Utah Broadband Center
Connecting Utah

Southeastern Utah
Local Broadband Plan

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1. EXECUTIVE SUMMARY

VISION	The Southeastern Utah Association of Local Governments (SEUALG) is fully committed to the implementation of affordable and reliable high-speed internet to connect all communities in Southeastern Utah. Quality internet is essential to a growing community and will aid in economic development, education, and communication.

KEY BARRIERS	**Geography**	**Lack of Potential Revenue**	**Relative Low Incomes**
	Southeastern Utah's geography is unique and rugged, with many households in remote locations.	Sparse population distribution limits the amount of potential revenue in the region for ISPs	Compared to Utah's urban counties, the region has relatively lower incomes and higher poverty rates restricting local budgets.

COVERED POPULATIONS	Individuals who reside in Carbon, Emery, Grand, and San Juan Counties	Individuals who are members of a minority group, have a language barrier and are refugees or immigrants	Elderly, Veterans and Individuals with disabilities	Individuals who live in households at or below 150% of the federal poverty line	Individuals in rural areas

GOALS	Improve existing broadband infrastructure while producing future-proof options.	Enhance the adoption and affordability of high-speed internet.	Extending broadband affordability and access to underserved and underfunded regions.

KEY STRATEGIES	Community Engagement and Needs Assessment	Infrastructure Investment	Public-Private Partnerships	Broadband Mapping and Planning

1 OVERVIEW OF THE LOCAL BROADBAND PLAN

1.1 VISION

The Southeastern Utah Association of Local Governments (SEUALG) is fully committed to the implementation of affordable and reliable high-speed internet to connect all communities in Southeastern Utah. Quality internet is essential to a growing community and will aid in economic development, education, and communication.

Modern broadband infrastructure is necessary throughout Southeastern Utah if communities are expected to keep pace with current social and economic growth trends. Our vision is that the infrastructure will be accessible and scalable to allow all communities an equitable opportunity to participate in the digital world. This vision will be achieved through collaboration with private and public stakeholders and ISPs to achieve well-defined goals.

1.2 GOALS AND OBJECTIVES

Goal 1: Improve existing broadband infrastructure while producing future-proof options.

Southeastern Utah's first goal in formulating this local broadband plan is to improve existing broadband infrastructure. Improving existing broadband infrastructure should prioritize reaching a minimum speed of 100/20 Mbps. To achieve these goals, Southeastern Utah will:

- Utilize existing infrastructure and new technologies to reduce costs and expand access to underserved communities.
- Support ongoing efforts of ISPs and state and federal governments in their efforts to expand fiber-to-the-home builds.

Goal 2: Enhance the adoption and affordability of high-speed internet

Getting residents, businesses, and institutions in Southeastern Utah to use high-speed internet is another crucial goal. To promote this adoption in the region, Southeastern Utah will:

- Promote digital equity by ensuring all residents, regardless of location, socio-economic status, or any other factors, have equal access to digital resources and high-speed internet. Utilizing the Affordable Connectivity Program and the Lifeline Program will be instrumental in this as they provide subsidies towards the internet for low-income households.
- Partnerships between school districts and other anchor institutions with ISPs to provide funding for students without internet access.

Goal 3: Extending broadband affordability and access to underserved and underfunded regions

Having the infrastructure in place is just the first step in ensuring widespread connectivity in these underserved areas. Broadband must also be affordable, reliable, and accessible to those in these regions. A few methods of ensuring affordable broadband access are:

- Continued expansion of cost-effective technologies, including fiber network deployment. ISPs in the region, particularly Emery Telcom, have expanded fiber throughout Southeastern Utah. In remote areas, affordable wireless technologies will need to be used.
- Ensuring that ISP-owned infrastructure remains updated and that proper funding is allocated to support existing plans for the future by ISPs. Partnerships with UDOT have also proven to be productive.

2 BACKGROUND

2.1 SCOPE OF BROADBAND PLAN

Southeastern Utah encompasses the counties of Carbon, Emery, Grand, and San Juan. These communities are varied rural communities within Utah. Carbon County is located in the eastern part of Utah. Its county seat and largest city is Price. As of 2021, the estimated population of Carbon County is around 20,800 people. Historically, Carbon County has relied on coal mining as its main source of economic growth. The County has recently been diversifying its economy by trying to create an atmosphere that welcomes new and existing businesses. Ensuring businesses and residents have access to affordable and reliable broadband internet will be key to the continued development of this county. Emery Telcom recently completed a full Fiber-to-the-premise project in Carbon County which has provided broadband internet access to the region.

Emery County is located in central Utah, with its largest city being Castle Dale. As of 2021, the estimated population of Emery County is approximately 10,000 people. Historically, Emery County has relied on agriculture and mining. As Emery County shifts its focus and diversifies its economy, ensuring affordable and accessible broadband will encourage more diversification. Emery Telcom has also recently completed a full fiber-to-premise project in Emery County, providing the majority of businesses and residents with broadband access.

San Juan County is located in the southeastern part of Utah. Its county seat and largest city is Monticello. As of 2021, the estimated population of San Juan County is around 16,000 people. San Juan County's economy is primarily driven by tourism, agriculture, and resource extraction.

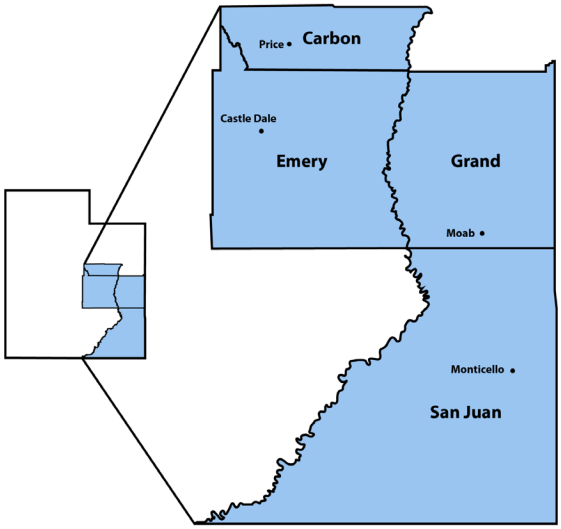
Currently, Emery Telcom is working to complete a fiber-to-the-premise build and is in the middle of a six-year plan to build this network. This project will not extend to the Navajo and Ute Nations.

Grand County is located in eastern Utah. Its county seat and largest city is Moab. As of 2021, the estimated population of Grand County is around 10,300 people. Grand County's economy heavily relies on tourism, outdoor recreation, and hospitality. Currently, Emery Telcom is working to complete a fiber-to-the-premise build and is in the middle of a six-year plan to build this network.

Carbon & Emery Counties have had extensive fiber connectivity expansion. Emery Telcom, the primary ISP, has made a direct effort to ensure households and businesses in the counties have a fiber connection. There are areas within these counties that are still unserved, however, the majority have a connection to Fiber. Expanding access to affordable and reliable broadband internet to those unserved and into Grand and San Juan will be important for the future of the region. With access to this resource, each county will have greater access to economic diversification and development, education and learning, communication and connectivity, and access to services. The region has made drastic steps in providing fiber broadband connectivity to Carbon and Emery Counties. Further deployment in Grand and San Juan Counties will benefit their regions immensely.

	Carbon[1]	San Juan	Grand	Emery
Total Population	20,412	14,518	9,669	9,825
Median Household Income	$51,725	$52,400	$51,433	$61,234
Bachelor's Degree or Higher	16.7%	20.6%	26.9%	15.1%
Poverty	15.9%	26.8%	11.1%	11.8%
White	94.3%	48.0%	89.0%	95.9%
Hispanic/Latino	13.8%	6.1%	10.8%	6.8%
American Indian	1.7%	48.5%	5.1%	1.4%
All Others	1.8%	1.1%	3.5%	1.1%

[1]U.S. Census Bureau. "QuickFacts: Emery County, Utah; Grand County, Utah; San Juan County, Utah; Carbon County, Utah." Census.gov, https://www.census.gov/quickfacts/fact/table/emerycountyutah,grandcountyutah,sanjuancountyutah,carboncountyutah/PST045222. Accessed 31 May 2023.



