 or more	11-20|41-50	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Some college but no degree

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/11/2023 20:59	Own	Yes, I have an internet connection at my residence.	Other: Cable	Up to 25 Mbps	Xfinity	HOA covers base speed, 20.00 upcharge for faster	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	51-60	No		Bachelor's degree
5/12/2023 9:03	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Xfinity	60	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	41-50	No	Adult education or technical training	Associate degree
5/13/2023 8:59	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	$105	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	51-60	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/13/2023 10:52	Own	Yes, I have an internet connection at my residence.	Other: Cable I think. It's Comcast.	Up to 100 Mbps	Xfinity		Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	61-70	No		Master's degree or doctorate
5/14/2023 5:58	Own	Yes, I have an internet connection at my residence.	I do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	Comcast	unknown	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	0-10|21-30	Yes	Elementary school (kindergarten to 6th grade)	12th grade or less (no diploma)
5/14/2023 16:19	Own	Yes, I have an internet connection at my residence.	Fiber optics|Other: coaxial from Xfinity	Up to 100 Mbps	Xfinity	$50	No	Entertainment/streaming services|Other				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	71 or older	No	Adult education or technical training	Master's degree or doctorate
5/15/2023 13:36	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 1 Gigabit	Other: Google FIBER	$86	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	61-70	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/15/2023 17:58	Own	Yes, I have an internet connection at my residence.	Other: Allwest not fiber optics	Up to 25 Mbps	All West	49.95	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$50,000-$74,999	71 or older	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/16/2023 7:44	Own	Yes, I have an internet connection at my residence.	Wireless|Other: Cable (which should be an option in the above list as it is the most common!). Re speed-unclear answer options (e.g. I have 400Mb)	Up to 100 Mbps	Xfinity	$60.82 (discounted because of bulk rate for the condo community)	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.		English	$100,000-$149,999	51-60	No		Master's degree or doctorate
5/16/2023 10:20	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 25 Mbps	Xfinity	unknown	Yes	Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	71 or older	No		Master's degree or doctorate
5/16/2023 10:49	Rent	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	All West	65	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	41-50	No		Bachelor's degree
5/16/2023 20:19	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	$80	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	11-20|21-30|41-50	Yes	Adult education or technical training	Associate degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/17/2023 14:33	Own	Yes, I have an internet connection at my residence.	Other: Twisted pair copper cable dsl	10 Mbps or less	All West	$100	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	51-60	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/17/2023 15:07	Own	Yes, I have an internet connection at my residence.	Other: DSL	10 Mbps or less	All West	$45	No	Remote working Remote learning|Entertainment/streaming services				No, and I am not interested.	White	English	$150,000 or more	41-50	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/17/2023 15:31	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Starlink or HughsNet	$110	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	11-20|41-50	Yes	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/17/2023 21:59	Own	Yes, I have an internet connection at my residence.	Other: DSL through Allwest	10 Mbps or less	All West	Too much for the speed we're getting	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Gaming				No, and I am not interested.	Multiple ethnicity / Other	English	$150,000 or more	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/17/2023 23:24	Own	Yes, I have an internet connection at my residence.	Other: DSL, copper	10 Mbps or less	All West	79	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	11-20|41-50	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/18/2023 4:02	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Starlink or HughsNet	120	No	Remote working Remote learning|Video conferencing/chatting|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Multiple ethnicity / Other	English	$150,000 or more	41-50	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/18/2023 6:38	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Other: Wificow	75	No	Remote health care/telehealth|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$50,000-$74,999	51-60	No	High school (9th grade to 12th grade) College or university	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/18/2023 6:46	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	120	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$150,000 or more	11-20|21-30|41-50	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/18/2023 7:32	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	70	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/18/2023 7:33		Yes, I have an internet connection at my residence.	Fiber optics	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	50?	Yes	Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	51-60|61-70	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Some college but no degree
5/18/2023 7:43	Own	Yes, I have an internet connection at my residence.	Other: Centurylink	Up to 25 Mbps	Lumen (CenturyLink)	60	No	Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.							
5/18/2023 9:14	Own	Yes, I have an internet connection at my residence.	Wireless|Other: No fiber to our street	Up to 100 Mbps	All West	unknown	Yes	Entertainment/streaming services|Shopping|Other: Basic connectivity to community and world				No, and I am not interested.	White	English	$100,000-$149,999	71 or older	No		Bachelor's degree
5/18/2023 10:12	Own	Yes, I have an internet connection at my residence.	I do not know	10 Mbps or less	All West		Yes	Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	71 or older	No	Adult education or technical training	Career or technical education certificate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/18/2023 11:16	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Other:	$45	No	Remote working Remote learning|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	61-70	No		Master's degree or doctorate
5/18/2023 11:36	Own	Yes, I have an internet connection at my residence.	Other: DSL	10 Mbps or less	Lumen (CenturyLink)	Unknown	Yes	Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$50,000-$74,999	61-70	No	High school (9th grade to 12th grade) College or university	High school diploma or equivalent (GED)
5/18/2023 12:05	Own	Yes, I have an internet connection at my residence.	Other: dsl	10 Mbps or less	All West	89	Yes	Remote working Remote learning				No, and I am not interested.	White	English	$100,000-$149,999	41-50	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/18/2023 12:06	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	All West	$75	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	21-30|61-70	No		Master's degree or doctorate
5/18/2023 12:15	Rent	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Other: Its the worst, almost every night we lose internet. Terrible service for the price	$65 and its horrible. We have internet half the time.	No	Remote working Remote learning|Other: Work from home				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	0-10|31-40	No	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/18/2023 12:18	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	All West	89.95	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.		English	$75,000-$99,999	41-50	No		
5/18/2023 12:33	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$50		No, and I am not interested.	White	English	$150,000 or more	11-20|51-60	Yes	Middle school (7th grade to 9th grade)	Some college but no degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/18/2023 15:14		Yes, I have an internet connection at my residence.	Other: DSL	Up to 25 Mbps	Other: CenturyLink	$70	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$50,000-$74,999	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/18/2023 15:28	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Other: Wifi Cow	$44	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	0-10|11-20|31-40|41-50	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)	Master's degree or doctorate
5/18/2023 15:42	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 1 Gigabit	Other: First Digital	49.99	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Other: Porn				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	41-50	No		Master's degree or doctorate
5/18/2023 16:13	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Other: Wificow	100	No	Remote working Remote learning|Entertainment/streaming services|Shopping|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	0-10|21-30|41-50	Yes	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/18/2023 16:21		Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps		$55	No	Remote working Remote learning|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English		11-20|41-50|51-60	Yes	Middle school (7th grade to 9th grade)	Master's degree or doctorate
5/18/2023 16:25	Own	Yes, I have an internet connection at my residence.	Other: cable or DSL	10 Mbps or less	All West	$80	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services					White	English	$50,000-$74,999	0-10|11-20|31-40	Yes	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/18/2023 17:30	Own	Yes, I have an internet connection at my residence.	Fiber optics	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	$85	Yes	Remote working Remote learning|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	61-70	No		Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/18/2023 17:40	Rent	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	Lumen (CenturyLink)	$88	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$50,000-$74,999	21-30	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Some college but no degree
5/18/2023 17:47	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Starlink or HughsNet	200	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	11-20|21-30|51-60|71 or older	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
5/18/2023 18:09	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	Unknown	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$75,000-$99,999	0-10|21-30|51-60|61-70	Yes	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/18/2023 19:28	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	90	No	Remote working Remote learning|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$100,000-$149,999	21-30|61-70	No		Master's degree or doctorate
5/18/2023 19:36	Own	Yes, I have an internet connection at my residence.	Other: Copper line	10 Mbps or less	All West	85	No	Remote working Remote learning|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$75,000-$99,999	51-60|61-70	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/18/2023 20:43	Own	Yes, I have an internet connection at my residence.	Other: DSL	10 Mbps or less	All West	$60	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	Multiple ethnicity / Other	English	$100,000-$149,999	11-20|41-50	Yes	Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/18/2023 20:56	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Wicked Fast	$99.99	No	Remote working Remote learning|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	71 or older	No		Bachelor's degree
5/18/2023 21:03	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	79	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/18/2023 21:18	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	110	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming|Other				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	11-20|21-30|51-60	Yes	Adult education or technical training	Master's degree or doctorate
5/18/2023 21:38	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Utah Broadband	Unknown	No	Remote working Remote learning|Entertainment/streaming services				No, and I am not interested.	White	English	$100,000-$149,999	21-30|51-60	No	Adult education or technical training	Bachelor's degree
5/18/2023 21:51	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Xfinity	$120	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Hispanic/Latino or Spanish Origin	English	$25,000-$49,999	31-40|41-50	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
5/18/2023 21:59	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Other:	45	No	Remote working Remote learning|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	21-30|41-50|51-60			Associate degree

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/18/2023 23:42	Own	Yes, I have an internet connection at my residence.	Other	I do not know (you can test your internet speed at speedtest.utah.gov)	Comcast	58	No	Remote working Remote learning|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	31-40|51-60	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/18/2023 23:45	Own	Yes, I have an internet connection at my residence.	Other	10 Mbps or less	All West	89	Yes	Remote working Remote learning|Shopping				No, and I am not interested.	White	English	$50,000-$74,999	61-70	No		Some college but no degree
5/19/2023 6:19	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	Unknown	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	0-10|11-20|41-50	Yes	Elementary school (kindergarten to 6th grade)|High school (9th grade to 12th grade) College or university	Associate degree
5/19/2023 7:01	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	All West	60	No	Video conferencing/chatting|Entertainment/streaming services|Other				Yes, I am aware of the Program, but do not participate in it or am not eligible.	American Indian or Alaska Native	English		71 or older	No		High school diploma or equivalent (GED)
5/19/2023 7:23	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Other: T-mobile	50	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Multiple ethnicity / Other	Other: Portuguese	$25,000-$49,999	41-50	No	Adult education or technical training	Some college but no degree
5/19/2023 7:54	Own	Yes, I have an internet connection at my residence.	Other: Utah broadband	Up to 25 Mbps	Utah Broadband	Unknown	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Multiple ethnicity / Other	English	$150,000 or more	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/19/2023 9:31	Rent	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	All West	$70	No	Remote working Remote learning				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$0-$24,999	61-70	No		Career or technical education certificate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/19/2023 10:41	Own	Yes, I have an internet connection at my residence.	Wireless|Other: To get fiber optics at my home I need to pay a fee for 3 blocks of installation. Can't afford that.	Up to 25 Mbps	All West	60	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	61-70	No	Adult education or technical training	Bachelor's degree
5/19/2023 11:37	Own	Yes, I have an internet connection at my residence.	Wireless|Satellite or mobile	Up to 25 Mbps	Other: TMobile	25	No	Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	61-70	No		
5/19/2023 12:11	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Other: T-mobile	$50.00	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	21-30|51-60	Yes	Adult education or technical training	Bachelor's degree
5/19/2023 12:18	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 1 Gigabit	Starlink or HughsNet		No	Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	21-30|41-50	No	High school (9th grade to 12th grade) College or university	12th grade or less (no diploma)
5/19/2023 13:01	Rent	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Xfinity	13.26	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Hispanic/Latino or Spanish Origin	Spanish	$0-$24,999	41-50	Yes	High school (9th grade to 12th grade) College or university	High school diploma or equivalent (GED)
5/19/2023 18:34	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Wicked Fast	unknown	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	11-20|41-50|51-60	Yes	Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/19/2023 20:25	Own	Yes, I have an internet connection at my residence.	I do not know	Up to 25 Mbps	All West	Unknown	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$75,000-$99,999	0-10|21-30|41-50|51-60	Yes	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/20/2023 7:13	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Other: Hughes Net	180	No	Remote health care/telehealth|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	31-40	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/20/2023 7:41	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Xfinity	Unknown	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$75,000-$99,999	71 or older	Yes		Bachelor's degree
5/20/2023 12:58	Own	Yes, I have an internet connection at my residence.	Wireless|Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Other: Used to use WiFi Cow. Possibly returning to them soon.	Unknown	No	Other: I'd rather keep that private. It isn't the Counties Business, and I am not engaging in illegal activities. This is definitely government overreach.				Yes, I am aware of the Program, but do not participate in it or am not eligible.							
5/20/2023 19:22	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	All West	84	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$25,000-$49,999	31-40|61-70	Yes	High school (9th grade to 12th grade) College or university	Career or technical education certificate
5/20/2023 21:31	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	100		No, and I am not interested.	White	English	$150,000 or more	31-40	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/21/2023 9:02	Own	Yes, I have an internet connection at my residence.	Other: DSL	Up to 25 Mbps	All West	110/month	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	Multiple ethnicity / Other	English	$75,000-$99,999	61-70	No	High school (9th grade to 12th grade) College or university	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/21/2023 10:56	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Other: wifi cow	60	No	Remote working Remote learning|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$100,000-$149,999	61-70		High school (9th grade to 12th grade) College or university	Bachelor's degree
5/21/2023 14:23		Yes, I have an internet connection at my residence.																	
5/21/2023 15:00	Own	Yes, I have an internet connection at my residence.	Other: connected to landline	Up to 100 Mbps	All West	$130.00 approx	Yes	Remote working Remote learning|Shopping|Gaming|Other				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	61-70	No		Some college but no degree
5/21/2023 17:48	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Other: Wifi Cow	70	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Other				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$150,000 or more	51-60	No	Adult education or technical training	Bachelor's degree
5/21/2023 18:06	Own	Yes, I have an internet connection at my residence.	Wireless		All West			Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$75,000-$99,999	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)|Adult education or technical training	Some college but no degree
5/22/2023 5:55	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	100	No	Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	61-70	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/22/2023 6:38	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Wicked Fast	99	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	Multiple ethnicity / Other	English	$150,000 or more	0-10|31-40|41-50	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/22/2023 7:24	Own	Yes, I have an internet connection at my residence.	Wireless|Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Xfinity	$60	No	Entertainment/streaming services				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$50,000-$74,999	71 or older	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/22/2023 10:24	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 1 Gigabit	Other:			Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming											
5/22/2023 14:33	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 1 Gigabit	All West	$130	Yes	Remote working Remote learning|Entertainment/streaming services				No, and I am not interested.	White	English	$150,000 or more	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/22/2023 21:16	Own	Yes, I have an internet connection at my residence.	Fiber optics	10 Mbps or less	Other: Century Link	Unknown	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$75,000-$99,999	61-70	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/22/2023 21:44	Own	Yes, I have an internet connection at my residence.	Other: UBB	Up to 100 Mbps	Utah Broadband	90	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	51-60	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/23/2023 0:11	Own	Yes, I have an internet connection at my residence.	I do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	All West		Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	71 or older	No		Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/23/2023 7:08	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Xfinity	$140	Yes	Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	51-60	No		High school diploma or equivalent (GED)
5/23/2023 7:31	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Starlink or HughsNet	$120	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming					White	English	$150,000 or more	0-10|31-40	Yes	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/23/2023 14:43	Own	Yes, I have an internet connection at my residence.	Wireless|Satellite or mobile	I do not know (you can test your internet speed at speedtest.utah.gov)	Other:								White	English		21-30|71 or older	No		Bachelor's degree
5/23/2023 20:13	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Other: Verizon	$25	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.							
5/23/2023 21:01	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Wicked Fast	$120	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Other: Home security				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English		11-20|41-50	Yes		Bachelor's degree
5/23/2023 23:11	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							Other: Internet is available but the quality of the service is so unreliable paying for it is not feasible.	140$ per month	We could access online education opportunities. Do online research, utilize online banking and checkout books from libraries.	No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	61-70	No	Adult education or technical training	Associate degree
5/24/2023 4:59	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Utah Broadband	70	No	Remote working Remote learning|Video conferencing/chatting				No, and I am not interested.	White	English	$150,000 or more	11-20|41-50	Yes		Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/24/2023 11:10	Own	Yes, I have an internet connection at my residence.	Other: Cable	Up to 100 Mbps	Xfinity	67	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	11-20|51-60	Yes	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/24/2023 16:56	Rent	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Wicked Fast	Unknown	No	Remote working Remote learning|Video conferencing/chatting				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	51-60	No		Bachelor's degree
5/24/2023 19:03		No, I don't have an internet connection at my residence (if selected, skip to question 10).							Monthly charges are too expensive	50 to 60 dollars		Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$50,000-$74,999	61-70	No	High school (9th grade to 12th grade) College or university	Some college but no degree
5/24/2023 19:22	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	All West	$69	No	Remote working Remote learning|Video conferencing/chatting|Shopping|Other				No, and I am not interested.	White	English	$150,000 or more	61-70	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/24/2023 19:24	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Lumen (CenturyLink)	45	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	31-40	No		Bachelor's degree
5/24/2023 19:38	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Wicked Fast	$100	No	Entertainment/streaming services|Shopping|Other: Home technology				No, and I am not interested.	White	English	$75,000-$99,999	61-70	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
5/24/2023 22:03		Yes, I have an internet connection at my residence.	Other: DSL	Up to 25 Mbps	Other:	50	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	Asian	English	$100,000-$149,999	61-70	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/24/2023 22:20	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Wicked Fast	200	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				No, and I am not interested.	White	English	$150,000 or more	41-50|51-60	No		Bachelor's degree
5/25/2023 3:01	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Wicked Fast	100	No	Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	51-60|61-70	No		Bachelor's degree
5/25/2023 6:26	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Wicked Fast	250	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Hispanic/Latino or Spanish Origin	English	$150,000 or more	0-10|31-40|41-50	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/25/2023 8:09	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	All West	$85	No	Remote health care/telehealth|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	American Indian or Alaska Native	English	$50,000-$74,999	31-40	No	High school (9th grade to 12th grade) College or university	Some college but no degree
5/25/2023 17:08	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	Utah Broadband	$89 per month	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				No, and I am not interested.	White	English	$150,000 or more	0-10|11-20|41-50	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)	Master's degree or doctorate
5/25/2023 18:02	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Wicked Fast	$99	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	0-10	Yes	Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/25/2023 19:31	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Other: Verizon	25	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	0-10|31-40	Yes	Elementary school (kindergarten to 6th grade)	Associate degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/25/2023 21:06	Rent	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Wicked Fast	100	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$150,000 or more	11-20|21-30|51-60	Yes	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/25/2023 22:24	Own	Yes, I have an internet connection at my residence.	I do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	Xfinity	50	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.				51-60	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/25/2023 22:37	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Other: T-Mobile	$50	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming|Other: General information. Travel booking, music, local ""radio""				No, and I am not interested.	White	English	$75,000-$99,999	11-20|41-50	Yes	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/26/2023 4:33	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Lumen (CenturyLink)	80	No	Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	Asian	English	$25,000-$49,999	21-30	No	High school (9th grade to 12th grade) College or university	Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/26/2023 10:19	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Other: wifi cow	50-75	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Shopping|Other: We desperately need fiber optics for more reliable internet. Wifi is constantly down or waves of connectivity. All West keeps saying they'll come through the rest of the town but right now it is only certain streets. It would be nice to have all of Henefer on a fiber line. At least finish out the entire city so it's not so spotty.				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$150,000 or more	51-60	No	Adult education or technical training	Bachelor's degree
5/26/2023 10:20	Rent	Yes, I have an internet connection at my residence.	I do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	$105	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	Multiple ethnicity / Other	English	$100,000-$149,999	11-20|41-50	Yes	Middle school (7th grade to 9th grade)	Career or technical education certificate
5/26/2023 15:54	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Wicked Fast	160	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	0-10|51-60	Yes	Elementary school (kindergarten to 6th grade)	Bachelor's degree
5/26/2023 16:23	Own	Yes, I have an internet connection at my residence.	Other: DSL	10 Mbps or less	All West	44.95	Yes	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English		61-70	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/26/2023 19:04	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Other: FastTel	$149	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	41-50|51-60	No		Master's degree or doctorate
5/27/2023 6:37	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Other:	Unknown	Yes	Entertainment/streaming services|Shopping				Yes, I participate in the Program.	White	English	$100,000-$149,999	71 or older	No	High school (9th grade to 12th grade) College or university	Bachelor's degree
5/27/2023 7:38	Own	Yes, I have an internet connection at my residence.	Fiber optics	Up to 100 Mbps	All West	100	No	Remote working Remote learning|Entertainment/streaming services|Gaming				Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$100,000-$149,999	11-20|41-50|51-60	Yes	High school (9th grade to 12th grade) College or university	Some college but no degree
5/27/2023 9:19	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Wicked Fast	$1,000	No	Remote working Remote learning|Remote health care/telehealth|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	American Indian or Alaska Native	English	$150,000 or more	0-10|31-40	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/27/2023 13:29	Own	Yes, I have an internet connection at my residence.	Wireless	I do not know (you can test your internet speed at speedtest.utah.gov)	Other: Our internet is not reliable, variable speed, sometimes its just off. VERY SLOW for what we pay.	80	No	Entertainment/streaming services				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	0-10|21-30	No		Master's degree or doctorate
5/27/2023 18:46	Own	Yes, I have an internet connection at my residence.	Wireless	10 Mbps or less	Lumen (CenturyLink)	Unknown	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				Yes, I am aware of the Program, but do not participate in it or am not eligible.	Hispanic/Latino or Spanish Origin	English	$150,000 or more	61-70	No	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/29/2023 9:17	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Other: T-Mobile		No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services				No, and I am not interested.	White	English	$25,000-$49,999	31-40	No		Bachelor's degree