2.2 WHAT IS BROADBAND?

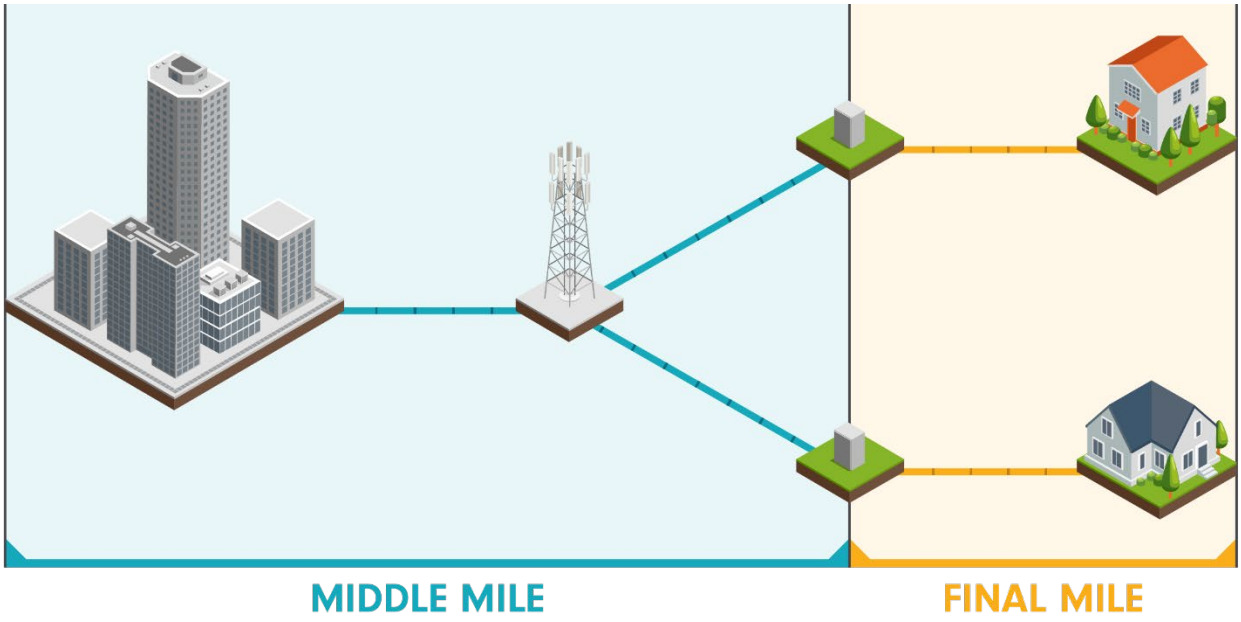
Broadband is a dedicated connection to high-speed internet. The threshold for what speed is defined as high-speed internet changes according to the standards presented by the Federal Communication Commission (FCC). Currently, broadband is defined as any speed above 25 megabits per second (Mbps) download speed and 3 Mbps upload speed (25/3 Mbps). The FCC is proposing to redefine broadband as 100/20 Mbps or above.

The Broadband Equity, Access, and Deployment (BEAD) Program defines households with less than 25/3 Mbps as unserved locations and those with less than 100/20 Mbps as underserved locations. Community anchor institutions with less than 1/1 gigabits per second (Gbps) speeds are also considered underserved, as defined by Section 60102 of the Infrastructure Investment and Jobs Act, which also sets forth the BEAD program.

2.2.1 Broadband Network Distribution

The infrastructure that data travels along is called a network. Similar to 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.



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 digital signals carrying data 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, so this type of network can require building new infrastructure. Fiber optic cables can be placed on existing power poles or can be placed inside conduit buried in the ground. If the network is designed and installed correctly, speeds can be up to 1 Gbps. **Fiber Optic 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, as they can be less than 1 Mbps or up to 100 Mbps. Households with this connection are typically considered “served” with high-speed broadband internet. 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. DSl

2.2.2.3 Cable Modem (Coax)

Cable Modem delivers similar speeds as DSL, but it uses the coaxial cables used for cable televisions to transmit broadband data. Like DSL, it is not a preferred option when building new broadband infrastructure, but it can be used where existing infrastructure is in place.

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 broadband involves satellites that orbit the earth transmitting long-range signals. It is primarily a Middle Mile wireless solution. It is often used in rural locations where there are no other terrestrial networks available. Satellite broadband has a higher latency (also known as lag), making video calls extremely difficult on this type of broadband. When using satellite connection, speeds vary based on location, and weather can cause outages.

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 cell towers transmitting radio signals of high-speed broadband internet data, which are then picked up through the modems in cellular phones, mobile routers, cellular antennas, or various signal boosters. The cell towers are often connected to a Middle Mile fiber network and provide a Final Mile connection for anyone near the signal. The speeds can often reach speeds of 60 Mbps if specialized equipment is used to boost the signal. This is usually the fastest high-speed broadband internet available for users that do not have access to fiber optic technology. Please note that BEAD funding can be used to build infrastructure for cell towers as long as they are connected to a terrestrial Middle Mile network.

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[2] conducted in April 2021 found that 90% of adults surveyed considered internet "essential or important for them personally during the [COVID-19] pandemic." 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. Southeastern Utah's primary business is mining and energy production, and high-speed broadband internet brings numerous advantages to the mining industry, including improved data transfer, real-time communication, remote monitoring and control of equipment, access to geospatial information, collaboration with experts, enhanced safety systems, and online training opportunities. It enables mining companies to optimize operations, make informed decisions, and ensure efficient and safe production processes. In today's world, broadband can grow Southeastern Utah's economic outlook.

High-speed broadband internet access has benefitted many regions across the state, including Southeastern Utah. Emery and Carbon counties were the first two counties in the state to utilize fiber connectivity in the region. With San Juan and Grand County's fiber networks being built, maintaining and expanding broadband access in Southeastern Utah will be paramount for success.

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. Districts need to be prepared with online learning options. Children without access to a broadband internet connection may be left out in online learning 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. Hospitals in the region offer telehealth services. Some of the benefits of telehealth include decreased healthcare costs, access to specialists not locally available, travel time reductions, and reduced risk of exposing others to viral 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

[2] Anderson, Monica, Emily A. Vogels, and Erica Turner. "The Internet and the Pandemic." Pew Research Center, 1 Sept. 2021, https://www.pewresearch.org/internet/2021/09/01/the-internet-and-the-pandemic/. Accessed 31 May 2023.

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 Southeastern Utah. This planning team will utilize both the Southeastern Association of Local Governments and the Comprehensive Economic Development Strategy Committee. Both of these organizations have extensive connections and partnerships within Southeastern Utah. The planning team utilized these organizations to produce the state of broadband in the region.

- The Comprehensive Economic Development Strategy Committee includes:
    - Carbon County Commission / BODEC
    - Carbon County Economic Development
    - Carbon County Planning Department
    - Emery County Commission / Entrepreneur
    - Castle Dale Mayor / Entrepreneur
    - Grand County Commission
    - Grand County Economic Development
    - Helper City Mayor
    - Monticello Mayor / USU Monticello
    - San Juan County Economic Development
    - San Juan County
    - Blanding City Economic Development
    - UDOT
    - Utah State University Eastern
    - Utah Tourism Industry Association
    - Utah Department of Workforce Services
    - Utah Office of Energy Development
    - Utah Governor's Office of Planning & Budget
    - Utah Governor's Office of Economic Opportunity
    - Senator Mitt Romney's Office
    - Congressman John Curtis' Office
    - Senator Mike Lee's Office
- The Southeastern Utah Association of Governments
    - Geri Gamber Executive Director

- Jade Powell Deputy Director

The activities performed included:

- **Internet Speed Tests:** Participation in the Utah Internet Speed Test Campaign sponsored by the UBC gave our team insight into internet speeds in the region. As a caveat, these speed tests are not the speed tests available at home. The device on the end of the speed tests determines this test. This data was collected via the internet speed test conducted by the Governor's Office of Economic Opportunity[3].
    a. **Carbon County:** There were 87 total tests conducted in the region. 66 were fixed locations and 5 were cellular locations. Tests were in 71 total locations which represents a household participation of 0.74%.
    b. **Emery County:** There were 213 total tests conducted in the region. 169 were fixed locations and 6 were cellular locations. Tests were in 175 total locations which represents a household participation of 3.90%.
    c. **Grand County:** There were 129 total tests conducted in the region. 76 were fixed locations and 7 were cellular locations. Tests were in 83 total locations which represents a household participation of 1.72%.
    d. **San Juan County:** As of July 20, 2023, there were 208 Speed Tests completed in San Juan County at 152 locations. This represents a household participation rate of 2.65%. 82% of respondents reported download speeds below 25 Mbps, and 74% of respondents reported upload speeds of less than 25 Mbps. The average download/upload speeds were 13/5 Mbps.

Source	Carbon County	Emery County	Grand County	San Juan County
Fixed Download				
No service	0.0%	0.0%	0.0%	6.3%
0-25 Mbps	15.2%	17.8%	38.2%	54.9%
25-100 Mbps	45.5%	53.3%	36.8%	20.1%
100+ Mbps	39.4%	29.0%	25.0%	18.8%
Fixed Upload				
No service	0.0%	0.0%	0.0%	6.3%
<3 Mbps	7.6%	5.3%	27.6%	27.8%
3-25 Mbps	13.6%	20.1%	38.2%	38.9%
25-100 Mbps	53.0%	56.8%	22.4%	16.0%
100+ Mbps	25.8%	17.8%	11.8%	11.1%

[3] Connected Nation. "Utah Broadband Speed Test." Expressoptimizer.net, https://expressoptimizer.net/projects/Utah/speedtestmap.php. Accessed 31 May 2023.

Cellular Download				
0-25 Mbps	80.0%	83.3%	57.1%	62.5%
25-100 Mbps	20.0%	16.7%	14.3%	37.5%
100+ Mbps	0.0%	0.0%	28.6%	0.0%
Cellular Upload				
<3 Mbps	40.0%	50.0%	28.6%	50.0%
3-25 Mbps	20.0%	33.3%	42.9%	25.0%
25-100 Mbps	40.0%	16.7%	0.0%	12.5%
100+ Mbps	0.0%	0.0%	28.6%	12.5%

- **Stakeholder Meetings & Public Outreach:** Stakeholder meetings and public outreach was conducted within the region. A quick overview for each county is provided below, and more information is available in Appendix A.

    a. Carbon County: Within Carbon County, they feel their broadband connectivity is great. They have had no issues with the connectivity as they have fiber throughout the county. When asked if they felt there were any challenges or issues with their connectivity, they informed us they had no issues or complaints about the connectivity within the county. Within Helper, they are happy with connectivity and expect more development in the future which will require further broadband buildout and connectivity. However, currently, they are extremely happy with their service. They see themselves as leading out in fiber connectivity within the state of Utah.

    b. Grand County: Speaking with stakeholders within Grand County, they recognize they are more connected than other communities of their size and location. According to them, connectivity and speed depend on where you live. Emery Telcom is currently in the process of installing full fiber connectivity. Stakeholders said that if you go farther south of the Moab Valley area, cell service is a problem, and you could have wifi. Installs are not as good in the southern part of the valley. Emery Telcom has a long-term capital investment strategy.

    c. Emery County: Similar to Carbon County, they feel very confident with their broadband connectivity. There are few unserved households in the region, and the majority of the community is connected to fiber internet.

    d. San Juan County: Where San Juan County has connection to fiber they are happy. However, in the regions without fiber connectivity, it was mentioned during site visits and stakeholder interviews that most internet service is provided via satellite from Starlink or HughesNet. Startup costs for equipment for Starlink range in price from $599 up to $2,500, with monthly costs at $120. HughesNet is another satellite provider available in the area with plans ranging in price from $49 to $200 per month with data caps. A focus on tribal consultations and input

was completed through the San Juan County local broadband plan. See that plan for further details into those tribal consultations.

- **Meeting With Internet Service Providers:** Conversations were had with the largest service provider in the region, Emery Telcom. They are doing tremendous work in the region and have worked to successfully provide fiber connectivity to most of the residents and businesses within Carbon and Emery Counties. Within these counties, there are a few unserved regions. However, they are largely in rural regions, and Emery Telcom is planning on applying for BEAD funding to connect these areas. This includes the Book Cliffs region of Carbon County. Within Emery County, there are mountain cabins that need to be served, and they also plan to apply for BEAD funding to connect these areas.

  Within Grand County, Emery Telcom purchased a cable internet company in 2009. Since then, they have built fiber in Green River in Emery County and down to Moab, where they have been building fiber in that community. They are currently three years into a five-year project to get fiber in Grand County. Where they don't have fiber, for the most part, they are completely building out Grand County.

  In San Juan County, they are also working to provide the same level of connectivity and service that is offered within Carbon and Emery County. They have already connected large areas of the county and have a six-year plan to provide full connectivity to the county.

- **Existing Assets Assessment:** These assets include fiber optic lines, existing towers, and more. This is filled out in the following sections.

- **Geographic Information System (GIS) Mapping:** GIS mapping tools were utilized in the drafting of this broadband plan. The maps provided valuable information pertaining to broadband speed and connectivity in Southeastern Utah.

3.2 EXISTING RESOURCES

Existing programs include all of the programs and activities that Southeastern Utah currently performs or has performed in the past. The main programs in the region are:

Table 1. Current Broadband-Related Resources

Activity Name	Description	Intended Outcome(s)
Utah State Universal Service Fund	Enables rural customers to have access to the same quality of service as urban customers at a comparable price.	This program's intended outcomes have been to advance and maintain Telecommunication networks and services in rural areas.

The Utah Broadband Center	This is a program by the Utah Governor's Office of Economic Development. This center provides resources, information, and technical assistance to support broadband development across the state.	The initiatives from this program offer mapping tools, grant information, and education resources for broadband providers and communities.
The Utah Rural Telecom Association (URTA)	The URTA is an association of Telecommunications providers in rural Utah.	They work to promote and improve Telecommunications services in underserved areas and advocate for policies and funding that support broadband infrastructure deployment.
The USDA ReConnect Program	The USDA offers funding to support broadband infrastructure deployment in rural areas.	It provides loans, grants, and loan-grant combinations to Telecommunications providers, electric cooperatives, and other eligible entities.
Rural Digital Opportunity Fund	This program is meant to bridge the digital divide in rural areas by distributing funds to install fixed broadband connectivity.	This fund is used to provide at least 100 megabits per second downstream and 20 megabits per second upstream. This fund has been utilized in the region.

Table 4. Broadband Funding

Source	Purpose	Total	Expended	Available
Utah Broadband Center	Planning Grants	$50,000	[$X00,000]	[$X00,000]
Broadband Equity, Access and Deployment program	Utah Broadband funding	$317,399,741.54		

3.3 PARTNERSHIPS

This section identifies existing and potential partners and community anchor institutions that Southeastern Utah 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.

Table 5. Local Community Partners and Community Anchor Institutions

COMMUNITY PARTNER / ANCHOR INSTITUTION	Description of Current or Planned Role in Broadband Deployment and Adoption
Comprehensive Economic Development Strategy Committee (CEDS)	CEDS is a fantastic resource to be engaged for the development and implementation of the Local Broadband Plan. Members of this organization include: • Carbon County Commission / BODEC • Carbon County Economic Development • Carbon County Planning Department • Emery County Commission / Entrepreneur • Castle Dale Mayor / Entrepreneur • Grand County Commission • Grand County Economic Development • Helper City Mayor • Monticello Mayor / USU Monticello • San Juan County Economic Development • San Juan County • Blanding City Economic Development • UDOT • Utah State University Eastern • Utah Tourism Industry Association • Utah Department of Workforce Services • Utah Office of Energy Development • Utah Governor's Office of Planning & Budget • Utah Governor's Office of Economic Opportunity • Senator Mitt Romney's Office • Congressman John Curtis' Office • Senator Mike Lee's Office
Southeastern Utah Association of Local Governments	• Geri Gamber Executive Director • Jade Powell Deputy Director

Emery Telcom	As the primary ISP in the region partnerships and communication will be important moving forward.
Anchor Institutions	• Utah State University Eastern • Grand County Library system • Emery County Library system • Emery County Offices • San Juan County Library system

Table 6. State-Wide 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*
Liz Gabbitas	lgabbitas@utah.gov	Digital Access and Education Program Manager *Utah State Library*
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 Southeastern Utah are described in section 3.4.1. Southeastern Utah's soft assets are described in sections 3.4.2 and 3.4.3, below.

3.4.1 Broadband Availability

Broadband availability in the region ranges from wireline connections, including DSL, Cable, and fiber connection, to wireless data. Carbon and Emery County DSL and Cable have all been replaced with fiber connections. Figures 5, 6, 7, and 8 show where there is, as defined by the Federal Communications Commission (FCC), a minimum download speed of 100 Mbps (megabits per second) and an upload speed of 20 Mbps.