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/29/2023 13:09	Rent	Yes, I have an internet connection at my residence.	I do not know	10 Mbps or less	All West	Unknown	No	Remote working Remote learning|Entertainment/streaming services|Gaming				No, and I am not interested.	White	English	$50,000-$74,999	0-10|11-20|31-40|61-70	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	Bachelor's degree
5/30/2023 12:39	Own	Yes, I have an internet connection at my residence.	I do not know	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	$50,00?	No	Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$0-$24,999	51-60	No		High school diploma or equivalent (GED)
5/30/2023 17:41	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 1 Gigabit	Wicked Fast	$99	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	61-70	No		Master's degree or doctorate
5/30/2023 18:38		Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	Other:	45	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping					White	English	$50,000-$74,999	61-70	No	High school (9th grade to 12th grade) College or university	Associate degree
5/30/2023 19:04	Own	Yes, I have an internet connection at my residence.	Wireless|Fiber optics	Up to 100 Mbps	All West	60	Yes	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, and I am not interested.	White	English	$150,000 or more	41-50|61-70	No	Adult education or technical training	Master's degree or doctorate
5/31/2023 5:42	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Utah Broadband	90	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	0-10|31-40	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/31/2023 5:46	Own	Yes, I have an internet connection at my residence.	Satellite or mobile|Other: Point to point	Up to 100 Mbps	Starlink or HughsNet	Unknown	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	0-10|31-40	No	High school (9th grade to 12th grade) College or university	Master's degree or doctorate
5/31/2023 11:56	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 25 Mbps	Utah Broadband	90	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming				No, and I am not interested.	White	English	$150,000 or more	0-10|31-40	Yes	Elementary school (kindergarten to 6th grade)	Master's degree or doctorate
5/31/2023 12:30	Own	Yes, I have an internet connection at my residence.																	
5/31/2023 12:33	Own	Yes, I have an internet connection at my residence.	I do not know	10 Mbps or less	All West	$83	No	Remote health care/telehealth|Video conferencing/chatting|Shopping				No, and I am not interested.	Multiple ethnicity / Other	English	$100,000-$149,999	11-20|41-50	Yes		Master's degree or doctorate
5/31/2023 15:48	Own	Yes, I have an internet connection at my residence.	Other: Copper	10 Mbps or less	All West	$74	No	Remote working Remote learning				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$50,000-$74,999	21-30|51-60	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree
5/31/2023 16:24	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	10 Mbps or less	Utah Broadband	$50	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Other: We qualify for the Affordable Connectivity Program but sadly Utah Broadband does not participate.				Yes, I am aware of the Program, but do not participate in it or am not eligible.	Native Hawaiian or Other Pacific Islander	English	$25,000-$49,999	61-70	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Bachelor's degree

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
5/31/2023 18:54	Own	Yes, I have an internet connection at my residence.	I do not know	Up to 100 Mbps	Lumen (CenturyLink)	50	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming|Other				Yes, I am aware of the Program, but do not participate in it or am not eligible.		English	$50,000-$74,999	20-Nov	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate
6/5/2023 10:54	Own	No, I don't have an internet connection at my residence (if selected, skip to question 10).							An internet connection isn't available in my area	$200 give or take	We are building a house at this location currently, and I work from home. We have not yet completed sorted out a solution to our internet issues, but it's a non-negotiable need. If we cannot find reliable and fast internet, I will need to get an office space in town.	Yes, I am aware of the Program, but do not participate in it or am not eligible.	White	English	$150,000 or more	31-40	No	Adult education or technical training	Bachelor's degree
6/5/2023 11:14	Own	Yes, I have an internet connection at my residence.	Fiber optics	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	60	No	Remote working Remote learning|Remote health care/telehealth|Video conferencing/chatting|Entertainment/streaming services|Shopping|Gaming|Other				No, and I am not interested.	White	English	$50,000-$74,999	31-40	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)	Bachelor's degree
6/7/2023 15:51	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	All West	70	No	Remote working Remote learning|Video conferencing/chatting|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$75,000-$99,999	0-10|41-50	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)	Master's degree or doctorate

Appendix A. Summit County Survey Data

Time	Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? Select all that apply.	What speed is your internet service (download speed)?	Which company do you use for internet?	What is the monthly charge for your internet service?	Does your internet bill include other services such as phone, TV, or premium content?	What do you use the internet for? Select all that apply.	Why don't you have internet access at your residence? Select all that apply.	How much would you pay for internet per month if it was accessible to you at your residence?	If you are willing, please share how a high-speed internet connection would improve your quality of life.	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households?	What is your race/ethnicity? Select all that apply.	What language is spoken most often in your household?	What is your household's gross annual income?	Which age groups live in your home? Select all that apply.	Do students live at your household?	Which education level? Select all that apply.	What is the highest level of education completed by someone in your household?
6/13/2023 10:22	Own	Yes, I have an internet connection at my residence.	Fiber optics	I do not know (you can test your internet speed at speedtest.utah.gov)	All West	125	Yes	Remote health care/telehealth|Entertainment/streaming services|Shopping				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$100,000-$149,999	0-10|11-20|31-40|41-50	Yes	Elementary school (kindergarten to 6th grade)|Middle school (7th grade to 9th grade)|High school (9th grade to 12th grade) College or university	High school diploma or equivalent (GED)
6/15/2023 11:23	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	60	No	Entertainment/streaming services|Other: Adult working children come often. They do not take vacation time to stay with us, but work via our wifi.					Asian	English	$75,000-$99,999	71 or older	No		Master's degree or doctorate
6/23/2023 20:26	Own	Yes, I have an internet connection at my residence.	Wireless|Other: Utah Broadband	Up to 25 Mbps	Utah Broadband	$60.00	No	Entertainment/streaming services|Shopping|Other				No, but I would like information to learn if my household qualifies. If this option is selected, please complete the ""Get Involved"" form following this survey.	White	English	$25,000-$49,999	61-70|71 or older	No	High school (9th grade to 12th grade) College or university|Adult education or technical training	Master's degree or doctorate

Appendix A. Summit County Survey Data

Statewide Survey: Summit County Resident Responses

Response #	Date	Location			Do you rent or own this property?	Do you have an internet connection at your residence?	What kind of internet connection do you have? (Select all that apply)	What speed is your internet service (download speed)? (Megabits per second = Mbps)	Which company do you use for internet? (E.g. Xfinity, Google Fiber, Connext, Emery Telecom, CenturyLink, etc.)	What is the monthly charge for your internet service? Write "Unknown" if unknown.	Does your internet bill include other services such as phone, TV, or premium content?							
		AOG	County	City/Town	Response	Response	Response	Response	Open-Ended Response	Open-Ended Response	Response	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatting	Entertainment/streaming services	Shopping	Gaming
1	6/28/2023 8:05	MAG	Summit County	Park City	Own	Yes, I have an internet connection at my residence.	Satellite or mobile	Up to 100 Mbps	starlink	130	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatting	Entertainment/streaming services	Shopping	
2	5/19/2023 9:36	MAG	Summit County	Kamas	Rent	Yes, I have an internet connection at my residence.	Wireless	Up to 25 Mbps	All West	$70	No		Remote learning					
3	2023-01-28 09:38:44	MAG	Summit County	COALVILLE	Own	No, I don't have an internet connection at my residence.												
4	2023-01-11 23:27:22	MAG	Summit County	Kamas	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line), Wireless	Up to 25 Mbps	Allwest	59	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatting	Entertainment/streaming services	Shopping	
5	2023-01-24 09:39:21	MAG	Summit County	Park City	Own	Yes, I have an internet connection at my residence.	Cable or digital subscriber line (DSL- telephone line)	Up to 100 Mbps	CenturyLink	$105	Yes	Remote working		Remote health care/telehealth	Video conferencing/chatting	Entertainment/streaming services	Shopping	
6	2023-01-18 20:55:53	MAG	Summit County	Park City	Own	Yes, I have an internet connection at my residence.	Wireless	Up to 100 Mbps	Utah Broadband	79	No	Remote working		Remote health care/telehealth	Video conferencing/chatting	Entertainment/streaming services	Shopping	
7	2023-01-20 08:22:45	MAG	Summit County	Park City	Own	Yes, I have an internet connection at my residence.	Satellite or mobile, Wireless	Up to 100 Mbps	Utah Broadband	$80	No	Remote working	Remote learning	Remote health care/telehealth	Video conferencing/chatting	Entertainment/streaming services	Shopping	Gaming

Appendix A. Summit County Survey Data

Statewide Survey: Summit County Resident Responses

Response #	Other (please specify)	Initial connection fees are too expensive	Monthly charges are too expensive	I do not have a computer or tablet to use	I do not know how to use a computer or tablet	I do not know how to get internet service	I do not need it/am not interested in it	I have physical limitations	I am worried about privacy and others getting my information	An internet connection isn't available in my area	I access the internet at a public internet source, such as a library or a community center	Other (please specify)	How much would you pay for internet per month if it was accessible to you at your residence? Open-Ended Response	If you are willing, please share how a high-speed internet connection would improve your quality of life. Open-Ended Response	Are you aware of the Affordable Connectivity Program, which provides a $30 monthly discount for internet to low-income households? Response	What is your race/ethnicity? Select all that apply. Response	Multiple ethnicity / Other (please specify)	What language is spoken most often in your household? Response
1															Yes, I am aware of the Program, but do not participate in it or am not eligible.	White		English
2	Cell Wifi														No, but I would like information to learn if my household qualifies. If this option is selected, please complete the contact form at the end of this survey.	White		English
3								I have physical limitations		An internet connection isn't available in my area			18	ACCESS TO FAMILY, WORK, SAFETY ISSUES, ETC.	No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.	No	White	
4		Hispanic/Latino or Spanish Origin													No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.	Yes	Hispanic/Latino or Spanish Origin	
5		White													No, but I would like information to learn if my household qualifies. If this option is selected, you will receive an email (or letter if no email address is provided) with information pertaining to the program.	No	White	
6		White													No, and I am not interested.	No	White	
7		White													No, and I am not interested.	No	White	

Appendix A. Summit County Survey Data

Statewide Survey: Summit County Resident Responses

Response #	What is your household's gross annual income? — Other (please specify)	Response	Which age groups live in your home? Select all that apply. — 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71 or older	Do students live at your household? — Response	Which education level? Select all that apply. — Elementary school (kindergarten to 6th grade)	Middle school (7th grade to 9th grade)	High school (9th grade to 12th grade)	College or university	Adult education or technical training	What is the highest level of education completed by someone in your household? — Response	
1		$150,000 or more								71 or older	No						Bachelor's degree	
2		$0-$24,999							61-70		No						Career or technical education certificate	
3	English	$50,000-$74,999								71 or older	No						Career or technical education certificate	
4	English	$25,000-$49,999	0-10				41-50				Yes	Elementary school (kindergarten to 6th grade)				Adult education or technical training	Master's degree or doctorate	
5	English	$100,000-$149,999						51-60	61-70		No						Master's degree or doctorate	
6	English	$150,000 or more	0-10			31-40					Yes	Elementary school (kindergarten to 6th grade)					Some college but no degree	
7	English	$150,000 or more	0-10				41-50	51-60			Yes	Elementary school (kindergarten to 6th grade)					Master's degree or doctorate	

Appendix A. Summit County Survey Data

Statewide Survey: Summit County Local Government Responses

Date	Which municipality or county do you represent?	Do you feel knowledgeable about the current state of broadband internet coverage for the city/county you represent?	What tools and/or resources could Connecting Utah provide to help you learn about internet coverage in your area? Select all that apply.					Has the city/county you represent benefited from past efforts to expand internet access?	What were those efforts?	Are you willing to share your story?	Tell us about internet access for the people in your community. Select all that apply.					
	Open-Ended Response	Response	Webinars	Informational guides	Networking/relationship-building opportunities	One-on-one instruction	Other (please specify)	Response	Open-Ended Response	Response	Some people who want internet access have it.	Some people want internet access but have no providers available.	Some people want internet provider options than those that are currently available.	Some people can't afford the internet option(s) available to them.	Some people aren't satisfied with the internet speeds available to them.	Some people do not want the internet.
2023-01-10 10:57:42	Summit County	Yes						Yes	Acces to UDOT fiber for county facilities. Also working with local telecom providers.	No	Some people who want internet access have it.	Some people want internet access but have no internet providers available.	Some people want internet provider options than those that are currently available.		Some people aren't satisfied with the internet speeds available to them.	