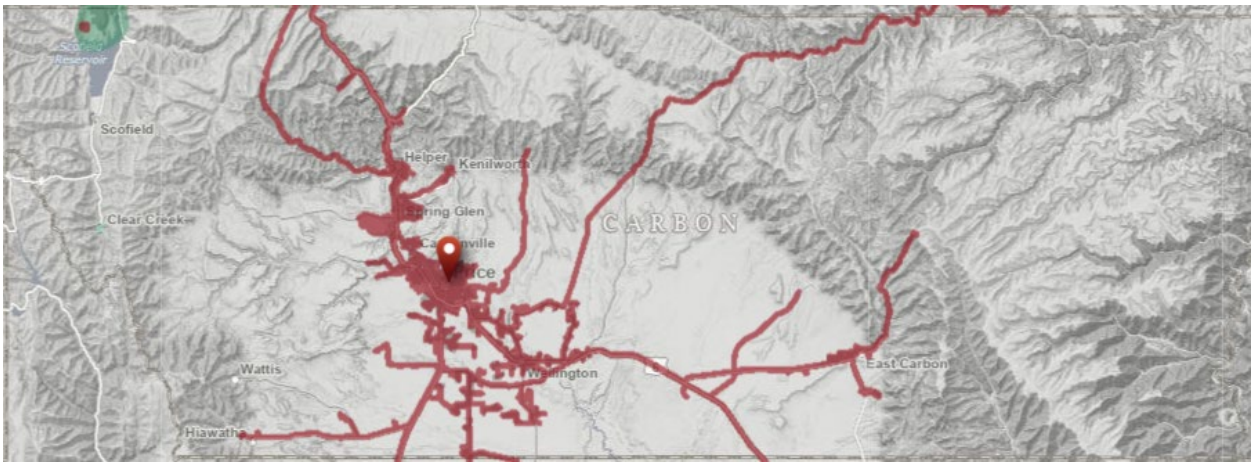


Figure 5. Emery Telcom fiber broadband internet in Carbon County with 100/20 Mbps.

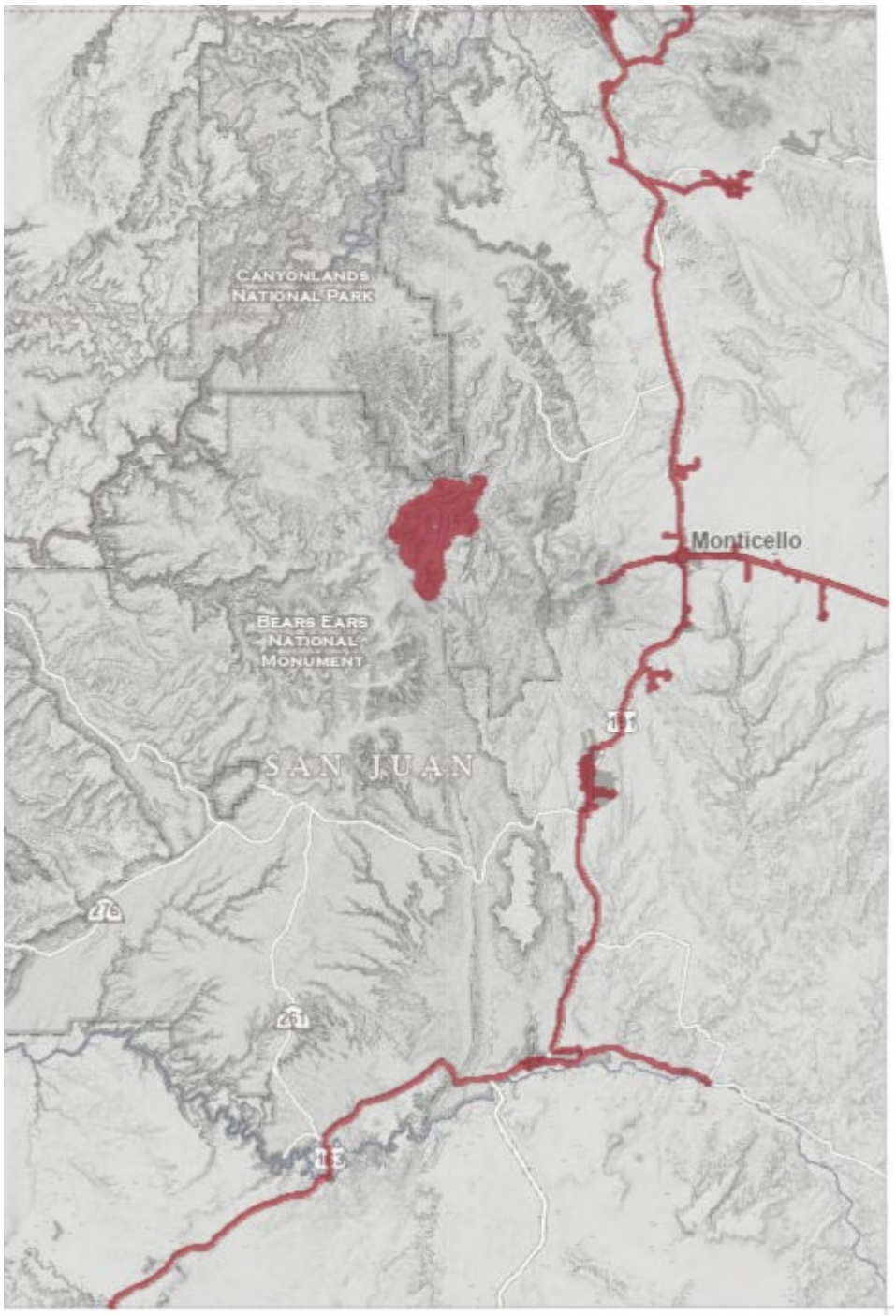


Figure 6. Broadband internet in San Juan County with 100/20 Mbps. Includes both wireline and fixed wireless.

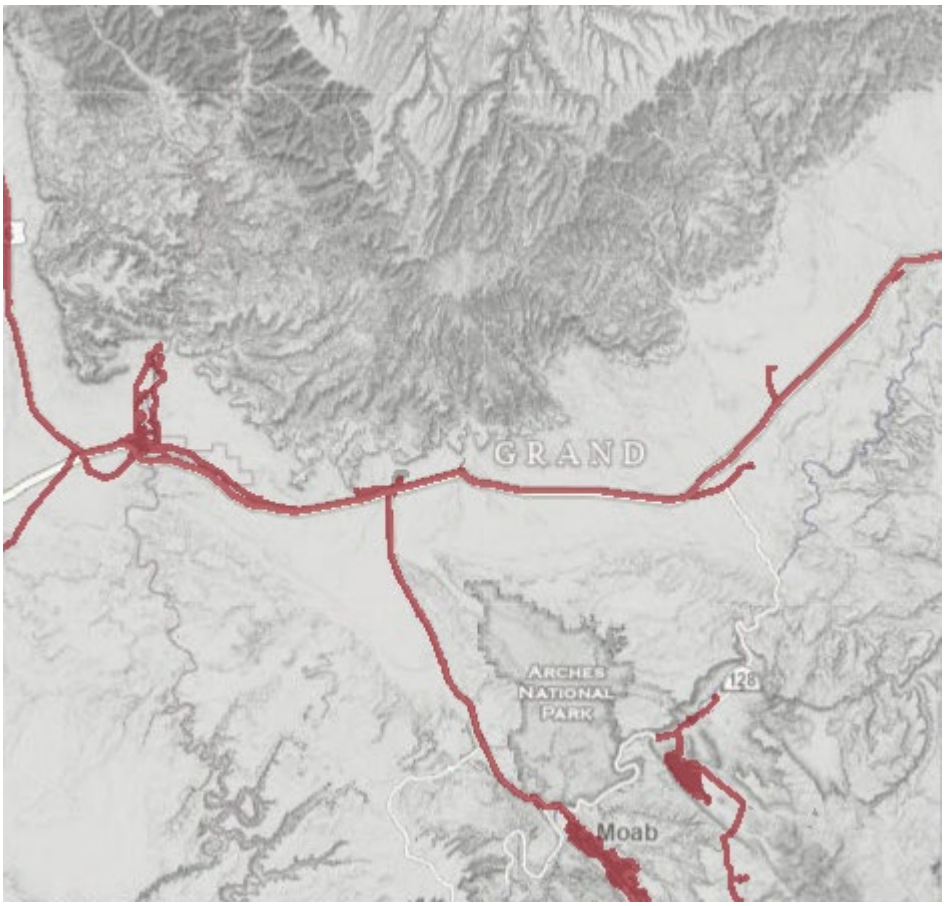


Figure 7. Emery Telcom broadband internet in Grand County with 100/20 Mbps fiber connection.