What barriers make it difficult for individuals in your area to access the internet? (e.g., affordability, infrastructure, service providers).	What would make it easier for individuals in your area to access the internet? (e.g., lower costs, subsidizing programs, infrastructure improvements).	Do you feel like your city/county has enough funding to expand broadband coverage to all homes?	Do you know the provider(s) in your area?	Have you met or talked to the provider(s) in your areas?	Is there anything else you'd like to share about internet access in your city/county?	Tell us how your community accesses the internet if devices are not available at their residence. Select all that apply.					What barriers make it difficult for individuals in your city/county to access device(s)? (e.g., affordability, supply issues).	What would make it easier for individuals in your city/county to access to device(s)? (e.g., lower costs, subsidizing programs).	Do you feel like your city/county has enough funding to provide internet-capable devices to homes that cannot afford them?	Do you have anything else to share about devices in your city/county?
Other (please specify)	Open-Ended Response	Open-Ended Response	Response	Open-Ended Response	Open-Ended Response	Open-Ended Response	Work	School	Library	Community Center	Other (please specify)	Open-Ended Response	Open-Ended Response	Response	Open-Ended Response
	Construction costs and grant availability	Infrastructure improvements	No	Yes	Yes	We have been trying to get grant funding for some areas.	Work	School	Library			Na	N/a	Yes	No

Appendix B: Community Partner Survey

This appendix contains the responses from the surveys distributed to Summit County's community partners, to get a better understanding of what current plans for broadband and digital access activities are already in place.

#1

Collector:	Web Link 1 (Web Link)
Started:	Friday, May 19, 2023 11:50:03 AM
Last Modified:	Friday, May 19, 2023 11:51:07 AM
Time Spent:	00:01:04
IP Address:	168.180.18.2

Page 1: Organization Information

Q1

Contact Information

Respondent skipped this question

Q2

Do you currently have any broadband or digital access projects, plans, or initiatives underway?

No

Page 2: Broadband Projects and Initiatives

Q3

Broadband Project Information

Respondent skipped this question

Q4

What is the status of this broadband project?

Respondent skipped this question

Q5

Estimated Duration of Project (by months)

Respondent skipped this question

Q6

Estimated Total Project Cost

Respondent skipped this question

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

I don't know

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

I don't know

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

Respondent skipped this question

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

Respondent skipped this question

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Respondent skipped this question

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Respondent skipped this question

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

Respondent skipped this question

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Respondent skipped this question

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

Respondent skipped this question

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#2

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Friday, May 19, 2023 1:14:34 PM
Last Modified:	Friday, May 19, 2023 1:15:55 PM
Time Spent:	00:01:21
IP Address:	216.250.40.132

Page 1: Organization Information

Q1

Contact Information

Name

Organization   **All West Communications**

Department   **Strategic Partnerships**

Phone

Email

City/Town   **Broadband deployment in new**

Brief description of involvement with broadband   **areas**

Q2   **Yes**

Do you currently have any broadband or digital access
projects, plans, or initiatives underway?

Page 2: Broadband Projects and Initiatives

Q3   **Respondent skipped this question**

Broadband Project Information

Q4   **Respondent skipped this question**

What is the status of this broadband project?

Q5   **Respondent skipped this question**

Estimated Duration of Project (by months)

Q6   **Respondent skipped this question**

Estimated Total Project Cost

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

Respondent skipped this question

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

Respondent skipped this question

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

Respondent skipped this question

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

Respondent skipped this question

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Respondent skipped this question

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Respondent skipped this question

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

Respondent skipped this question

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Respondent skipped this question

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

Respondent skipped this question

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#3

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Friday, May 19, 2023 3:05:15 PM
Last Modified:	Friday, May 19, 2023 3:46:54 PM
Time Spent:	00:41:38
IP Address:	207.135.243.152

Page 1: Organization Information

Q1

Contact Information

Name

Organization   **Coalville City**

Department

Phone

Email   **Coalville City**

City/Town   **Infrastructure**

Brief description of involvement with broadband

Q2   **No**

Do you currently have any broadband or digital access
projects, plans, or initiatives underway?

Page 2: Broadband Projects and Initiatives

Q3   **Respondent skipped this question**

Broadband Project Information

Q4   **Respondent skipped this question**

What is the status of this broadband project?

Q5   **Respondent skipped this question**

Estimated Duration of Project (by months)

Q6   **Respondent skipped this question**

Estimated Total Project Cost

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

No

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

No

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

I'm not aware of any data collection efforts

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

We are going to pursue a discussion about better broadband in our community.

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

I have citizens who are always hoping that there will be better internet speeds and less digital glitch. We are home to businesses and the school district that could greatly benefit from.

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Existing rights-of-way,

Utility poles,

Other (please specify):

There could be possible tower space heater in the near future as we work to better our meter reading system.

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

I don't know

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Some one to educate us about the topic

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

I don't know

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#4

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, May 22, 2023 8:53:06 AM
Last Modified:	Monday, May 22, 2023 8:59:18 AM
Time Spent:	00:06:11
IP Address:	75.203.142.134

Page 1: Organization Information

Q1

Contact Information

Name	
Organization	**Snyderville Basin Water Reclamation District**
Department	**Engineering**
Phone	
Email	
City/Town	**Park City**
Brief description of involvement with broadband	**Information System and GIS Manager**

Q2

Do you currently have any broadband or digital access projects, plans, or initiatives underway?

No

Page 2: Broadband Projects and Initiatives

Q3

Broadband Project Information

Respondent skipped this question

Q4

What is the status of this broadband project?

Respondent skipped this question

Q5

Estimated Duration of Project (by months)

Respondent skipped this question

Q6

Estimated Total Project Cost

Respondent skipped this question

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

No

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

Yes

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

I'm not aware of any data collection efforts

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

Respondent skipped this question

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Respondent skipped this question

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Not interested in sharing resources at this time

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

I don't know

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Respondent skipped this question

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

No

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#5

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, May 22, 2023 10:35:08 AM
Last Modified:	Monday, May 22, 2023 10:37:54 AM
Time Spent:	00:02:46
IP Address:	216.117.230.78

Page 1: Organization Information

Q1

Contact Information

Name	
Organization	**Mountain Regional Water**
Department	**Technology**
Phone	
Email	
City/Town	**Park City**
Brief description of involvement with broadband	**Decision maker on broadband providers for District**

Q2

Do you currently have any broadband or digital access projects, plans, or initiatives underway?

No

Page 2: Broadband Projects and Initiatives

Q3

Broadband Project Information

Respondent skipped this question

Q4

What is the status of this broadband project?

Respondent skipped this question

Q5

Estimated Duration of Project (by months)

Respondent skipped this question

Q6

Estimated Total Project Cost

Respondent skipped this question

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

No

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

No

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

I'm not aware of any data collection efforts

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

Respondent skipped this question

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Respondent skipped this question

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Not interested in sharing resources at this time

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

No

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Respondent skipped this question

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

No

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#6

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Thursday, May 25, 2023 9:58:58 AM
Last Modified:	Thursday, May 25, 2023 10:01:28 AM
Time Spent:	00:02:29
IP Address:	205.123.97.148

Page 1: Organization Information

Q1

Contact Information

Name	
Organization	**North Summit School District**
Department	**Tech**
Phone	
Email	
City/Town	**Coalville**

Q2

Do you currently have any broadband or digital access projects, plans, or initiatives underway?

No

Page 2: Broadband Projects and Initiatives

Q3

Broadband Project Information

Respondent skipped this question

Q4

What is the status of this broadband project?

Respondent skipped this question

Q5

Estimated Duration of Project (by months)

Respondent skipped this question

Q6

Estimated Total Project Cost

Respondent skipped this question

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

No

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

No

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

Internet Speed Test

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

Respondent skipped this question

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Upton and Toll Gate

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Respondent skipped this question

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

Respondent skipped this question

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Respondent skipped this question

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

Respondent skipped this question

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#7

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, May 30, 2023 8:13:42 PM
Last Modified:	Tuesday, May 30, 2023 8:17:52 PM
Time Spent:	00:04:09
IP Address:	204.113.154.188

Page 1: Organization Information

Q1

Contact Information

Name	
Organization	**Oakley City**
Department	**Mayor**
Phone	
Email	
City/Town	**Oakley**
Brief description of involvement with broadband	**User**

Q2

Do you currently have any broadband or digital access projects, plans, or initiatives underway?

No

Page 2: Broadband Projects and Initiatives

Q3

Broadband Project Information

Respondent skipped this question

Q4

What is the status of this broadband project?

Respondent skipped this question

Q5

Estimated Duration of Project (by months)

Respondent skipped this question

Q6

Estimated Total Project Cost

Respondent skipped this question

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

No

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

No

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

I'm not aware of any data collection efforts

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

This is not something we've discussed.

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Not that I'm aware of.

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

I don't know

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

No

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Not sure

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

No

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

#8

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Tuesday, May 30, 2023 11:21:30 PM
Last Modified:	Tuesday, May 30, 2023 11:44:04 PM
Time Spent:	00:22:34
IP Address:	76.129.77.39

Page 1: Organization Information

Q1

Contact Information

Name	
Organization	**Pine Meadow Ranch, HOA**
Phone	
Email	
City/Town	**Coalville, UT**
Brief description of involvement with broadband	**Have worked with County to hopefully find a reliable broadband solution for our Mountain Community which consists of over 800 lots.**

Q2

Do you currently have any broadband or digital access projects, plans, or initiatives underway?

Yes

Page 2: Broadband Projects and Initiatives

Q3

Broadband Project Information

Broadband Project Name	**Empty Conduit along with Road Repairs**
Project Manager or Company	**John Adams, VP, Pine Meadow Ranch, HOA**
Project Manager's Email (if known)	**vp@pinemeadowranch.org**

Q4

What is the status of this broadband project?

Information gathering,

Community engagement

Q5

Estimated Duration of Project (by months)

three to four months

Q6

Estimated Total Project Cost

$20,000 to $30,000

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Not yet.

Q8

Describe the economic benefits of this project and how these benefits can be measured.

If we can colocate empty fiber optic conduit as we make road repairs, we hope to be better positioned to eventually introduce reliable, high speed internet to our community through a fiber optic network.

Q9	**No**
Do you have additional broadband projects, plans, or initiatives?	

Page 3: Broadband Projects and Initiatives

Q10	**Respondent skipped this question**
Broadband Project Information	

Q11	**Respondent skipped this question**
What is the status of this broadband project?	

Q12	**Respondent skipped this question**
Estimated Duration of Project (by months)	

Q13	**Respondent skipped this question**
Estimated Total Project Cost	

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

Yes

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Contact Name	**John Adams**
Title	**Vice President**
Status (full-time, part-time, volunteer)	**Volunteer**
Role	**HOA Board member**

Q27

Are there additional broadband-specific positions within your organization currently?

No

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

Yes

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

Community broadband survey,

FCC Map Challenges,

Internet Speed Test,

Utility mapping

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

We surveyed our community in 2021 and over 60% of respondents were in favor of introducing fiber broadband. We would keep a direct and open line of communication with our community on any broadband opportunities that became available.

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Those who need reliable service to work remotely often ask if there are alternatives other than wireless.

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Existing rights-of-way

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

Yes

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Repairs and maintenance of Tollgate Canyon Road and / or Forest Meadow Road.

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Technical direction, partnering, and grant opportunities for underserved communities.

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

Yes

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

State, county, or municipal entities,

Local internet service providers

#9

INCOMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Monday, May 22, 2023 9:41:16 AM
Last Modified:	Friday, June 02, 2023 11:47:35 AM
Time Spent:	Over a week
IP Address:	50.208.10.146

Page 1: Organization Information

Q1

Contact Information

Name

Organization   **Comcast**

Department   **Government Affairs**

Phone

Email

Q2   **Yes**

Do you currently have any broadband or digital access
projects, plans, or initiatives underway?

Page 2: Broadband Projects and Initiatives

Q3   **Respondent skipped this question**

Broadband Project Information

Q4   **Respondent skipped this question**

What is the status of this broadband project?

Q5   **Respondent skipped this question**

Estimated Duration of Project (by months)

Q6   **Respondent skipped this question**

Estimated Total Project Cost

Q7

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q8

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q9

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 3: Broadband Projects and Initiatives

Q10

Broadband Project Information

Respondent skipped this question

Q11

What is the status of this broadband project?

Respondent skipped this question

Q12

Estimated Duration of Project (by months)

Respondent skipped this question

Q13

Estimated Total Project Cost

Respondent skipped this question

Q14

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q15

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q16

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 4: Broadband Projects and Initiatives

Q17

Broadband Project Information

Respondent skipped this question

Q18

What is the status of this broadband project?

Respondent skipped this question

Q19

Estimated Duration of Project (by months)

Respondent skipped this question

Q20

Estimated Total Project Cost

Respondent skipped this question

Q21

Is funding for this project secured? If so, please describe amounts and sources.

Respondent skipped this question

Q22

Describe the economic benefits of this project and how these benefits can be measured.

Respondent skipped this question

Q23

Do you have additional broadband projects, plans, or initiatives?

Respondent skipped this question

Page 5: Broadband Projects and Initiatives

Q24

Please list any additional broadband projects, plans, or initiatives.

Respondent skipped this question

Page 6: Broadband Staffing

Q25

Does your organization have any dedicated positions related to broadband expansion?

Respondent skipped this question

Page 7: Broadband Staffing

Q26

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q27

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 8: Broadband Staffing

Q28

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q29

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Page 9: Broadband Staffing

Q30

Please list the position, employment status, and roles for any dedicated broadband positions.

Respondent skipped this question

Q31

Are there additional broadband-specific positions within your organization currently?

Respondent skipped this question

Q32

Please list any additional broadband-specific positions and contacts within your organization (include name, title, department, status, and role).

Respondent skipped this question

Q33

Has your organization explored or had interest in additional, broadband-specific staffing?

Respondent skipped this question

Page 10: Broadband Planning

Q34

To your knowledge, have any local county or city organizations in your area undertaken any data collection efforts as it relates to broadband? If yes, please select the efforts undertaken.

Respondent skipped this question

Q35

Outline any known policy and/or regulatory impediments to the expansion of broadband in your organization. Does your area have any plans to create policies that allow aid to be given in broadband expansion?

Respondent skipped this question

Q36

Are there areas in your city or county where you commonly hear complaints regarding the lack of high-speed internet?

Respondent skipped this question

Page 11: Partner Coordination

Q37

Broadband expansion may be expedited through shared resources and access to existing physical resources to cut costs and quicken expansion. What physical infrastructure does your organization have that it could leverage for broadband expansion?

Respondent skipped this question

Q38

Does your organization have any upcoming capital projects that could be leveraged to deploy broadband infrastructure (conduit or fiber)? For example, any road construction, sewer system repair, or new building projects that could be coupled with broadband deployment.

Respondent skipped this question

Q39

Please list the upcoming capital projects that could be coupled with broadband expansion in your community.

Respondent skipped this question

Q40

What support does your organization need from the Utah Broadband Center moving forward?

Respondent skipped this question

Page 12: Broadband Coalition

Q41

Does your organization have a broadband committee or similar working group tasked with expanding broadband?

Respondent skipped this question

Q42

If a community or broadband action team has been established, select the organizations or sectors that are represented in that group. Select all that apply.

Respondent skipped this question

Appendix C: Notes from Stakeholder Meetings

The following pages include notes from stakeholder meetings and workshops gathered as part of the Summit County local broadband planning outreach. Stakeholder meeting and workshop notes gathered as part of the Connecting Utah statewide outreach in counties within the Summit County are also included as part of this appendix.

Summit County | Statewide Connecting Utah Workshop | January 17, 2023

Elected Official Workshop Notes

- Access
  - Eastern side of county
    - Main provider is AllWest
      - Only cable provider, all the others are fixed wireless
      - Based out of Kamas
    - Have another provider but haven't expanded into Henefer
    - Wicked Fast Internet in Park City, gotten to Wanship
    - Utah Broadband have a little service here, that's about all the options
  - Where does cellular lie? Have a lot of people with cellular hot spots
    - Doesn't technically qualify
    - Priority projects are fiber
  - Working with AllWest about trying to get broadband into Tollgate, because lots are so big it's 6x more expensive to get broadband there (about $30k/home)
    - Wireless options might be more appropriate in some areas
    - Horrocks representative discussed match requirements
  - Park City
    - Pinebrook area, not consistent due to mountains
      - Challenging to do work from home in some areas
  - Have communities that are still copper, limited to speeds
  - Kimball Junction connected to Utopia Fiber, work with UEN through e-Rate and that has 1 gig. Costs lets than running 100 Mbps in Kamas and Coalville through AllWest
  - In the last year, when redid connection, fiber cost went down (got some funding)
  - Most of Henefer is on copper
  - We need another provider on the east side of the county
  - UDOT coming this direction, hopefully in the next few years
  - Library will have IT people contact us with their dead spots
  - Park City proper
    - CenturyLink had slow speeds, didn't want to pay for access
    - Comcast; paying for 300 Mbps, get 40
    - Wicked Fast came in, wireless, not getting speeds paying for
    - Jeremy Ranch, Silver Summit, don't have as good of speeds
    - Promontory is unhappy with AllWest
  - Low-income apartments also underserved, along Rasumssen Road, Elk Meadow, Aspen Villas, Park Side
    - Kids really struggle
    - Tried Wicked Fast for apartments, but really did not work
- Policies
  - Any dig once requirements or policies?
    - Trying to put into approvals several years ago, had to have at least some conduit for developments
    - Not in policies right now
    - Conduit can be used as part of the match
    - Have some legislative leaders from construction backgrounds that tend to be more restrictive

- Want to allow development codes to be expanded to allow for dig once
  - New development is easier, preexisting places are harder
  - Bring up with UBC and Utah Senator that works closely with them
- Libraries
  - Park City Library system
  - Summit County Library system
  - Hot spot programs
    - Get used a lot, have 21 that loan out, always check out, speed is at 25 Mbps (Summit)
      - 21 total for three libraries
      - Would like to have 30-40, so people can come get one, and not have to wait
    - Park City also has one
  - State library grant allowed to double the amount of hot spots, through CARES or ARPA. Pay $10/month per hot spot right now. Would like speeds to be faster
  - Libraries see people coming in for help, broadcast wifi into parking lot so people can access when closed
  - From time to time will offer training classes, a lot of help is one-on-one, looking at Chromebooks
    - Used to have 7-8 seniors come in
    - A lot of people asking for help with basic computer stuff, Virtual VITA, eBooks on Libby
  - Libraries would love to help every way can, will push testing and ACP
- Senior Center
  - Best one is in Kamas, in same facility in library so trying to work on one-on-one appointments
  - Have senior centers in all three areas of the county
- Schools
  - Have 100 wifi, but hard to get during pandemic, have them all checked out like a library book. Always used
    - Transitioned from packets after the first 4-6 weeks
  - Kids have 1 to 1 devices, K-5 stay in school, 6-12 go home every day
  - 7+ year recycle program, sometimes donate to North or South Summit after that
  - Do online classes in partnership with other entities, Utah Schools Connect, Silver Summit
  - Biggest barriers
    - Some kids ride buses for two loops on city in order to get connectivity
    - Lots of kids doing homework in library parking lots
    - 20-25% low income, not along ethnicity lines
    - Affordability is a big issue
  - Not sure if High Valley offers connection on transit; think probably not
    - Goes to Wasatch County and Salt Lake
- Economic development
  - What is on the horizon for Summit County?
    - Western side of county has enough approved development rights to support 100K people
      - Functional part of Park City has 35K, want to keep to 50K
    - Eastern side of county seeing a lot of development pressure, leading to other issues like affordable housing, transportation

- 5K people in North Summit
- Blue Sky, Cedar Valley, developments can see more than 10K people come in in the next five years
- Also seeing a lot of development around Jordanelle (Wasatch County)
  - Interesting to see what connection looks like there, based on geography
    - Do connectivity plans exist now? Not in general plan, not sure if have in other plans
- Labor
  - Significant challenge county wide in all industries
    - Better this year than last year
    - Will see changes in labor market this year, unemployment rate will probably go up this year
    - Housing biggest impediment, somewhat more affordable on west side
    - County incentivized about 1000 units in the last four years
      - Canyons has 400 units coming online now to house workers
      - New development, if commercial, need to fill workers for development first, before going out
      - Council will be doing a dissection of affordable housing
        - Service providers—32% of first responders live outside the county
      - Some public-private partnerships
      - Working on figuring out housing
    - Also have a lot of employees living outside Summit County and commuting (from Salt Lake)
      - Compete with family ties, entertainment
- What are the top three things that you would like to see in statewide plan
  - Incentivizing a way for last mile connection, getting them to last mile so it can be affordable for providers. If can make it more affordable to reach houses, can make it more affordable for competitors to come in
  - Want more providers in Kamas and Coalville, more competition and opportunities
    - Starlink seems to work, but pretty expensive
  - Would like students to have affordable access at home
- Kamas happy to share information UBC

Public Workshop Notes
- Connectivity
  - Silver Creek—half has fiberoptic, the other side has wireless. Big problem, because everyone connects to one antenna, then it doesn't work
    - Only one provider
  - School district provides hotspots for kids
    - Everyone in the family would then connect to hotspot, so then it didn't work
    - Hotspot is not a solution
  - Low-income housing areas have some problems connecting as well
    - Were supposed to get free internet but never happened
- Digital resources
  - Would be helpful to have devices for unsheltered populations. Using refillable cards, but they go fast. Usually park outside the library, but sometimes get turned

away by the police. Police asked the library to turn off the wifi at night, but the library continues to offer the service

- ▪ Bus stops often used by unsheltered people, could be a good place for wifi
  - ○ Senior center
    - ▪ Have a monthly visit from Park City library to answer questions and provide help for devices
    - ▪ Four months ago, had high-speed internet connected by Comcast, have two modems there that provide a signal for people who want to use
      - • Lift Zone
    - ▪ Still becoming used to it
    - ▪ A lot of people that aren't interested in internet at all, still using flip phones. Had to expel people from board of directors because they weren't connected at all and couldn't be communicated with
    - ▪ What can help people overcome lack of interest?
      - • Some just won't be interested
    - ▪ Important that they have someone that they can depend on to get them information (family member, friend, etc.)
- • Veterans
  - ○ Serve 12 counties, high population in Park City. Older veteran population, on fixed income, internet is not a priority.
    - ▪ Organization in process of a digital transformation, hit a challenge with that
      - • Especially unsheltered population, doesn't have email, hard to get connected to them
      - • Struggle because trying to innovate, but still serve an aging population
      - • VA benefits are still available in person now, but moving toward more virtual appointments, etc. Especially for rural populations. Can try to see if VA has any data
      - • A lot of veterans traveling from other areas, even other states to VA in SLC at least once a month or once a quarter
    - ▪ Currently do not offer digital skills training or hotspots
    - ▪ Older population, probably highest barrier is interest
    - ▪ Younger populations, probably highest barrier is affordability
- • If everyone was able to access the ACP, with navigator help, would people take advantage of that?
  - ○ Some stigmas in VA community about using federal assistance, thought that it will be reported back to the DoD, do a lot of education around those services. Higher rate of success in programs that don't share data with third parties or government. May be able to help with ACP education piece
- • What type of programs would you like to see or would be helpful to connect your folks?
  - ○ CCPC (helping low-income, dv, unhoused that really need support to access resources), if had a program where could get people to the internet through hotspots, basic skills. Could widen to help people with classes
    - ▪ Don't currently have Lifeline program, right now they offer financial assistance for minute phones
    - ▪ Would need training and information about resources
    - ▪ NTIA representative explained benefits of pairing Lifeline and ACP benefits together

- How would connectivity impact your clients?
  - Make finding jobs and resources much easier for people
  - Mental health, helping children
- Online health
  - Demand for online therapy and telehealth appointments; suspended all in-person appointments during early COVID. Hard to do telehealth with younger kids, but older kids, adolescents, adults is an option
    - Barrier at some points; 2020 used tablets and hotspots to connect for appointments, or tried to schedule appointments that didn't overlap so can use the device for multiple appointments
    - Parenting classes have been incredible to do remotely, can have both parents there
    - Most clients join from mobile devices
  - Still give out tablets and hotspots, don't know how utilize it is now
- Communication with clients
  - Do social service providers experience challenges communicating with clients? Do you spend more time than you should because of internet issues, adoption issues?
    - Many families use WhatsApp to communicate on phone, big part of the population that serve, especially for Latinos. If information isn't shared on WhatsApp, they won't get the information at all. Better responding back via text message than anything else.
    - Email doesn't work. Never expect that parents will respond to email, better if you text them.
    - Ran into challenges running virtual events with connection issues, etc. As an organization, not really thinking about this topic, were judging success by the amount of people who registered, but how many families couldn't participate because they didn't have access. Started asking self these questions over the past year
    - People want to be texted, not emailed, but don't necessarily have the program set up to collect permission, etc.
      - Also the software isn't free, can be an additional cost
    - See it most when communicating with clients initially, much more responsive to text
    - Calling is worst, email is maybe, texting you hear back right away
      - Used to have a strict agency policy to not communicate via text, now seeing relationships built better via text
- Workforce training
  - Serving military spouses, transitioning military members. Used to have local case managers to connect people with services, now moving everything virtual
    - Need internet to access
    - Refer to other organizations that provide trainings
    - Increased demand for remote work, but have to have appropriate connections to participate in remote work
  - DWS
    - Offer online support for Summit and Wasatch County, because so short-staffed. Does DWS offer a hotspot, device program for onboarding?
- Top priorities

- ○ Reaching Latino population, making sure they have access and are not afraid to sign on, make sure their information is safe, and they have the right to gain access to internet
  - ▪ Internet access, having a phone are top priorities
    - • Right now purchasing phones with wifi
- ○ Also want to see that for homeless population, can reach out to them when something is happening
  - ▪ Phones with no service
- ○ Free or reduced internet for disabled veterans and their caregivers, as well as families
- ○ Free or reduced internet for people at risk of suicidal ideation, so they can reach out when need help
- ○ Use emergency line for people that are victims of domestic violence and suicidal ideation
  - ▪ Independent access to phones and service, not controlled by abusers
- ○ Digital literacy classes
  - ▪ What is an email address? What does it mean to have an online identity, etc.? Helpful for populations who are uninterested or nervous about access
- ○ Subsidies for equipment; initial laptop/tablet purchase, income-based qualification
- ○ Ensure that those services are offered in different languages, for refugees and immigrants; hiring trainers and staff that speak the languages

Appendix D: Notes from Internet Service Provider Meetings

The following pages contain notes from meetings held with ISPs as part of the Summit County local broadband planning efforts.

All West Communications | June 9, 2023

Attendees:
- All West – Phil Marchant, Jack Walkenhorst
- Summit County – Ron Boyer, Jeff Jones
- Park City IT – Scott Robertson
- Horrocks Engineers – Eleise Lowe

Meeting Summary:

Updates on build-out areas All West has received USDA grant funding for
- Weber Canyon (10-12 miles, Smith Morehouse to end of road)
- Huff Creek Canyon in Upton
- Clark Canyon in Coalville

Discussion on Costs
- 60% for distribution
- 40% for fiber to the home

Summit County concerns
- Toll gate / Jeremy Ranch area - #1 priority, lots of full-time residents, most complaints regarding connectivity from this area
- All West has reported too high for Henefer and Oakley
  - NOTE FROM ALLWEST ON JULY 25, 2023: Have reviewed the FCC location map and adjusted coverage areas to reflect actual coverage locations.

Comcast | June 9, 2023

Attendees:
- Comcast – Joseph Silverzweig, Kate Sneed, Jennifer Somers
- Summit County – Ron Boyer, Jeff Jones
- Park City IT – Scott Robertson
- Horrocks Engineers – Eleise Lowe

Meeting Summary:

Discussion on areas Comcast is expanding service with private company funding
- Promontory
- Ski resort areas
- Silver Creek
- Jeremy Ranch

Discussion on dig-once
- Summit wants to know if Comcast would place fiber in County or City owned conduit
  - Comcast minimum specs – (2) 2" HDPE Conduit, Pull box spec from Comcast
- Comcast would like to be emailed any time there is open trench or new development in Summit County

Discussion on Comcast Internet Essentials Plan
- Internet Essentials Plan is Comcast's low cost internet plan. Costs $30/month for those that qualify for ACP. Internet is then free since they can receive $30/month government funding for internet.
- Summit County has 4200 seasonal workers for ski season – lower income individuals
- Comcast can partner with Park City Community Foundation to help people sign up for ACP and other programs they qualify for
  - Get in contact with the Comcast ACP specialist (Deneiva Knight)

Additional information shared from Comcast via email July 18, 2023 and July 26, 2023:

1. Internet Essentials Plan

Comcast's Internet Essentials Plan is low-cost, high-speed internet for anyone on Federal Assistance. It's $9.95 a month for a 50/20 Mbps plan and $29.95 a month for a 100/20 Mbps plan. With the Federal $30/month ACP benefit, that means that high speed internet is free to qualifying income constrained-income Xfinity customers. Internet Essentials also comes with access to a brand-new laptop computer for just $150 as well as a full suite of digital literacy training through the website.

2. ACP questions – Ioana Platon is our Community Impact specialist and best point of contact for ACP partnerships and questions. Deneiva Knight is the Director of External Affairs for the market.

3. Community Impact – We are renewing our **digital connectivity project** with the People's Health Clinic (PHC) Foundation in Park City. People's Health Clinic is a volunteer-driven, community-supported non-profit clinic providing high-quality, no-cost healthcare to uninsured residents of Summit and Wasatch

Counties in Utah. PHC serves individuals with no health insurance who are Summit and Wasatch Counties residents. During 2021, we provided 13,100 patient encounters, and over 150 medical providers and staff volunteers made this possible. **Our partnership** involves promoting Internet Essentials—Comcast's flagship digital equity initiative--and the affordable connectivity program. Upon finalizing our partnership with PHC, the clinic will amplify these opportunities by placing marketing collateral in highly trafficked areas, waiting room TV screens, pamphlets near check-in desks, and inclusion in any take-home packets. In addition, we are seeking opportunities to host on-site awareness and sign-up events in collaboration with the Summit County community and PHC.

Furthermore, we have a history of working closely with the Park City Gazette to **highlight human stories** that amplify the need and benefits of digital connectivity. We plan to continue this partnership to expose the underrepresented community in Summit County to digital connectivity opportunities.

Appendix E: Sample Specifications and Policies

Attachments in this section include:

1. UDOT specifications for fiber conduit

2. UDOT standard drawing for fiber junction box and utility vault

3. "Dura-line Dig Once Best Practices" with state legislation examples

ATMS CONDUIT

PART 1   GENERAL

1.1   SECTION INCLUDES

A.   ATMS conduit for communications and fiber optic cables.

B.   Detectable pull tape, conduit, and all materials, labor, workmanship, equipment, and incidental items required for a complete system of conduit.

1.2   RELATED SECTIONS

A.   Section 02056: Embankment, Borrow, and Backfill

B.   Section 02221: Remove Structures and Obstruction

C.   Section 02705: Pavement Cutting

D.   Section 02741: Hot Mix Asphalt (HMA)

E.   Section 02776: Concrete Sidewalk, Median Filler, and Flatwork

F.   Section 02842: Delineators

G.   Section 03575: Flowable Fill

1.3   REFERENCES

A.   ASTM D 2241: Poly-Vinyl Chloride (PVC) Pressure-Rated Pipe (SDR Series)

B.   ASTM F 2160: Solid Wall High Density Polyethylene (HDPE) Conduit based on Controlled Outside Diameter (OD).

C.   National Electrical Code (NEC)

D.   National Electrical Manufacturers Association (NEMA)

E.   State of Utah Administrative Rules

F.   Underwriters Laboratories (UL)

1.4   DEFINITIONS   Not Used

1.5   SUBMITTALS

    A.   Manufacturer's product data sheets and recommended installation instructions.

    B.   Manufacturer's warranties and parts lists

    C.   Conduit Mandrel Test Form prior to substantial completion.

    D.   Refer to http://www.udot.utah.gov/go/standardsreferences for blank forms for this Section.

PART 2   PRODUCTS

2.1   MATERIALS

    A.   Conduit and fittings for ATMS communication and fiber optic conduit
        1.   Schedule 40 PVC rated at 194 degrees F as specified in NEMA TC-2, NEMA TC-3, ASTM D 2241,
        2.   High Density Polyethylene (HDPE) SDR11 rated complying with ASTM F 2160.
            a.   HDPE conduit with smooth outer wall and ribbed or smooth interior wall.
            b.   Fittings and couplers rated for a minimum of 130 psi.
            c.   Mechanical type couplers when joining HDPE and PVC conduits.
        3.   Microduct
            a.   HDPE microduct with an outside/inside diameter of 0.500/0.394 inch (12.7/10 mm) or 0.630/0.512 inch (16/13 mm) or 0.709/0.551 (18/14 mm), as shown.
            b.   Microduct having a ribbed interior.
            c.   Watertight couplers rated for a minimum of 200 psi.
            d.   Microduct bundle within a single 0.100 inch thick polyethylene oversheath.
            e.   Microduct bundles must contain a factory installed #14 AWG solid, insulated locate wire and a minimum of two rip cords for removal of oversheath.

    B.   Conduit Banks
        1.   New, prefabricated
        2.   ATMS Multi-duct Conduit Types
            a.   1D = four 1.25-inch conduits

  b. 2D = eight 1.25-inch conduits

  c. 4D = sixteen 1.25-inch conduits

 3. Color-code each conduit or cell as follows:

  a. One, two, or three conduits gray

  b. 1D Bank 1 blue, orange, green and brown

  c. 2D Bank 1 blue, orange, green, and brown

      Bank 2   slate, white, red, and black

  d. 4D Bank 1 blue, orange, green, and brown

      Bank 2   slate, white, red, and black

      Bank 3   same as bank 1 with a contrasting stripe

      Bank 4   same as bank 2 with a contrasting stripe

 4. Microduct types:

  a. Individual 0.500/0.394 inch (12.7/10 mm) or 0.630/0.512 inch (16/13 mm) microducts installed loosely within new or existing conduit.

  b. MD2, MD3, MD4 and MD7: microduct bundle containing two, three, four or seven 0.709/0.551 inch (18/14 mm) microducts respectively.

  c. Factory-assembled bundles for bundled applications.