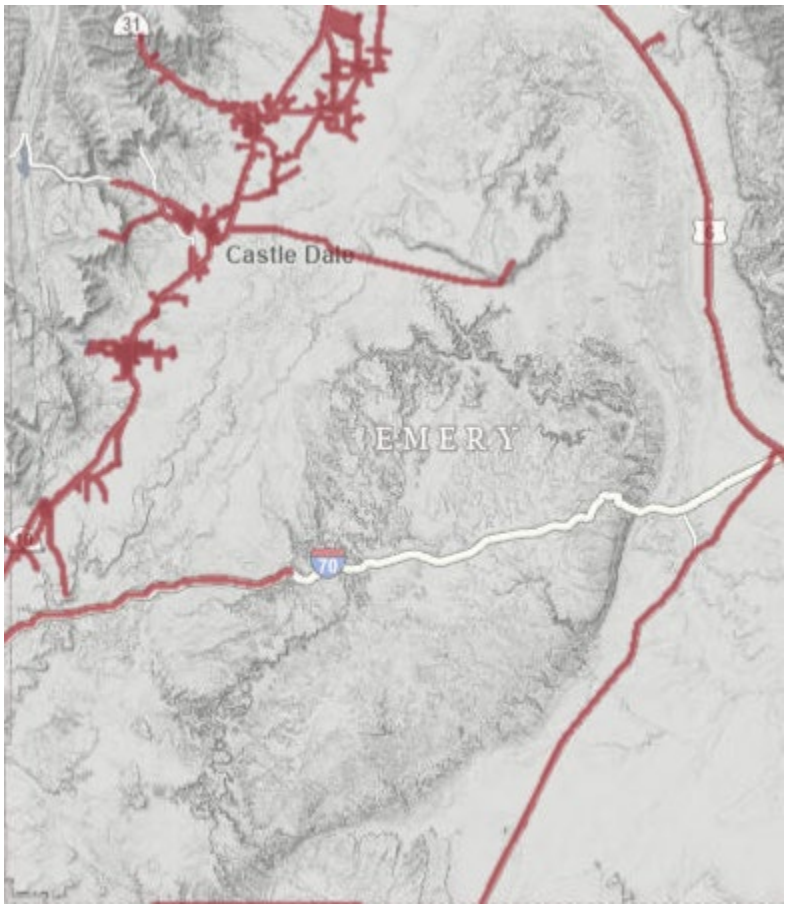


Figure 8. Fiber Broadband internet in Emery County with 100/20 Mbps. Includes both wireline and fixed wireless.

3.4.2 Digital Access

Digital access is the ability of individuals to use and benefit from broadband internet. Access to the internet is also the availability of infrastructure, knowledge, and access to hardware. In cities within Southeastern Utah, there are different programs and entities that provide digital access to the community.

These include public Wi-Fi networks. In the region, these are primarily public libraries and schools. These are cataloged with the Utah Communities Connect interactive map.

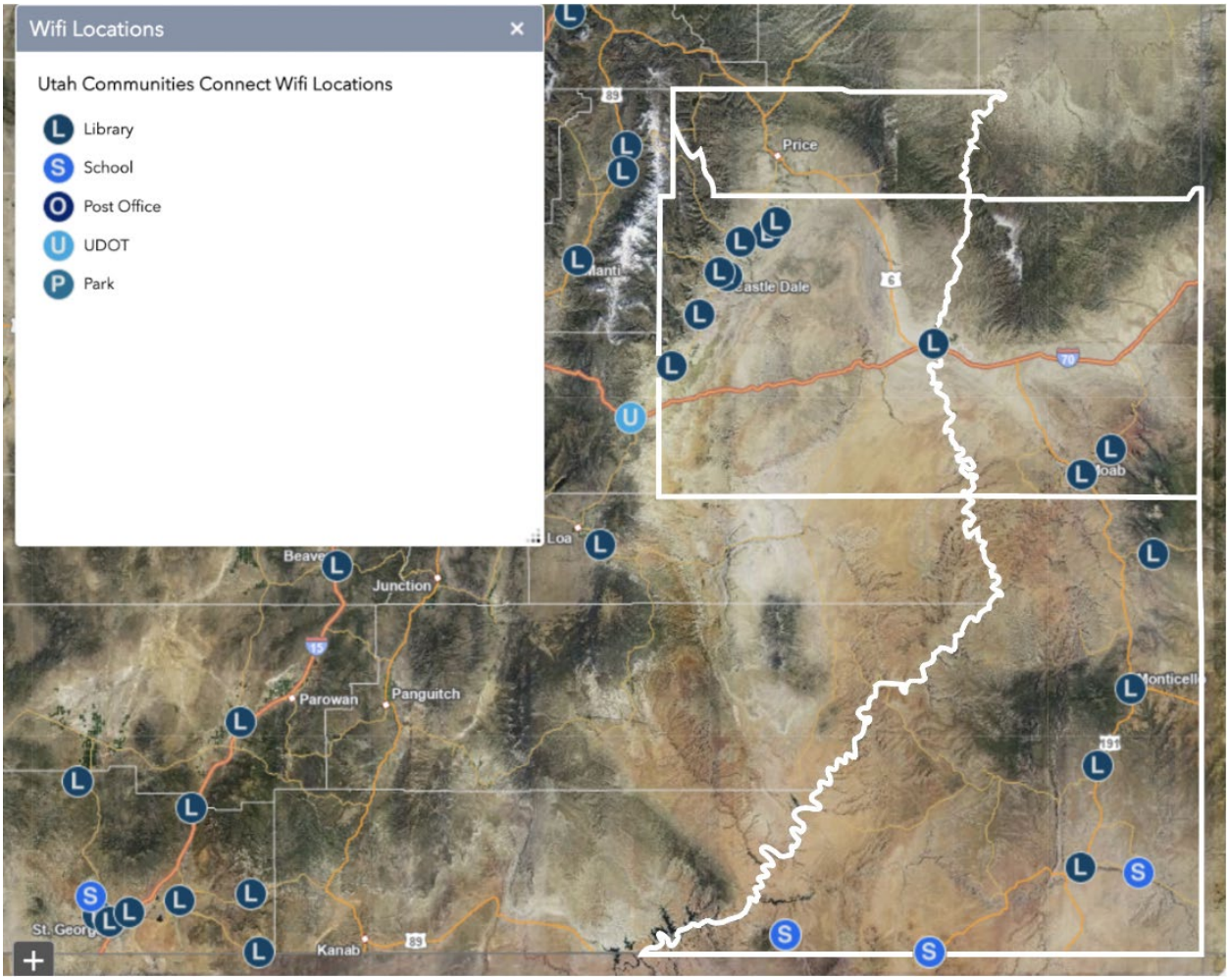


Table 7. Technology Available to Region's Population. Each County is represented by its county seat and the top five most populated cities in the region. This data was collected through GIS data as reported from FCC Form 477 and the FCC National Broadband Map. Percentages are based on access to download speeds of 100 Mbps and upload speeds of 20 Mbps.

	Percent of Population				
CITY	Fiber	DSL/Cable	Satellite	WIRE LESS	OTHER
Price	100%	13.8%	99.3%	99.3%	

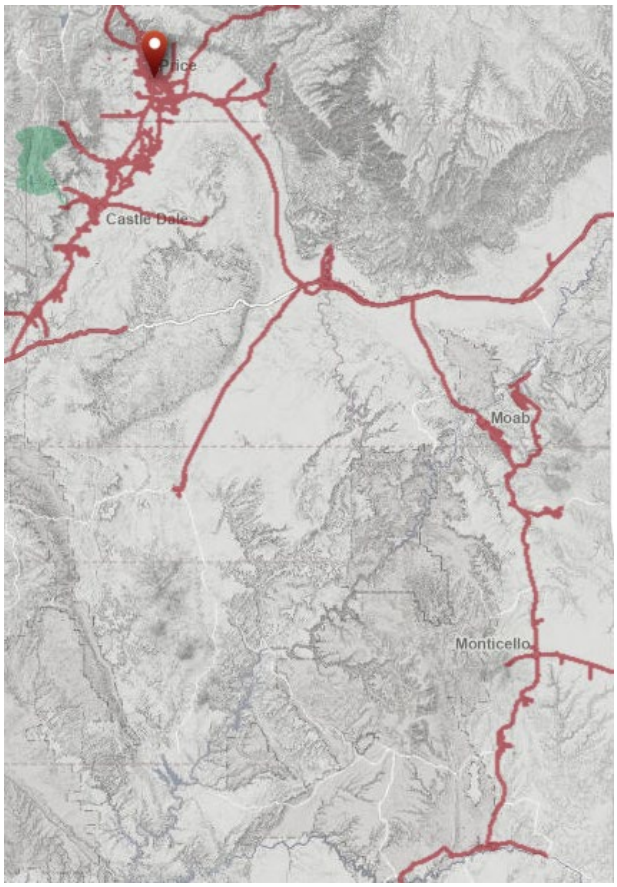
Helper	98.2%	0%	99.8%	99.5%	
East Carbon	99.79%	0%	100%	100%	
Wellington	99.87%	0%	99.3%	99.3%	
Sunnyside	100%	0%	100%	100%	
Castle Dale	100%	0%	99.3%	99.3%	
Huntington	100%	0%	100%	100%	
Ferron	100%	0%	98.8%	98.8%	
Orangeville	100%	0%	99.6%	98.3%	
Cleveland	100%	0%	100%	100%	
Moab	96.13%	99.97%	99.2%	98.7%	
Castle Valley	100%	0%	99.2%	98.7%	
Thompson Springs	21.28%	0%	85.7%	85.7%	
Cisco	80%		100%	100%	
La Sal	95.9%	0%	99.8%	80.2%	
Monticello	91.87%	90.99%	99.3%	40.5%	
Bluff	97.47%	0%		98.4%	
Blanding	97.6%	92.65%		100%	
Aneth Chapter	2.9%	37.2%		6.9%	
Dennehotso Chapter	0%	0%		0%	