 5. Color-code microducts and oversheaths as follows:

  a. Individual microducts installed loosely within conduit or bundled within oversheath:

    1) blue

    2) orange

    3) green

    4) brown

    5) slate

    6) white

    7) red

    8) black

  b. Oversheaths:

    Bundle #1 blue

    Bundle #2 orange

    Bundle #3 green

    Bundle #4 brown

C. Meet or exceed all of the conduit manufacturer's recommendations for materials used in the installation of conduits including sweeps, adapters, couplings, glue, plugs, and fittings.

 1. Conduit plugs must seal the conduit and allow the secure fastening of detectable pull tape.

D. PVC conduit sections – Nominal 20 ft sections. Couplings and fittings must provide watertight integrity.

E.   Sweeps – factory manufactured sweeps (11¼, 22½, 45, and 90 degree angles) complete with bell and spigot.

F.   Detectable Pull Tape – flat profile, low stretch polyester, detectable, sequential footage marked, 1,200 lb tensile strength pull tape in each conduit.

G.   Backfill
      1.   Flowable Fill – Refer to Section 03575.
      2.   Free Draining Granular Backfill – Refer to Section 02056.
      3.   Sand
            a.   Friable natural river or bank aggregate, free of loam, detrimental, or soluble or organic matter.
            b. $^3/_8$ inch minus, well graded.
      4.   Hand-mix grout
            a.   Minimum strength – 50 psi
            b.   Maximum strength – 150 psi
            c.   Slump – 5 inches to 10 inches

H.   Rigid Metal Conduit (RMC) complying with UL-6. Zinc galvanized exterior coating complying with ANSI C80.1.

I.   Liquidtight Flexible Metal Conduit (LFMC), -30 degrees C to 80 degrees C rated, UL 360 listed.

J.   Liquidtight Flexible Nonmetallic Conduit (LFNC), 80 degrees C dry, 60 degrees C wet rated, sunlight resistant, UL 1660 listed.

PART 3   EXECUTION

3.1   GENERAL

A.   Maximum spacing between junction boxes and vaults
      1.   500 ft for electrical cable.
      2.   1,000 ft for fiber optic cable on tangent surface street installations.
      3.   2,500 ft for fiber optic cable on tangent highway installations.
      4.   Reduce maximum spacing if horizontal or vertical deflection incurred during installation prevents the installation of cable within maximum pulling tension rating of the cable.
      5.   Notify the Engineer if utility avoidance requires junction box and conduit locations differing from requirements for deflection in this Section, article 3.2.

B. Minimum Cover of Conduit
1. Minimum cover under pavement is 4ft and minimum cover under sidewalks is 3 ft.
2. Minimum cover in highway right-of-way, greater than 20 ft from the edge of the pavement is 3 ft.
3. Minimum cover in highway right-of-way, within 20 ft of the edge of the pavement is 5 ft.
4. Refer to State of Utah Administrative Rule 930-7

3.2 INSTALLATION

A. Prevent conduit from deflecting vertically or horizontally along its length by a ratio greater than 10:1, (no more than 4-inch deflection per 40 inch in length) when installing conduit that houses communication cable.

B. Prevent sum total of the vertical and horizontal conduit deflection or bend between any two junction boxes from exceeding 270 degrees when installing conduit.

C. Install conduit within 1 ft of existing parallel conduit run if the planned location of conduit is parallel to the existing traffic signal or ATMS conduit.

D. Obtain approval for field bending of conduit with the Engineer in cases where factory sweeps are not appropriate. Field bending must be performed using a heat box or heat blanket. Torch heating conduit is prohibited. Install all conduit bends to have a radius that is not less than the following:
1. 24 inches within the cabinet and pole foundations
2. 36 inches in all other locations
3. 46 inches for MD7 microduct bundle
4. 40 inches for MD4 microduct bundle
5. 36 inches for MD3 microduct bundle
6. 32 inches for MD2 microduct bundle
7. 12 inches for individual microduct

E. Install conduits that cross finished curbs and gutters, sidewalks, concrete flatwork, or textured or decorative surfaces by boring, jacking, or drilling. Replace any damaged concrete sections, joint to joint. Refer to Section 02221.

F. Proof all conduit before installation of cabling and detectable pull tape.
1. Use a mandrel at least 80 percent of the conduit diameter, at least twice as long as the conduit diameter, and composed of rigid material.
2. Schedule proofing with the Engineer at least 5 working days in advance of performing the work.

3. Proof all conduit with a Department representative witness present.
4. Complete and submit a completed Conduit Mandrel Test Form for all ATMS conduit.
5. Proof microducts using proofing balls.
6. Proofing balls must maintain a minimum 80 percent fill ratio of inside diameter of the microduct being tested.
7. Proofing must occur after all junction boxes have been installed to final grade, including placement of flowable fill or hand-mix grout at junction box walls, and after all excavation in the immediate proximity of the conduit system has been completed.
    a. Re-proof any conduit segment where excavation has occurred near the conduits following initial proof testing.

G. Provide detectable pull tape in all conduits.
1. Install continuously between junction boxes.
2. Fasten securely to conduit plug and leave 6 ft of pull tape slack inside of the conduit.
3. Do not splice detectable pull tape in conduit.
4. Use flat profile, low stretch polyester, 1,200 lb tensile strength detectable pull tape that is sequential footage marked.
5. Verify that the pull tape is detectable throughout its entire length by performing a continuity test or equivalent verification.
6. Detectable pull tape not required in microducts.

H. Encase open trench conduit in sand backfill covered by flowable fill within existing roadway, proposed roadway and sidewalk pavement areas only.
1. Seal junction box wall around conduits using flowable fill or approved hand-mix grout.
2. Use 6 inches of sand backfill covered with native material in all other areas.
3. Refer to AT Series Standard Drawings.

I. Use rigid metal conduit or schedule 80 PVC conduit for above ground application.
1. Liquidtight flexible metal conduit (LFMC) or liquidtight flexible non-metallic conduit (LFNC) is permitted in lengths not exceeding 6 ft where not subject to physical damage.
2. Apply corrosion protection to any portion of rigid metal conduit buried in the ground or encased in concrete.

J. Use PVC or HDPE conduit for underground application.

K. Warning Tape
1. Install orange warning tape with black legend "Caution - Buried Communication Cable," in all trenches containing multi-duct conduit or conduit containing communication cables.

2. Install red warning tape with black legend "Caution - Buried Electric" in all other trenches.
3. Not required when flowable fill is directly overlaid with asphalt pavement or PCCP.
4. Not required when boring or plowing conduit.

L. Install a bushing or adapter at ends of all conduits that contain a conductor according to the NEC.

M. Furnish and install Utility Marker Posts along the longitudinal conduit running line. Refer to AT Series Standard Drawings and Section 02842.

N. Install a #14 AWG solid, insulated locate wire inside of new or existing conduit with individual microducts.
1. Verify that all locate wires are detectable throughout their entire length by performing a continuity test or equivalent verification.

3.3 TRENCH

A. Paved Asphalt Surface
1. Install T-patch over trenched area according to AT Series Standard Drawings.
2. Cut pavement from roadway surface to roadway base on both sides of trench to provide a clean, straight wall for T-patch before any backhoe use according to Section 02705.
3. Refer to AT Series Standard Drawings for depth of flowable fill under paved surfaces.
4. Evenly apply tack coat on final backfill before installing T-patch.
5. Place restoration patch – match the composition, density, and elevation ($\pm\frac{1}{4}$ inch), of the existing surface according to Section 02741.
6. Apply a hot-pour rubberized asphalt joint sealant or approved equal after the patch is installed.

B. Sidewalk or Decorative Pavement
1. Use flowable fill to bottom of new pavement or sidewalk.
2. Match existing pavement thickness. New pavement thickness must be 3½ inches minimum and 8 inches maximum.
3. Restore sidewalk or decorative pavement to original condition or better after work is completed. Refer to Section 02776.

C. Unpaved Surface
1. Backfill using native material, if suitable, that matches the composition, density, and elevation (±0.2 inch), of the existing surface according to Section 02056.

        2.   Dispose of surplus material promptly.

        3.   Sand Backfill

            a.   Use sand backfill in trench sections outside of existing roadway, proposed roadway, and sidewalk pavement areas, including exposed conduit locations when plowing or boring.

            b.   Provide 6 inches of sand backfill above conduit in trench.

                1)   Backfill trench above sand to finished grade using native material.

                    a)   Backfill and tamp in 6 inch lifts.

            c.   Compaction of sand backfill is not required.

D.   Sleeve foreign utilities that cross a trench so they are not encased in flowable fill.

E.   Place all conduits in the same trench whenever possible.

F.   Flowable Fill or Hand-mix Grout

        1.   Install flowable fill or approved hand-mix grout to the wall of junction box to seal conduit entry into junction box.

        2.   Clean excess flowable fill or hand-mix grout from the inside of the junction box.

G.   Install all conduits so the flowable fill or sand backfill completely encases all exterior surfaces of the conduit.

        1.   Separate multi-duct conduits using a commercially available conduit spacer or approved equivalent.

        2.   Place spacers no more than 4 ft apart and not more than 2 ft from each coupler.

H.   Anchor the conduit in trench at 16 ft intervals to maintain the required conduit depth during flowable fill placement.

I.   Minimum separation between all conduits and the wall of the trench is 1½ inches.

3.4   BORE OR PLOW

A.   Immediately contain, remove, and properly dispose of all excess drilling fluid.

3.5   USE OF EXISTING OR OCCUPIED CONDUIT
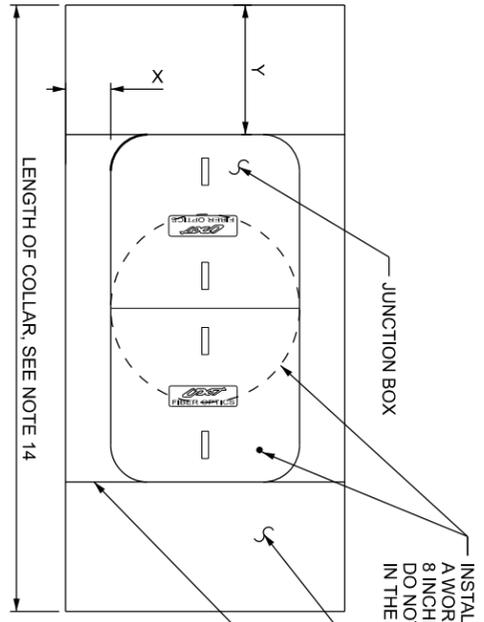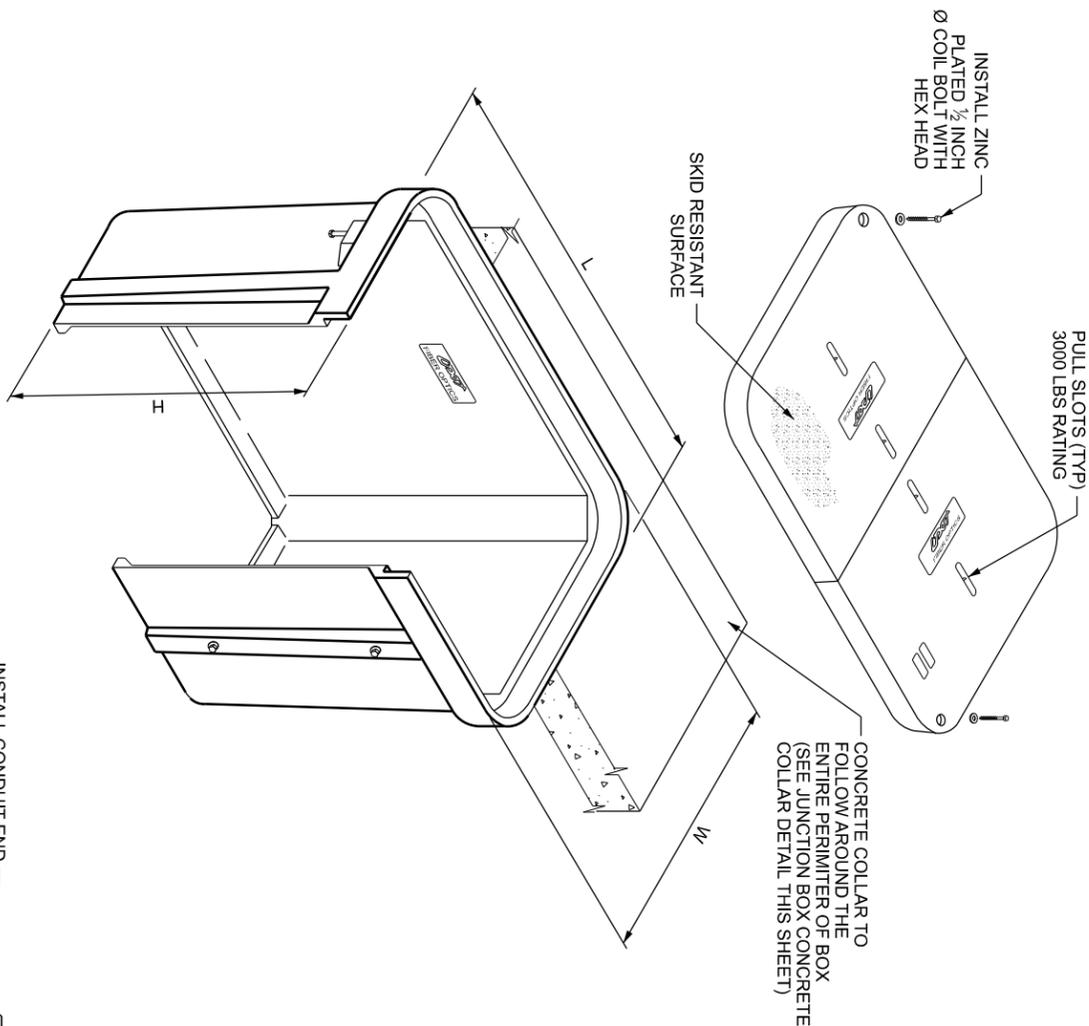
A.   Maintain the physical condition and functional integrity of all cabling and wiring in existing or occupied conduit.

B.   Cable or wire installation in an existing or occupied conduit.

1. Remove any existing fiber optic cable or copper wire.
2. Test the integrity and clean the conduit by successfully pulling a Department-approved mandrel through the conduit.
3. Re-pull existing and new fiber optic cable or copper wire together.
4. Perform all necessary splices and replace any impacted fiber cable and spider fan-out kits according to Section 13594.

C. Use existing conduit in-situ only if shown and as approved by the Engineer.

D. Intercept individual microducts from existing microduct bundle mid-span and reroute to new junction box location:
   1. Type II-PC junction box
      a. Bury at existing microduct bundle depth.
      b. Notch the 24-inch box walls and install junction box over existing microduct bundle.
      c. Provide 12 inches of free draining granular backfill borrow underneath junction box.
      d. Encase all conduit in flowable fill orhand-mix grout where the conduit enters the junction box.
      e. Place locate ball or disk in junction box.
      f. Ground rod, and grout floor are not required.
   2. Conduit and microduct bundle inside of buried Type II-PC junction box.
      a. Install conduit from buried junction box to new junction box location for rerouting of individual microducts. Provide #14 AWG solid, insulated locate wire inside of new conduit between junction boxes.
      b. Extend conduit and microduct oversheath 6 inches beyond inside wall of the junction box.
      c. Expose microducts by removing no more than 20 inches of oversheath.
      d. Identify and cut only the individual microducts to be rerouted.
      e. Use approved couplers and extend microducts to new junction box using corresponding microduct color.
      f. Splice all locate wires together using an approved waterproof connector.
         1) Verify that the locate wire conductors are not exposed.
   3. New junction box location
      a. Install new junction box within 20 ft of buried junction box or within 20 ft of edge of roadway when existing microduct bundle is underneath roadway, to provide access to locate wire for mapping and locating purposes.

3.6 REPAIR OR RESTORATION

A.   Restore all areas, including landscaping, concrete pavement, asphalt, finished curbs and gutters, box culverts, sewers, underground water mains, sprinkler systems, sidewalks, concrete flatwork, colored, textured, or decorative surfaces damaged during conduit and junction box installation.

B.   Coordinate with local utilities for utility repair.

C.   Notify the Engineer of all necessary repairs.

D.   Replace all damaged facilities in kind.

E.   Buried microduct bundle coupling and repair:
1.   Expose microducts by removing no more than 12 inches of oversheath beyond area to be coupled or repaired.
   a.   Trim microducts to length as necessary to eliminate all bends and deflection.
2.   Use approved couplers.
3.   Splice the locate wires together using an approved waterproof connector.
   a.   Verify that the locate wire conductors are not exposed.
4.   Protect exposed microducts, couplers and locate wire using split duct.
   a.   Seal split duct joints and split duct ends around microduct bundle oversheath using approved waterproof sealing tape or other approved methods prior to backfill.
   b.   Do not use heat-shrink or cold-shrink protection methods.
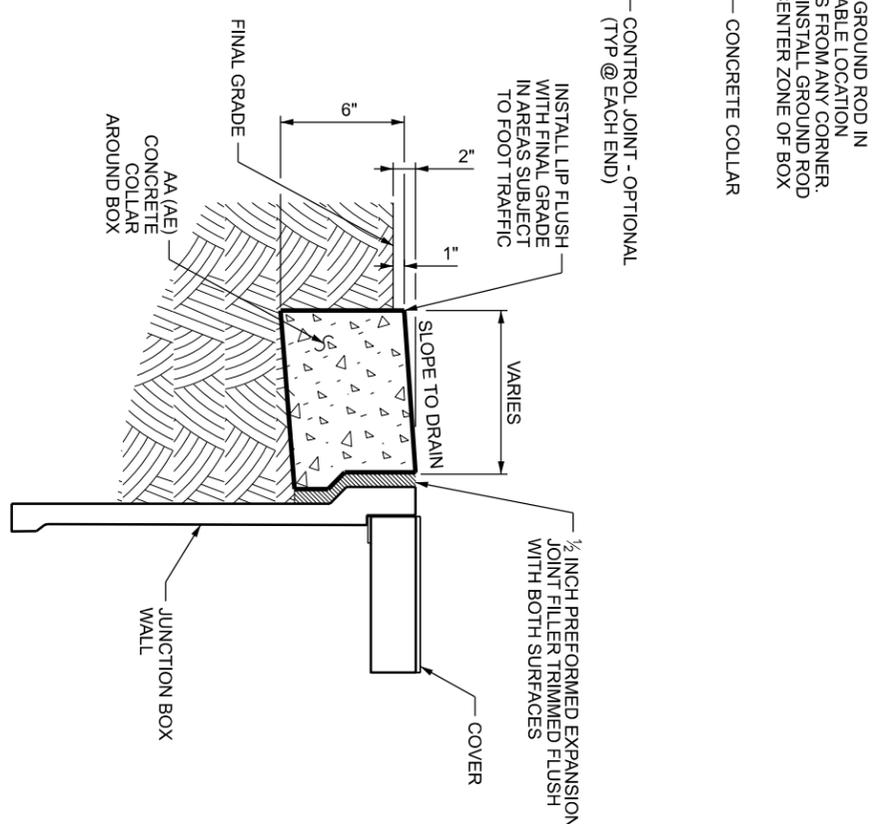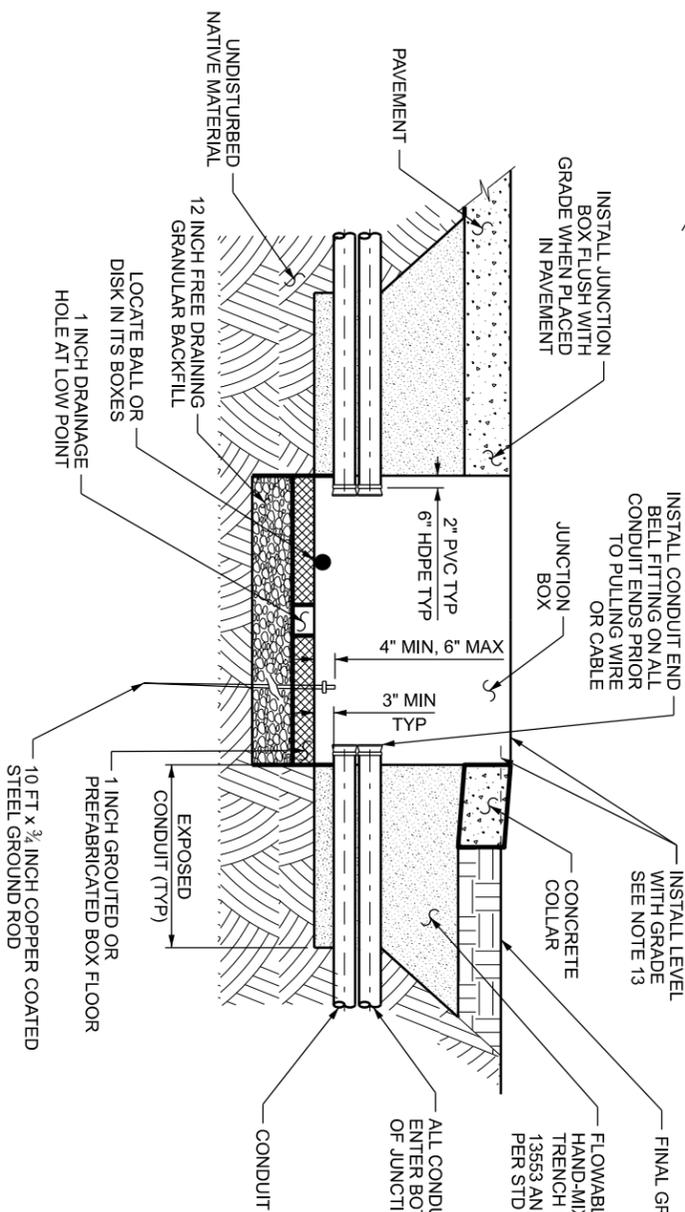
END OF SECTION

JUNCTION BOX CONDUIT PENETRATION DETAIL

- UNDISTURBED NATIVE MATERIAL
- PAVEMENT
- INSTALL JUNCTION BOX FLUSH WITH GRADE WHEN PLACED IN PAVEMENT
- 12 INCH FREE DRAINING GRANULAR BACKFILL
- LOCATE BALL OR DISK IN ITS BOXES
- 1 INCH DRAINAGE HOLE AT LOW POINT
- 10 FT x ¾ INCH COPPER COATED STEEL GROUND ROD
- 2" PVC TYP
- 6" HDPE TYP
- 4" MIN, 6" MAX
- 3" MIN TYP
- JUNCTION BOX
- INSTALL CONDUIT END BELL FITTING ON ALL CONDUIT ENDS PRIOR TO PULLING WIRE OR CABLE
- INSTALL LEVEL WITH GRADE SEE NOTE 13
- 1 INCH GROUTED OR PREFABRICATED BOX FLOOR
- EXPOSED CONDUIT (TYP)
- CONDUIT
- ALL CONDUIT TO ENTER BOTTOM HALF OF JUNCTION BOX
- CONCRETE COLLAR
- FINAL GRADE
- FLOWABLE FILL OR APPROVED HAND-MIX GROUT TO EDGE OF TRENCH PER STANDARD SPECIFICATION 13553 AND 1½ INCH MIN CLR PER STD DWG AT 6 (TYP).

PLAN VIEW - JUNCTION BOX AND CONCRETE COLLAR

- INSTALL ZINC PLATED ½ INCH Ø COIL BOLT WITH HEX HEAD
- SKID RESISTANT SURFACE
- PULL SLOTS (TYP) 3000 LBS RATING
- CONCRETE COLLAR TO FOLLOW AROUND THE ENTIRE PERIMTER OF BOX (SEE JUNCTION BOX CONCRETE COLLAR DETAIL THIS SHEET)
- H
- L
- W

- LENGTH OF COLLAR, SEE NOTE 14
- INSTALL GROUND ROD IN A WORKABLE LOCATION 8 INCHES FROM ANY CORNER. DO NOT INSTALL GROUND ROD IN THE CENTER ZONE OF BOX
- CONTROL JOINT - OPTIONAL (TYP @ EACH END)
- JUNCTION BOX
- CONCRETE COLLAR
- X
- Y

TABLE OF DIMENSIONS

BOX TYPE	"W" inch	"L" inch	"H" inch	"X" inch	"Y" inch	LOADING
I-PC	13	24	13	10	10	TIER 22
II-PC	24	36	24	10	24	TIER 22
III-PC	30	48	36	10	24	TIER 22

JUNCTION BOX CONCRETE COLLAR DETAIL

- FINAL GRADE
- AA (AE) CONCRETE COLLAR AROUND BOX
- INSTALL LIP FLUSH WITH FINAL GRADE IN AREAS SUBJECT TO FOOT TRAFFIC
- 6"
- 2"
- 1"
- SLOPE TO DRAIN
- VARIES
- ½ INCH PREFORMED EXPANSION JOINT FILLER TRIMMED FLUSH WITH BOTH SURFACES
- JUNCTION BOX WALL
- COVER

NOTES:

1. BOX LOGO OR NAME PLATE, REFER TO STANDARD SPECIFICATION 13554.
2. DO NOT PLACE JUNCTION BOXES IN THE TRAVELED WAY OR ON FREEWAY SHOULDERS.
3. CONCRETE COLLAR WIDTH VARIES WHEN ADJACENT TO ITS CABINETS. REFER TO AT AND SL SERIES STD DWGS.
4. PROVIDE CONCRETE COLLARS EXCEPT WITHIN CONCRETE PAVED AREAS.
5. INSTALL CONDUIT PLUG PER STANDARD SPECIFICATION 13554.
6. ALIGN ITS CONDUIT BY COLOR ON EACH SIDE OF THE JUNCTION BOX.
7. PROVIDE TYPE III-PC JUNCTION BOXES WITH A SPLIT LID.
8. CONFORM TO ANSI/SCTE-77 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY" TIER 22 LOADING FOR ALL JUNCTION BOXES. TIER 22 ID PLATE TO BE VISIBLE ON BOX.
9. EXTEND GROUND ROD A MINIMUM OF 4 INCHES AND A MAXIMUM OF 6 INCHES ABOVE BOTTOM OF JUNCTION BOX.
10. USE INTER SYSTEM GROUNDING BRIDGE CLAMP FOR BONDING TO GROUND ROD. ATTACH NOT MORE THAN 4 WIRES PER CLAMP.
11. DO NOT CUT GROUND RODS.
12. PROVIDE CLEAR SPACE OF AT LEAST 36 INCH FOR PERSONNEL TO PULL LID OFF BOX WITHOUT CONFLICT.
13. PLACE JUNCTION BOXES AND CONCRETE COLLARS LEVEL WITH GRADE ON SLOPES 6:1 OR FLATTER. REFER TO PLANS FOR DETAILS OF JUNCTION BOX PLACEMENTS ON SLOPES STEEPER THAN 6:1. SLOPE CONCRETE COLLAR TO DRAIN AS SHOWN.
14. INSTALL ENTIRE PAD UNIFORMLY TO LONGEST LENGTH WHEN SEVERAL JUNCTION BOXES ARE BEING PLACED ADJACENT TO ONE ANOTHER.

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
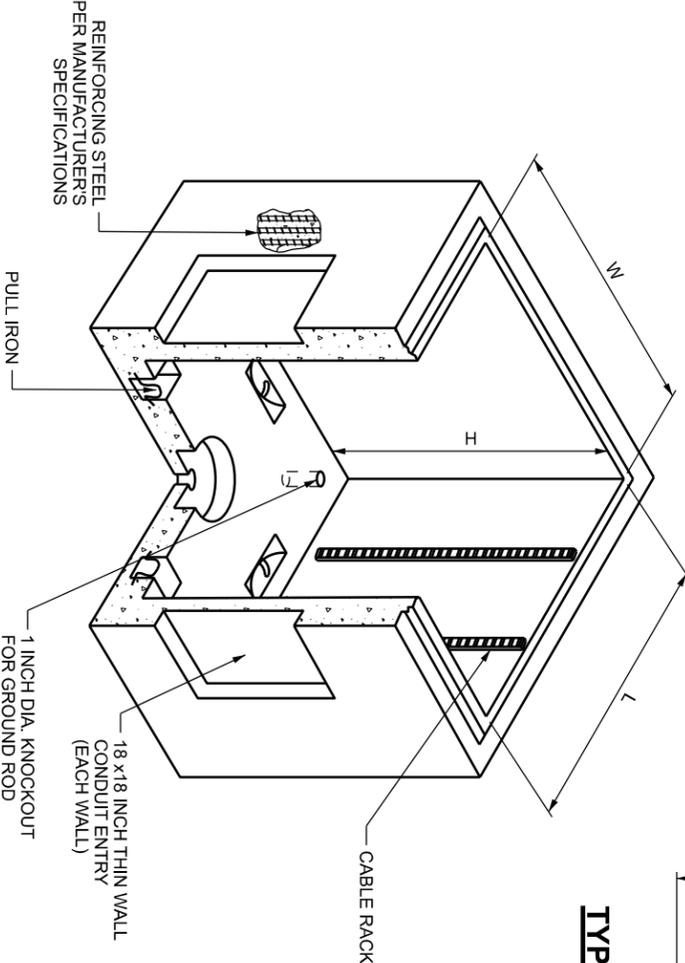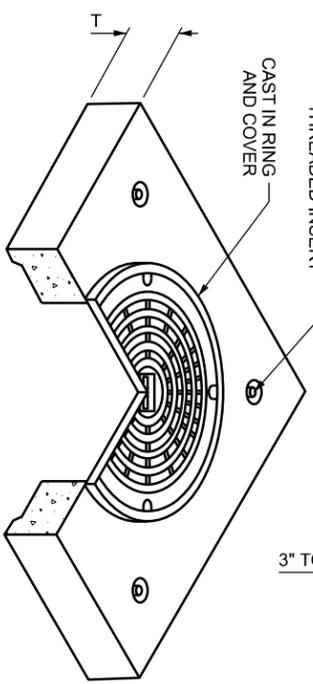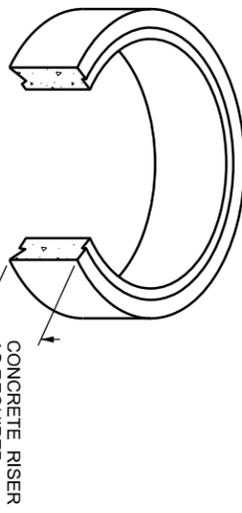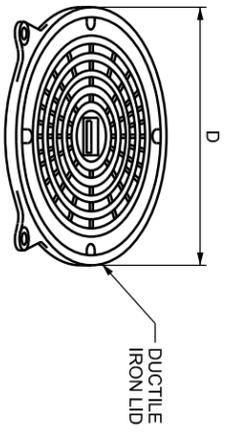SALT LAKE CITY, UTAH

STANDARD DRAWING EDITION

2024 Standard Drawing

STD. DWG. NO.
AT 7A

POLYMER CONCRETE JUNCTION BOX DETAILS

STANDARD DRAWING TITLE

NO.	DATE	APPR.	REMARKS
1	12/07/22	MAA	CHANGE ATMS TO ITS
	4/30/20	MAA	ADDED "OPTIONAL" TO CONCRETE COLLAR DETAIL

CONCRETE FIBER VAULT WITH MANHOLE LID

- REINFORCING STEEL PER MANUFACTURER'S SPECIFICATIONS
- PULL IRON
- 1 INCH DIA. KNOCKOUT FOR GROUND ROD
- 18 x 18 INCH THIN WALL CONDUIT ENTRY (EACH WALL)
- CABLE RACK

- T
- W
- H
- L

- CAST IN RING AND COVER
- ⅜ INCH DIAMETER THREADED INSERT
- CONCRETE RISER AS REQUIRED
- 3" TO 12"

- D
- DUCTILE IRON LID

TYPICAL CABLE RACK

- 3'- 0"
- STANCHIONS (TYP)
- EXPANSION ANCHORS (TYP)
- CONCRETE FIBER VAULT WALL
- RACK ARMS (TYP)
- 9"
- 3"
- 14"
- 20"

FIBER VAULT CONDUIT PENETRATION DETAIL

- GRANULAR BACKFILL OR APPROVED NATIVE MATERIAL
- CONDUIT AS SHOWN IN PLANS
- 12 INCH FREE DRAINING GRANULAR BACKFILL
- UNDISTURBED NATIVE MATERIAL
- 8 INCH SUMP W/ DRAIN HOLE
- 10 FT x ¾ INCH COPPER COATED STEEL GROUND ROD
- LOCATE BALL OR DISK IN VAULT
- 4" MIN, 6" MAX
- EXPOSED CONDUIT, 1 FT MINIMUM
- CONDUIT
- ALL CONDUIT TO ENTER VAULT AT THIN WALL SECTIONS ONLY
- SEE NOTE 16
- CONCRETE FIBER VAULT
- FINAL GRADE
- FLOWABLE FILL OR APPROVED HAND-MIX GROUT TO EDGE OF TRENCH, REFER TO STANDARD SPECIFICATION 13553. REFER TO STANDARD DWG AT 6 FOR CONDUIT SPACING.

METAL LID FOR TYPE IV-CV FIBER VAULT

- DROP HANDLE
- Z
- Y
- X
- SPRING ASSISTED LID PANELS (2)
- BOLT DOWN SPLIT LID. SEE NOTE 6

VAULT DIMENSIONS

VAULT TYPE	"L"	"W"	"H"	"T"	LID	"X"	"Y"	"D"
V-CV	48 INCH	72 INCH	72 INCH	6 MIN INCH	HINGED OR MANHOLE	N/A	N/A	36 INCH
IV-CV	48 INCH	48 INCH	48 INCH	6 MIN INCH	MANHOLE ONLY	24 INCH	36 INCH	36 INCH

NOTES:

1. SUPPLY TYPE IV FIBER VAULT WITH A TAMPERPROOF HINGED METAL LID FOR UNPAVED AREAS, OR A TAMPERPROOF HEAVY DUTY MANHOLE-STYLE LID IN PAVED AREAS. SUPPLY FIBER VAULTS, LIDS, AND COVERS RATED FOR AASHTO LRFD HL-93 LOADING.