Internet Service Providers (ISPs) In The Region

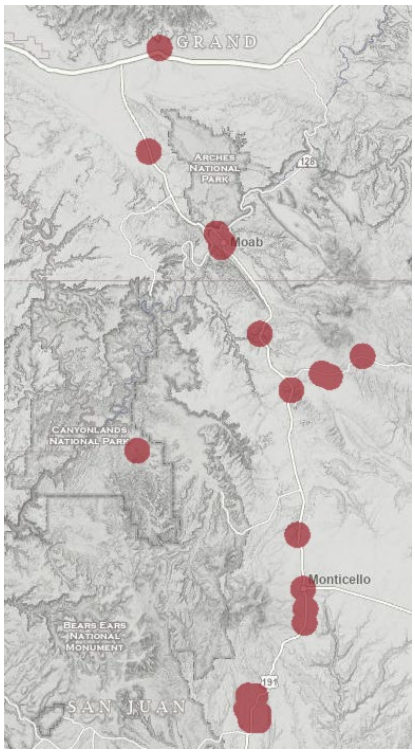
Private ISP companies provide internet service to residents and businesses. They typically own the networks that distribute the broadband to their customers. Twice a year, ISPs report their service areas through FCC Form 477. In Utah, these coverage areas are mapped onto the Utah Broadband Map[4]. The ISPs that provide service in Southeastern Utah are:

- Emery Telcom
- Frontier Communications
- CentraCom Interactive (Partnered with Emery Telcom)

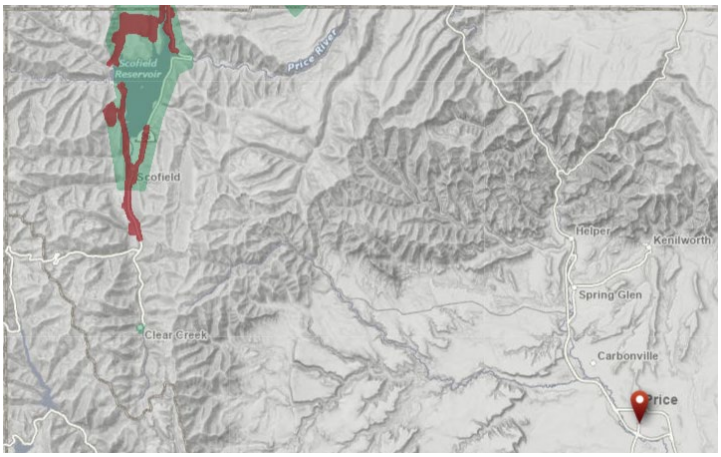
[4] Utah Broadband Outreach Center. "Utah Broadband Outreach Center." Broadband.ugrc.utah.gov, https://broadband.ugrc.utah.gov/. Accessed 31 May 2023.



Emery Telcom service coverage in Southeastern Utah



Frontier Communications service coverage in Southeastern Utah

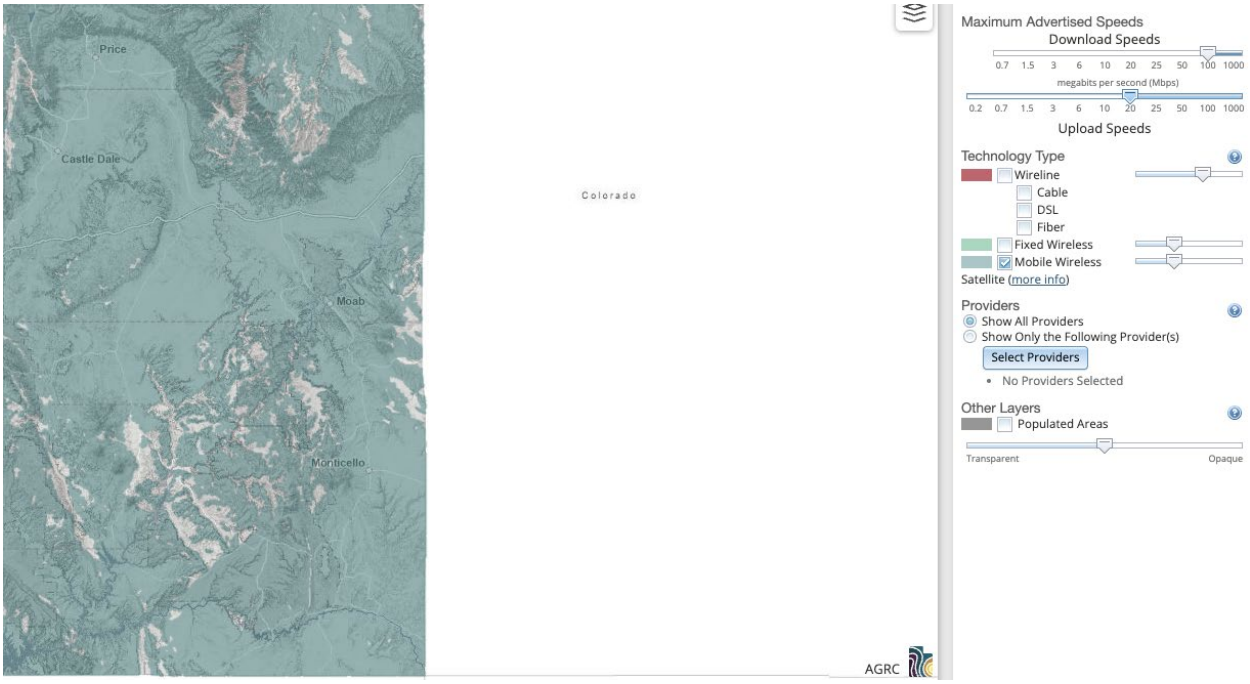


CentraCom Interactive service coverage in Southeastern Utah

Wireless Towers & Connections

Wireless towers have been extended in the past to southeastern Utah through a microwave system with fiber as a backhaul. This system utilizes Beehive Telephone's Gigabit pipeline from Salt Lake City, which is a fiber network. This system is wireless and doesn't require telephone lines.

Additional wireless towers include, 37 FCC-registered antenna towers in Emery County[5], 41 FCC-registered antenna towers in Grand County[6], 51 FCC-registered antennas & cell phone towers in Carbon County, and 68 FCC-registered antennas & cell phone towers in San Juan County. The map below illustrates the connectivity of mobile wireless access.



Mobile Wireless Coverage Area in Southeastern Utah (100/20 Mbps Minimum Speeds)

Fiber Connections

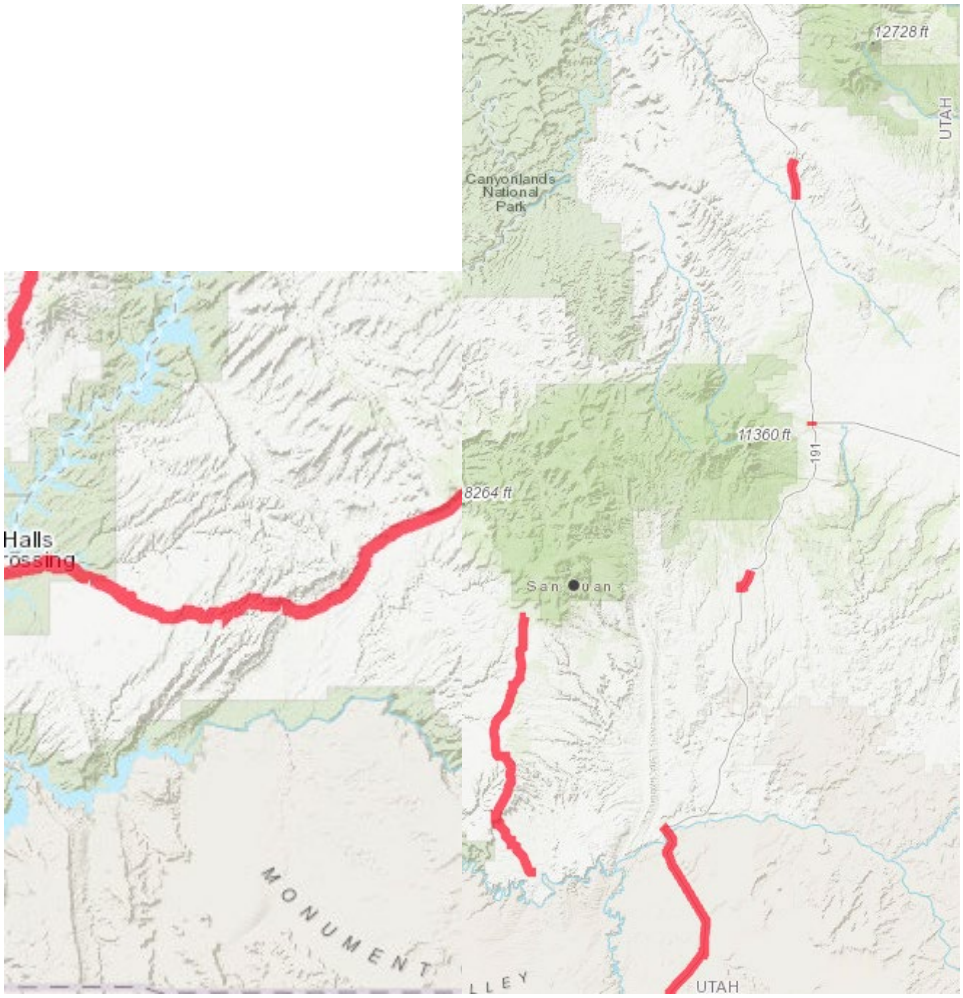
Emery Telcom has been actively deploying fiber optic infrastructure along the state highway system[7]. This infrastructure includes conduits, fiber optic cabling, access points, distribution hubs, and communication equipment. After discussions with Emery Telcom, it has become apparent that the UDOT fiber network is out-of-date. Most of the areas that are listed as fiber