2. SUPPLY TYPE V-CV FIBER VAULT WITH A MANHOLE-STYLE LID ONLY.

3. SUPPLY MANHOLE LIDS WITH A HOLE OR SLOT FOR REMOVAL WITH A LEVER OR HOOK. SUPPLY HINGED METAL LIDS WITH DROP HANDLES.

4. SUPPLY VAULTS WITH A PERMANENT INTERNAL LADDER.

5. PROVIDE FIBER VAULT LIDS MARKED, "UDOT FIBER OPTIC" USING MIN 3 INCH HIGH LETTERING WITH ⅛ INCH THICKNESS. FORM LETTERS BY ENGRAVING, CASTING, STAMPING, OR WITH A PRECISE WELD BEAD.

6. PROVIDE HINGED METAL LID WITH A MINIMUM OF ³⁄₃₂ INCH HIGH DIAMOND PATTERN OR SIMILAR SURFACE.

7. PROVIDE FIBER VAULTS WITH A HEAVY-DUTY NONMETALLIC CABLE STORAGE RACK SYSTEM. PROVIDE RACK ARMS AND STANCHIONS CAPABLE OF SUPPORTING A MINIMUM OF 250 LB FOR TYPE IV-CV FIBER VAULT RACKS. INCLUDE A MINIMUM OF 36 INCH RACK STANCHIONS AND 4 RACK ARMS. FOR TYPE V-CV FIBER VAULTS, INCLUDE A MINIMUM OF 45 INCH RACK STANCHIONS AND 5 RACK ARMS.

8. CONDUITS PENETRATE FIBER VAULT AT THIN WALL SECTIONS ONLY. CORE DRILL HOLE IN THIN WALL SECTION TO CONDUIT SIZE PLUS ¼ INCH. DO NOT "KNOCK OUT" THE THIN WALL SECTION.

9. COMPLY WITH OSHA REQUIREMENTS FOR ENCLOSED WORK SPACES.

10. BOND AND GROUND ALL EXPOSED METALLIC COMPONENTS OF THE FIBER VAULT PER NEC 250 IF ARMORED FIBER OPTIC CABLE IS USED.

11. INSTALL CONDUIT PLUGS ACCORDING TO STANDARD SPECIFICATION 13553.

12. ALIGN ARMS CONDUIT BY COLOR ON EACH SIDE OF FIBER VAULT.

13. EXTEND GROUND ROD A MINIMUM OF 4 INCHES AND A MAXIMUM OF 6 INCHES ABOVE BOTTOM OF FIBER VAULT.

14. USE GROUND ROD BRIDGE CLAMP FOR BONDING TO GROUND ROD. ATTACH NOT MORE THAN 4 WIRES PER CLAMP.

15. DO NOT CUT GROUND RODS.

16. INSTALL VAULT PLUMB AND LEVEL. GRADE BACKFILL FLUSH WITH VAULT.

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH
STANDARD DRAWING EDITION

2024 Standard Drawing

PRECAST CONCRETE FIBER OPTIC AND UTILITY VAULT DETAILS

STANDARD DRAWING TITLE

STD. DWG. NO.
AT 7B

NO.	DATE	APPR.	REMARKS

Dig Once Best Practices Overview

SECTION 1: GOALS OF THE LEGISLATION

Economic Viability Exists in a Digital Connection
No one can predict the demand for data in the next 10 to 20 years, but we know our lives are going to be even more connected. By consolidating the installation of broadband infrastructure at the time of road construction, communities are positioned to participate in the digital economy in the most cost-effective way for the taxpayers.

Saving Tax-Payers Dollars
The U.S. DOT's Intelligent Transportation Systems Joint Program Office estimates the average cost of deploying fiber-optic cable is about $27,000 per mile. According to the Federal Highway Administration, the Dig Once legislation has the potential to eliminate up to 90 percent of the cost of deployment.

Dig Once U.S. Federal Legislation
In an effort to make high speed broadband more affordable and accessible, the U.S. Federal Government passed "Dig Once" legislation. After a decade of various versions of the concept, the bill received overwhelming bi-partisan support with more than 30 co-sponsors.

Eliminating Duplicate Expenses
Essentially, the legislation provides for the notification of federally funded road construction projects where conduit or fiber could be included at the same time. Digging one time for two or more projects and enabling future upgrades without additional expense brings tremendous added value and efficient use of resources.

Digging Deeper into Saving Taxpayer's Money
The law allows for some flexibility: installation of fiber, conduit, or both fiber and conduit. If fiber is direct buried alone, it will still be a leap forward in streamlining and investing in broadband infrastructure. However, when an upgrade is needed, it eventually means more digging to replace the fiber cable.

The Federal Communications Commission, or FCC, recommended State policies should require contractors to install spare fiber and empty conduit to accommodate "reasonably anticipated" future demand. The use of a conduit network system provides the flexibility of upgrading (adding additional fiber) without the cost of digging. Fiber can be placed by air-jetting into the conduit quickly and easily without the expense and disruption of construction. Burying empty conduits in the ground at the time of road construction allows the potential for expansion when it is necessary and can be immediately revenue-generating by leasing or renting.

SECTION 2: BEST PRACTICES OF DIG ONCE POLICIES

The law allows for some flexibility: installation of fiber, conduit, or both fiber and conduit. The Federal Communications Commission, or FCC, recommended State policies should require contractors to install spare fiber and empty conduit to accommodate "reasonably anticipated" future demand.

Best Practice #1: Education
- The extra effort spent on educating the stakeholders will result in on-going cooperation
- Explain the cost-savings benefits
- Demonstrate the high-speed broadband connectivity economic impact
- Clarify the definition of "reasonably anticipated" future demand in conjunction with the installation of fiber, conduit, or both fiber and conduit
- Describe the ability to upgrade for the future (if conduit is used)

Best Practice #2: Ordinances (see pages 3-9: https://broadbandnow.com/report/dig-once-digital-divide/)
- Use existing laws and practices and integrate ideas into statutes and processes
- Explain expectations for compliance and how to cope with expectations
- Underscore who is responsible in the text of ordinance
- Encourage or require companies to use your conduit
- Maintain public ownership of conduit as much as possible

Best Practice #3: Coordination
- Establish relationships and expectations by keeping track of private projects and streamlining bureaucratic systems
- Create effective coordination committees
- Provide clear explanation of costs
- Line up departments' budgets for potential large projects

Best Practice #4: Installation of Conduit Network Systems (see pages 10-13)
- Create a master plan
- Publish clear and consistent guidelines (with engineering standards)
- Choose the type of conduit that makes sense for your community — plan for the future
- Do not underestimate the added value of MicroTechnology and MicroTrenching *(Note: MicroTrenching is different than NanoTrenching, which puts the conduit only a few inches below the surface and is unproven. MicroTrenching has been around 10+ years and is a proven installation method with the correct reinstatement material.)*
- Document and verify your conduit

NOTE: Incremental funding required to pass 90 percent of U.S. households with high-speed fiber broadband by 2025 is estimated at a cost of $70 billion.* Dig Once has the potential to reduce that expense significantly. *(*Source: Cartesian, FCC Form 477, US Census, American Community Survey, Company Presentations)*

SECTION 3: STATE LEGISLATION EXAMPLES
(SOURCE: https://broadbandnow.com/report/dig-once-digital-divide/)

NORTH CAROLINA
Law(s): Executive Order 91 forming the Task Force on Connecting North Carolina
Date enacted: 2019
Description: The Governor of North Carolina formed the Task Force on Connecting North Carolina in March 2019, aimed at increasing Internet access to North Carolina residents and aligning state agencies policies in order to remove barriers to broadband deployment. It's comprised of officials representing an array of state departments, including the department of transportation (DOT) and the department of information technology (DIT). The governor asked representatives from the DOT and DIT to jointly develop and implement a statewide "Dig Once" policy promoting the installation of broadband conduit or cables during road construction projects by July 1st, 2019.

UTAH
Law(s): R907-64. Longitudinal and Wireless Access to Interstate System Rights-of-Way for Installation of Telecommunication Facilities; Section 72-7-108
Date enacted: 1999
Description: Utah's state government began implementing Dig Once policies ahead of the 2002 Salt Lake City Olympics. The state's DOT has since expanded the policy, requiring the installation of oversized conduit for certain road construction projects, while interested telecom parties can then extend that infrastructure to neighboring communities. The state's DOT owns the conduit and leases it to telecom companies that want to use it. The state's Telecommunications Advisory Council reviews and approves valuations and trades between the state's DOT and telecom companies for access to conduit, and maintains a map of fiber locations.

ARIZONA
Law(s): Arizona REV. STAT. ANN. § 28-7381
Date enacted: 2012
Description: Arizona's Dig Once policies are targeted specifically at expanding broadband access to rural communities. The policy states that during road construction projects along rural highways, the DOT can coordinate with telecom companies to install conduit and it enables the agency to lease the conduit to telecom providers at a cost-based rate.

MINNESOTA
Law(s): 116J.39-116J.40: Coordination of Broadband Infrastructure Development
Date enacted: 2013
Description: Minnesota's state laws encourage the state's Office of Broadband Development to coordinate with the state's DOT for "Dig Once" measures in planning, relocation, installation, or improving broadband conduit within a right-of-way. It enables the Office of Broadband Development to evaluate procedures and criteria for contracts or lease agreements with telecom companies, as well as pricing requirements. It also allows for co-location of fiber and conduit with other utilities in the same trench.

NEVADA
Law(s): SB 53, creating the Nevada Telecommunications Advisory Council
Date enacted: 2017
Description: Nevada state legislature formed the Telecommunications Advisory Council within the state's DOT in 2017, outlining parameters and regulations for the DOT in coordinating with telecom companies for access to rights-of-way for installing telecommunications equipment. The law charges the council with seeking input from telecommunications providers and the public relating to broadband access, providing recommendations to the state DOT on offering access to rights-of-way to telecommunications providers, as well as approving or denying proposed fiber trade agreements between the DOT and a telecom provider. The DOT is also authorized to enter into agreements with telecom companies and charge fees to access to public rights-of-way or receive in-kind compensation.

MARYLAND
Law(s): SB 717 –Connecting Rural Maryland Act of 2017, creating the Task Force on Rural Internet, Broadband, Wireless, and Cellular Service; HB 961-Rural Broadband Communication Services
Date enacted: 2017-present
Description: Maryland's DOT coordinates with telecom providers and local utilities for installing conduit. The Connecting Rural Maryland Act created the Task Force on Rural Internet, Broadband, Wireless and Cellular Service, which was charged with facilitating cooperation between telecom providers to reduce redundancy, save money, and ensure that the all fiber assets are being used efficiently. The task force focused on facilitating cooperation between electric cooperatives and telecom companies. The task force's last report recommended the state include fiber optic cable as part of the state's definition of telecommunications equipment, and that it allow utilities to lease excess fiber and/or pole attachment rights for telecommunications, including broadband, without obtaining a separate easement, in order to promote broadband access in rural parts of the state. It has requested that the state's legislature draft authority for electric cooperatives to coordinate with telecom providers in laying fiber. That bill was expected to be introduced in 2019. HB 961, meanwhile, specifies that nonprofit telecommunications services providers in rural and underserved areas of the State must be allowed to use the right-of-way or easement of specified State agencies for the installation of broadband communication infrastructure without being charged to do so.

GEORGIA
Law(s): SB 402 — Achieving Connectivity Everywhere (ACE) Act
Date enacted: 2018
Description: Georgia state legislature passed the ACE bill in 2018, which enables the state DOT to develop and implement a long-term policy allowing public rights-of-way to be used for the deployment of broadband services and other "emerging communication technologies" either by the state or private providers. It also requires local governments' comprehensive plans to include elements to facilitate the deployment of broadband services, and it amends the OneGeorgia Authority Act to include broadband services. Finally, the bill authorizes the Georgia Technology Authority to establish policies and programs necessary to coordinate

statewide efforts to promote broadband deployments between state agencies, local governments and industry representatives.

WEST VIRGINIA
Law(s): HB 4447, creating new codes §17 – 2 E- 1-E-9
Date enacted: 2018
Description: West Virginia's state government has developed a uniform system for conduit installation for telecom companies that are applying to install telecom infrastructure. Telecom companies must enter into an agreement with the state's Division of Highways for installing conduit in public rights-of-way; companies must also notify the West Virginia Broadband Enhancement Council and all other carriers on record within the state of their installation permit. Other telecom companies that are interested in installing their own fiber have 30 days to notify the applicant of interest in sharing the trench. The telecom company is also required to run an advertisement in the relevant media for two weeks advertising the project to allow other carriers the opportunity to respond. The law also allows the Division of Highways to charge fees for access to public rights-of-way, or accept in-kind compensation from sources such as conduit, dark fiber, access points, other telecom equipment or services, or even bandwidth.

MAINE
Law(s): Chapter 344, Sec. 1. 35-A MRSA §2503, sub-§2
Date enacted: 2018
Description: Maine's law requires any public entity involved in a construction project to install broadband conduit and authorizes that entity to lease the conduit to telecom companies for installing broadband and/or wireless facilities for the purpose of providing service.
The law states that telecom companies proposing broadband deployments must notify the ConnectME Authority with the location and description of the proposed facility and that the Authority must then disseminate that information to all other telecom companies or other entities that may be interested in installing broadband at the same time. The Authority is also tasked with maintaining a map of broadband conduit installations through the state.

ILLINOIS
Law(s): 605 ILCS 5/9-131) Sec. 9-131.
Date enacted: 2009
Description: Illinois state law requires the state DOT and the Department of Central Management Services (DCMS) to collaborate in installing fiber network conduit, where it does not already exist, in every new state-funded construction project that opens trenches along state-owned roadways. Either department is authorized to allow a third-party company to manage the leasing of the conduit to telecom companies, as long as the state can receive market-based pricing for the lease. The state's DOT also coordinates with the Illinois Broadband Deployment Council to compile Dig Once best practices and draft ordinances for county and city agencies within the state.

CALIFORNIA

Law(s): Section 14051 of the Government Code
Date enacted: 2016
Description: California requires the state DOT to notify telecom companies of state-led highway construction projects through its website to enable companies to collaborate with the state on installing conduit in public rights-of-way during each project.

SECTION 4: CITY AND COUNTY LEGISLATIONS EXAMPLES
(SOURCE: https://broadbandnow.com/report/dig-once-digital-divide/)

LOMA LINDA, CA
Law: Ord. 629 §1
Date enacted: 2004
Description: The city of Loma Linda requires all new construction to connect to the city's existing fiber network through ordinances laid out in their Loma Linda Connected Community Program. Residential and commercial builders in Loma Linda are required to include broadband-capable internal wiring and fiber-optic interfaces in new structures. Loma Linda was one of the first communities in the US to adopt a comprehensive future-facing dig once construction policy, and one of the only ones to extend the ordinance to building wiring specifications.

BRENTWOOD, CA
Law: Ordinance No. 609
Date enacted: 1999
Description: Brentwood began implementing Dig Once policies 20 years ago. The city requires developers to design and install two advanced technology system conduits dedicated to the city within public rights-of-way during new construction and to each lot line within the development. It goes on to require developers to install a fiber optic system in one of the two conduits designed to serve the development by either the city itself or a licensed franchisee. The second conduit must remain empty and is reserved for future use by other franchisees. Over the last 20 years, the city now has 150 miles of conduit passing over 8,000 homes. ISP Sonic.net has relied heavily on the conduit to provide broadband service to residents.

SANDY, OR
Law: Development code 17.84.60
Description: The city of Sandy requires private developers to install conduit when disturbing existing roads or building new ones and offers maps of existing installations so that developers can be strategic in how they install conduit. The city has added broadband fiber to the list of municipal infrastructures (such as water, sewer, power lines and mailboxes) that all new developments must include.

BOSTON, MA
Date enacted: 1998; expansion in 1994
Description: Boston is possibly the very first city to implement a Dig Once policy, back in 1988. Initially, the city required all construction projects that involved excavators in a public right-of-way to install conduit and the city then leased that conduit to telecom companies through a one-time fee plus a $5 per foot annual charge. However, the city found its offering wasn't attractive enough to telecom companies, who had begun building their own conduit along parallel streets. The city has since revised its laws to require telecom companies to lease space from the installed conduit before being allowed to install their own conduit, thereby encouraging companies to make use of what's already been installed. In 1994, Boston implemented a policy that required all telecom companies to install conduits in the same trench at the same time, on a shared-cost basis. This policy requires a lead company to

coordinate with other telecom entities in drafting engineering plans and estimating costs for the trenching and conduit installation.