[5] City-Data.com. "Cell towers in Emery, Utah." City-data.com, https://www.city-data.com/towers/cell-Emery-Utah.html. Accessed 31 May 2023.

[6] City-Data.com. "Cell towers in Moab, Utah." City-data.com, https://www.city-data.com/towers/cell-Moab-Utah.html. Accessed 31 May 2023.

[7] Horrocks Engineers. "Utah Broadband Project." ArcGIS, https://horrocks.maps.arcgis.com/apps/webappviewer/index.html?id=096d0a7dd31a4be289b9623935308fc9. Accessed 31 May 2023.

needs have already been built out. There are still a few cases where fiber still needs to be built along the highways and those are listed below.



San Juan County Fiber Needs

Tables 8 through 11: Broadband Speed Tables.

Below, Tables 8 and 9[8] show the *wireline speeds* available to residents throughout the region. Table 8 shows the wireline download speeds in the region, and Table 9 shows the wireline

[8] Federal Communications Commission. "Area Summary - Fixed (Carbon County, Utah)." Broadbandmap.fcc.gov, https://broadbandmap.fcc.gov/area-

upload speeds in the region. Tables 10 and 11 show the *wireless speeds* available to residents throughout the region. Table 10 shows the wireless download speeds, and Table 11 shows the wireless upload speeds.

Table 8. Wireline Broadband Availability: Download Speeds

	Percent of Community Population With Available Download Speeds				
DOWNLOAD SPEED	CARBON	EMERY	GRAND	SAN JUAN	
3 Mbps	93.43%	94.94%	96.94%	52.76%	
10 Mbps	99.45%	94.94%	96.94%	51.76%	
25 Mbps	95.65%	94.94%	96.94%	49.69%	
100 Mbps	93.86%	94.94%	96.86%	49.44%	
1 Gbps	93.86%	94.94%	96.83%	49.26%	

Table 9. Wireline Broadband Availability: Upload Speeds

	Percent of Community Population With Available Upload Speeds				
UPLOAD SPEED	CARBON	EMERY	GRAND	SAN JUAN	
3 Mbps	93.43%	94.94%	96.94%	52.76%	
10 Mbps	99.45%	94.94%	96.94%	51.76%	
20 Mbps	95.65%	94.94%	96.94%	49.69%	
100 Mbps	93.86%	94.94%	96.86%	49.44%	
1 Gbps	93.86%	94.94%	96.83%	49.26%	

Table 10. Fixed Wireless Broadband Availability: Download Speeds

	Percent of Community Population With Available Download Speeds				
DOWNLOAD SPEED	CARBON	EMERY	GRAND	SAN JUAN	
3 Mbps	97.42%	90.66%	82.49%	59.69%	
10 Mbps	94.53%	81.18%	95.36%	66.17%	
25 Mbps	85.59%	71.8%	93.94%	63.15%	
100 Mbps	2.81%	3.53%	.05%	11.03%	
1 Gbps	0%	0%	0%	0	

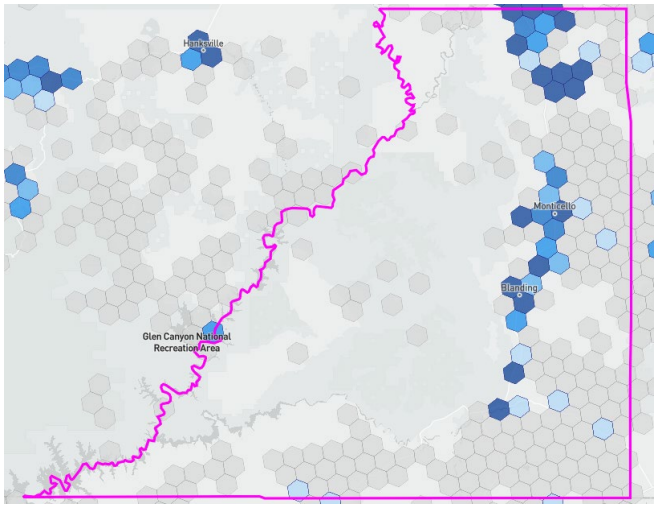
summary/fixed?version=dec2022&geoid=49007&type=county&zoom=8.85&vlon=-110.560702&vlat=39.641014&br=r&speed=25_3&tech=6_7. Accessed 31 May 2023.

Table 11. Wireless Broadband Availability: Upload Speeds

	Percent of Community Population With Available Upload Speeds				
UPLOAD SPEED	CARBON	EMERY	GRAND	SAN JUAN	
3 Mbps	97.42%	90.66%	82.49%	59.69%	
10 Mbps	94.53%	81.18%	95.36%	66.17%	
20 Mbps	85.59%	71.8%	93.94%	63.15%	
100 Mbps	2.81%	3.53%	.05%	11.03%	
1 Gbps	0%	0%	0%	0	

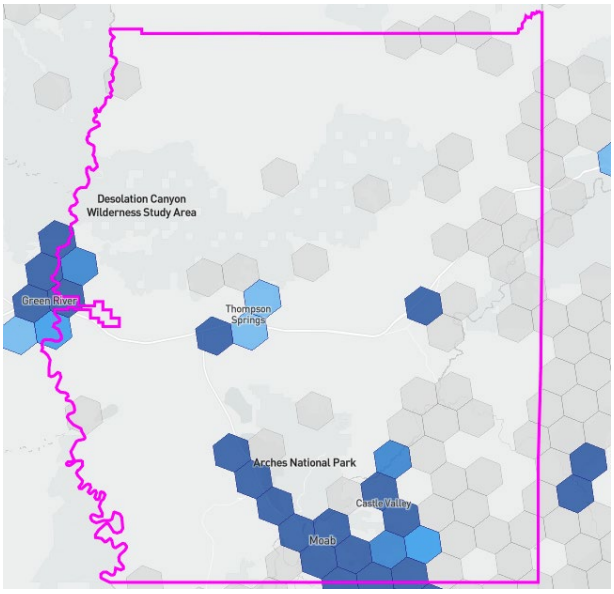
The data for these maps were found through the FCC's broadband map tool[9]. The legend for the maps below are as follows:

- 80 - 100% coverage
- 60 - 80% coverage
- 40 - 60% coverage
- 20 - 40% coverage
- 0 - 20% coverage