BERKELEY, CA

Law: Ord. 7083-NS § 4 (part) Excavations for video and telecommunications systems
Date enacted: 2009
Description: Berkeley has implemented a suite of policies and procedures outlining best practices for telecom companies in order to minimize the inconveniences of installation, maintenance, and removal of telecom facilities in public rights-of-way. The city requires existing facilities be moved underground alongside new facilities when feasible, and that telecom companies coordinate construction projects with utilities installing infrastructure in public rights-of-way. Telecom companies must also alert the city to any excess or surplus conduit to be installed, and that new facilities be installed within existing facilities where there is sufficient excess capacity.

BELLEVUE, WA

Description: The city of Bellevue doesn't have a formal Dig Once policy in place, but the city has set Dig Once conditions within some of its development projects in the past. The city asks excavator projects include installing conduit along roads when feasible, as well as during street lighting and traffic signal upgrades. It also requires transportation projects that interrupt public sidewalks to include installed conduit.

GONZALES, CA

Law: "Dig Once" Policy for Public Works Projects in Gonzales
Date enacted: 2016
Description: Gonzales city government has implemented a Dig Once policy for public works projects that requires the city to install conduit during projects such as construction and maintenance of utility infrastructure or public roadways, or during excavations for installing communications, in public rights-of-way. The conduit is owned by the city.

ARLINGTON COUNTY, VA

Description: Arlington County does not have a specific Dig Once policy, but the county has reached "Dig Once" agreements with utility providers in the past. The county entered into one such agreement with electric utility Dominion Virginia Power. The utility needed to install underground conduit along a congested urban public right-of-way. The county required the utility to install fiber in parallel conduit for the county's use. The county is in the midst of installing a fiber network and is building extra capacity for use at a later date.

SAN FRANCISCO, CA

Law: Ordinance 220-14
Date enacted: 2014
Description: San Francisco laws requires any government-led construction project involving a public right-of-way to include improvements to communications infrastructure when feasible. It also requires a telecom company applying to install communications infrastructure to notify the city's Department of Technology so the department can participate in installing conduit at

the same time. The law encourages the department to participate to create a more efficient delivery of broadband services to the public and for the city's needs.

MONTEREY, CA
Law: MBEP/CCBC Shadow Conduit Specifications version 1.0
Date enacted: 2016
Description: The city of Monterey and the Central Coast Broadband Consortium (CCBC) have developed a set of conduit specifications and guidelines for reducing redundancy in installation. Its recommendations range from the conduit size and number of conduits to install, whether future conduit installation would be problematic or impossible, and whether any partners or customers will make immediate use of it. However, the specifications leave out guidance on when conduit installation is required and who should be required to install it.

SANTA CRUZ, CA
Law: Telecommunications Improvement Ordinance
Date enacted: 2014
Description: The city of Santa Cruz, also part of the Central Coast Broadband Consortium (CCBC), adopted the Santa Cruz county's ordinance in 2014, which in turn, was based on the city of San Francisco's Dig One policy. It requires that any entity proposing construction projects in public rights-of-way for utility improvements also install conduit or other telecommunications equipment when practical and feasible. City staff will work with contractors to identify the most cost-effective approach to installing conduit to meet the city requirements and will notify and coordinate with other telecom companies to join the project.

SAN BENITO COUNTY, CA
Law: Multi-use streets policy
Date enacted: 2015
Description: San Benito County, part of the CCBC, implemented a Dig Once practice as part of its multi-use streets policy. It requires county roadway construction projects to include installation of underground utility conduit. The county, which is part of a municipal broadband network, can then use the conduit to expand the network. The county may also utilize the CCBC's shadow conduit policy, which recommends trenching digging projects include a 60-day window so other telecom or utility providers who may be interested in installing conduit at the same time may be notified. The county encourages local jurisdictions to adopt similar policies.

CHICAGO, IL
Description: The City of Chicago has created a specific office that handles coordinating construction projects across agencies and companies to minimize disruptions to the public. The Project Coordination Office, within the city's DOT, was formed in 2012 at the direction of Mayor Rahm Emanuel to coordinate projects within public rights-of-way between different service providers and utilities. In 2013, the mayor expanded the scope of the office to include telecommunications. The office has helped the city save an estimated $150 million in construction costs since 2012.

CELINA, TX
Law: Subdivision Ordinance; Division 4. Design Standards; Section 10.03.126: Improvements; Subsection 10.03.126(i)
Date enacted: 2017
Description: The city of Celina has adopted a conduit ordinance that requires any city-led or developer-led construction project that includes underground excavation to install conduit and fiber-optic cable at the same time to accommodate future telecommunications uses. Private developers must pay for the conduit installation, which then becomes the property of the city. The city also requires that telecom companies looking to install fiber make use of the city's fiber assets when available first and pay fees to the city for access to the infrastructure.

MOUNT VERNON, WA
Law: Municipal code 12.20.015 Construction standards for the regulation of use of public rights-of-way and public property.
Date enacted: 1999
Description: Mount Vernon requires private developers to install conduit when engaging in construction projects that either disturb existing roads or create new roads. The city maintains maps of conduit installations so developers can strategically place the conduit.

EL DORADO COUNTY, CA
Law: Broadband Infrastructure Installation Policy
Date enacted: 2018
Description: El Dorado County adopted a conduit installation requirement for capital improvement projects. The policy requires construction projects from the county's Department of Transportation, the Facilities Division and the Parks, Trails and Rivers Division to include installing conduit when digging trenches or excavating underground as part of the construction.

HUMBOLDT COUNTY, CA
Law: General Plan
Date enacted: 2017
Description: Humboldt county's 2017 updated general plan includes provisions to expand broadband access that include implementing Dig Once policies. The plan recommends that new residential and commercial development projects include requiring developers to install conduit within joint utility trenches for future telecommunications use. It also recommends flexibility in conduit placement requirements in order to allow for retrofitting of communications systems.

POULSBO, WA
Law: 12.02.010 Construction and development standards
Date enacted: 2003
Description: Poulsbo requires any new public street construction, by either the city or a private developer, to include the installation of conduit that can accommodate two telecom companies' fiber infrastructures. The law requires that the conduit be dedicated to the city upon completion and any telecom company looking to deploy infrastructure must first lease conduit space from the city if available.

SECTION 5: CONDUIT NETWORK SYSTEMS

A well-engineered plan will ensure the application can achieve benefits well in excess of the costs of the plan and the conduit network system deployment. Generally, the actual cost of the conduit network systems is only approximately three percent of the overall project costs. Conduit is widely used in most industries, accommodating simpler initial installations and providing a Dig Once permanent pathway.

It is common for cables to be buried in ducts to provide further protection, allowing for simple repair, and potentially providing upgrade paths. In some circumstances, ducts are only used for sections of deployment (e.g. under roads or rivers) where excavation would pose a difficulty, but increasingly ducts are being used for the entire route. This is possible because conduits can provide several benefits without a significant project cost impact.

Brief History of Conduit Network Systems

In the early to mid-1980s, tremendous growth occurred in the deployment of fiber optic cables, linking major metropolitan areas. Fiber optic cables were quickly becoming the technology of choice for streaming huge amounts of voice, video, and data. These cables were installed in very long lengths, up to 30,000 feet, with the goal of using as few splice points as possible to minimize signal attenuation. Because of the more fragile qualities of these long, thin strings of glass, individually no thicker than a strand of human hair, they needed more protection and different handling procedures than traditional jacketed metallic cables. There was an immediate need for a conduit system that offers improved installation efficiencies and cable protection.

Existing conduit network systems typically were 3.5 inches to 6 inches in diameter to accommodate the very large diameter of copper cables that filled the duct banks. As copper cables were being replaced with fiber optic cables, which are much smaller in diameter, smaller high-density polyethylene (HDPE) conduits ranging from 1 inch to 1.25 inches were pulled into the vacated conduit creating multiple pathways to be used for initial and future fiber optic cable placement and for redundancies if a cable got damaged.

This new method of deployment using MicroDucts in existing pathways was called "innerducts" and is still used today. Additionally, now conduit suppliers offer bundled MicroDucts under one oversheath for ease of placement and to maximize fiber count in limited underground and aerial spaces. Multiple variations of standard HDPE conduit and bundled HDPE MicroDucts are available. The installation methods and tools are the same for both.

In addition to traditional trenching, over the years newer installation methods also evolved to minimize the above and below ground surface damage, restoration requirements, and disruption to traffic: plowing, horizontal directional drilling (HDD), and MicroTrenching.

In 1999, new technology was introduced to help solve the issue of overcrowded right-of-ways. Using the same installation methods and tools as traditional HDPE standard conduit, bundled MicroDucts under one oversheath maximized the fiber count in the same space. As technology advances, fiber optic cables are higher capacity in a smaller size, called MicroCables, and conduits are following in size, called MicroDucts. Multiple configurations allow for easy connection to existing networks and efficient transition to current technology.

All conduit is not created equal, and the type of conduit can determine which type of fiber cable you need. Conduit has an inner diameter (ID) and an outer diameter (OD); the standard is to refer to the outer diameter when describing the conduit. A common engineering practice is to not fill each conduit subduct more than about 65 percent full of fiber cables. This space is necessary to air-jet, or pull, the fiber through the conduit without damaging the fiber.

As fiber technology continues to evolve, the fiber cable diameter will continue to get smaller. Microfiber cables can fit many strands of fiber in small diameter conduit. MicroTechnology continues to improve. For decades, conduit has been the preferred manner of installing fiber cable underground and now even in aerial applications.

Installation Advantages
It is easier to install, as it can be put in section-by-section between access points, with the fiber cable later air-assisted and pushed or pulled in as a continuous run.

It is also easier to handle unexpected changes in the route, such as having to go around an obstacle, as compared to directly placing fiber cable.

The continuous run of fiber cable can help reduce the cost of splice points and improve the fiber loss budget and performance for the total system.

The conduit itself can be locatable, which allows the fiber cable to be constructed with only non-conductive dielectric materials which can allow easier access to the fibers.

Protection of the Fiber
The conduit provides mechanical protection of the fiber cable, both during installation of the fiber cable and over the entire life of the fiber cable.

Typically, direct buried fiber cables require additional design enhancements to withstand environmental conditions, whereas the conduit can provide that environmental, tensile and crush protection itself. This enables the fiber density to increase significantly for a given outer diameter cable.

Permanent Pathways

Conduit provides for an always-present pathway for upgrades and changes whenever needed. For example:

1. Remove and change out a fiber cable that is damaged
2. Swap out with improved technology
3. Use the additional empty conduits for increasing capacity
4. Re-route the conduit pathway if there is a change in route

The Dig Once legislation stresses the importance of burying conduit once, with the possibility to add new cables, upgrade existing ones, and increasing capacity. By planning for the future by installing extra permanent pathways, the networks are able to adapt to changes more quickly.

Communication Needs

Communication needs could be for telecommunications, cameras, data transfer, security and many others.

Revenue Opportunity

There is a financial opportunity that network and right-of-way owners are realizing and planning whereby empty pathways can be used, to grant access to difficult right-of-ways or be leased to carriers.

By installing multiple MicroDucts, take full advantage of the new high-density MicroCables that fiber cable providers are shrinking and improving year over year.

It is important to realize that there are different types of conduits suited for different purposes:

- In a more traditional system, 1, 2, or 3 standard conduits could be installed together. However, the outside diameter of these conventional ducts is often quite large compared to the smaller outer diameter of MicroDucts now available. While these large dimensions, perhaps 1.5 inches or 2 inches in diameter, are still used in the industry, they were developed at a time when fiber cables were of much larger diameter with lower fiber density. Since typically only one cable is placed per duct, they actually limit the number of fiber cables that can be placed in a right-of-way.

- Smaller diameter MicroDucts are designed to take advantage of the advances the higher fiber density MicroCables that have much smaller outer diameter. Amazingly, there are 288 and 432 fiber cable diameters on the market on the order of 8 to 10mm, so by sizing the MicroDucts for better space utilization, you can achieve much greater overall fiber density in any right-of-way space.

SECTION 6: ADDED VALUE OF FIBER OPTIC SENSING OPPORTUNITIES

Distributed Acoustic Sensing in Conduit

Optical fiber sensing (FOS) interrogator companies have been installing commercial sensing system in conduit of many years. Information from several market leading companies has indicated that as approximately 50 percent of sensing systems are comprised of fiber cables installed within conduit pathways. The reasons for doing this included conduit pathways provide tremendous added protection, easier installation, flexibility for changes, repairs, and technology upgrades, as well as added capacity for additional use and monetization. When it comes to distributed acoustic sensing, however, an additional reason is that commercially sensitive systems work extremely well in conduit. FOS use is increasing in many vertical markets, with new applications and use cases growing with experience. The following presents an overview of common applications and finding relative to sensing using the advantages of conduit.

Predominant Vertical Markets

- The Security and Asset Integrity Market
- The Pipeline Market
- Emerging Smart City applications

Monitor Assets

- Manual excavation (perimeter security)
- People walking
- Traffic flow
- Leak prevention (oil and gas line)

Research Shows

- Standard telecom-grade fiber is well suited for DAS installations
- Cable design specifically engineered for FOS purposes does impact DAS performance
- For current commercial quality Fiber Optic Sensing systems, there is a negligible difference between performance of a cable in a duct and a cable not in a duct. The protection and advantage the conduit offers far outweighs any difference in signal sensitivity in most all commercial cases.
- The cable to conduit fill-ratio should be considered when selecting a conduit and cable mix, in that an overly large conduit with too much air gap may impact performance. The conduit can be sized for both easily installation through jetting or pulling into the conduit, with sensing consideration also accommodated.
- Typical cable Installed in conduit: Gel-filled, loose tube, unarmored

About Dura-Line

At Dura-Line we aspire to a more connected world, because we believe every company, every community, every person deserves the chance to advance their lives through better access to high-speed broadband. Strengthening our fiber optic network and conduit system infrastructure is critical to supporting the next wave of digitization. And, Dura-Line is at the forefront of the industry creating strategic solutions that solve the issue of the unpredictable needs of tomorrow's fiber cable requirements.

As a TL 9000 and ISO 9001 rated manufacturer, Dura-Line takes pride in our state-of-the-art quality products and being recognized a key partner with all of the major telecommunications companies across the world. In one year, Dura-Line produced over 1.4 billion feet of digital network infrastructure. Through our innovative product solutions and unparalleled customer insight, we are the ones who enable the physical build-out of this new technology realm that impacts education, healthcare, agriculture, energy, transportation, industry, and more.

SILICORE™

Several advanced manufacturing techniques set Dura-line apart as an industry-leader, including low friction SILICORE™ permanently lubricated lining. SILICORE™ is proven to reduce installation time, thus reducing installation costs.

Advantages of Dura-Line's FuturePath (multi-bundled MicroDuct conduit)

Dura-Line manufactures FuturePath, which are smaller MicroDucts are packaged together under one sheath. There are combinations of FuturePath all the way from 2-MicroDucts, under a single sheath to 24-MicroDucts under a single sheath. Other configurations have mixed sizes of MicroDucts and standard conduit to accommodate both smaller and larger diameter cables.

Dura-Line's FuturePath HDPE Product Line is Sustainable

- Supports Dig Once initiatives
- Saves space in overcrowded right-of-ways
- Requires fewer and smaller handholes
- Reduces manpower and machine power for installation
- Reduces fuel consumption, gas emissions, and lower material handling requirements
- Lessens soil displacement Environmental Benefits of HDPE
- Non-leaching
- Flexible, non-rusting materials minimizes leaks common in corroded steel pathways
- Resin and pipe have a superior resistance to failure, corrosion, tuberculation, deposits, and rapid crack propagation (RCP)
- Modern manufacturing methods allow for hundreds, or even thousands, of feet of continuous extrusion, which results in fewer joints
- High performance in extreme temperatures, which greatly reduces compromised pathways Reduced transportation, handling, and installation due to quick installation with less heavy machinery which reduces fuel and labor usage as well as ground disturbance when compared with installation of steel counterparts

- Joints typically use a mechanical coupler, rather than a glue-based solvent which gives off noxious fumes
- Fewer and smaller handholes required
- Low lifecycle costs
- Useful life of HDPE is estimated at 50+ years
- Studies have shown that HDPE can withstand scratching and gouging up to 10-20 percent with no detrimental effects to the long-term performance of the pipe
- Versatility of design allows for multiple applications in several industries

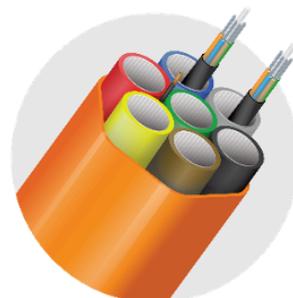**Standard Conduit with a single fiber cable**

Single Standard Conduit
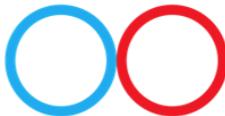
Two Standard Conduit

Three Standard Conduit

MicroDucts or FuturePath with high-density fiber cables

2 Way

3 Way

4 Way

7 Way

8 Way