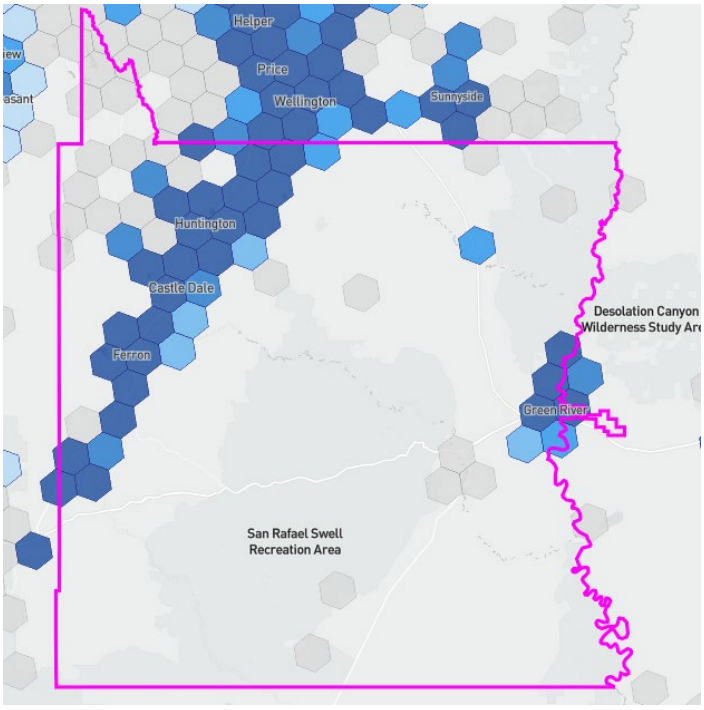


San Juan County ***Wireline Broadband Availability: Download/Upload Speeds***

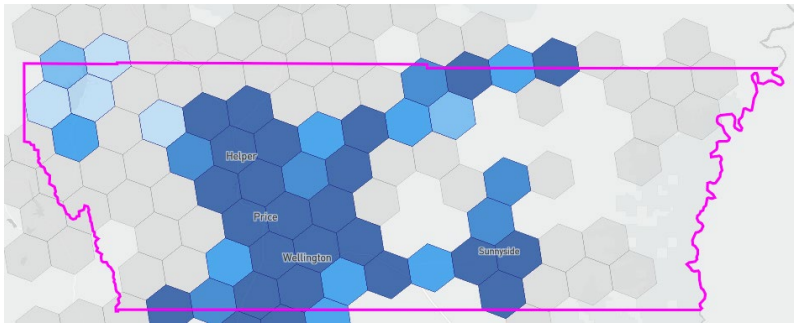
[9] Federal Communications Commission. "Area Summary - Fixed (San Juan County, Utah)." Broadbandmap.fcc.gov, https://broadbandmap.fcc.gov/area-summary/fixed?version=jun2022&geoid=49037&type=county&zoom=7.81&vlon=-110.227178&vlat=37.752636&br=r&speed=25_3&tech=1_2_3. Accessed 31 May 2023.



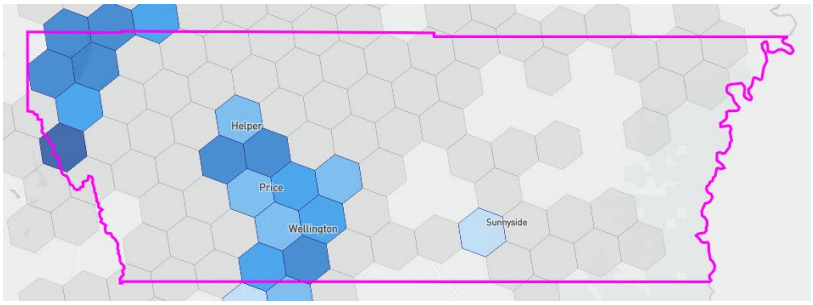
Grand County ***Wireline Broadband Availability: Download/Upload Speeds***



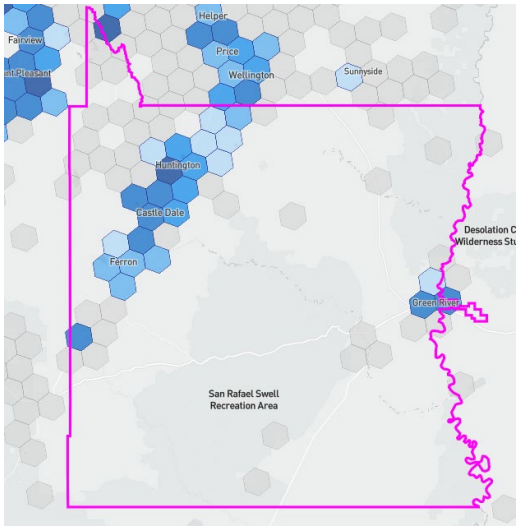
Emery County ***Wireline Broadband Availability: Download/Upload Speeds***



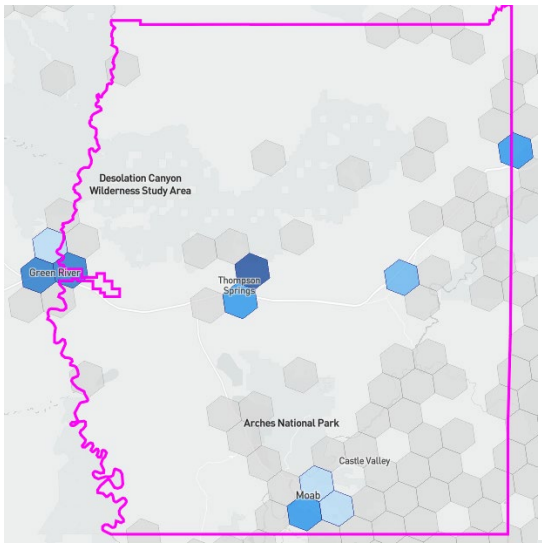
Carbon County ***Wireline Broadband Availability: Download/Upload Speeds***



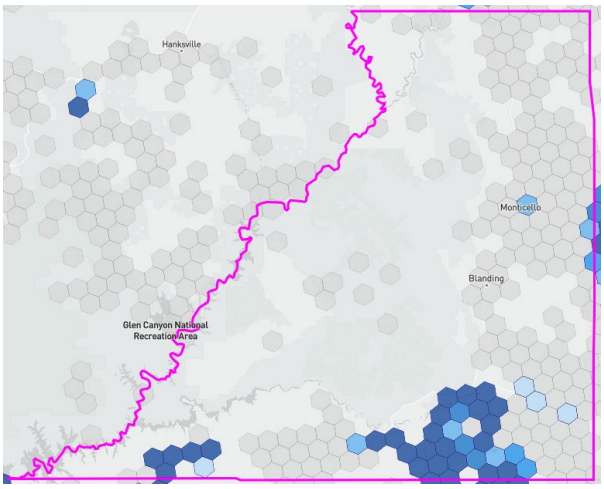
Carbon County Wireless Broadband Availability: Download/Upload Speeds



Emery County Wireless Broadband Availability: Download/Upload Speeds



Grand County Wireless Broadband Availability: Download/Upload Speeds



San Juan County Wireless Broadband Availability: Download/Upload Speeds

3.4.3 Broadband Affordability

Table 12. Providers and Prices

Provider	Price	DESCRIPTION OF SERVICE TIER, ADVERTISED SPEEDS, AND AFFORDABILITY	Participate in an Affordable Connectivity Program?
River Canyon Wireless	$99.99	25Mbps/10Mbps	Yes
Frontier	$62.00	25Mbps	Yes
Emery Telcom	$49.95/mo $59.95/mo $59.95/mo $69.95/mo $79.95/mo	25Mbps/5Mbps - 1TB Usage 100Mbps/20Mbps - Unlimited Usage 100Mbps/100Mbps - 250 GB Usage 1 Gbps/1Gbps - 1TB Usage 1Gbps/1Gbps - Unlimited Usage	Yes
Starlink (Satellite)	$120	Unlimited Data	No
HughesNet (Satellite)	$200	Unlimited Data	No

Various federal and state programs 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 Southeastern Utah is the ACP[10]. 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 under-utilized 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. Below you will see the communities in the region and their adoption rates of this program.[11]

[10] Utah Governor's Office of Economic Development. "Access and Connectivity Program (ACP)." Business.utah.gov, https://business.utah.gov/broadband/acp/. Accessed 31 May 2023.

[11] EducationSuperHighway. "ACP Data." EducationSuperHighway, 2023, https://www.educationsuperhighway.org/no-home-left-offline/acp-data/#dashboard. Accessed 18 July 2023.

City	County	Adoption Rate	Eligible Households	Enrolled Households	Eligible Unconnected Households
Price	Carbon	35%	1229	425	431
Wellington	Carbon	30%	239	71	84
Helper	Carbon	16%	370	60	130
Scofield	Carbon	16%	30	5	11
Emery	Emery	9%	53	5	18
Ferron	Emery	21%	212	45	74
Castle Dale	Emery	28%	249	69	87
Cleveland	Emery	16%	65	10	23
Huntington	Emery	19%	301	58	106
Clawson	Emery	10%	22	2	8
Orangeville	Emery	13%	188	24	66
Elmo	Emery	15%	53	8	18
Moab	Grand	12%	837	100	293
Castle Valley	Grand	12%	101	12	35
Monticello	San Juan	9%	251	23	88
Blanding	San Juan	19%	386	74	135
Bluff	San Juan	46%	63	29	22

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 an additional $9.25 per month to certain qualifying households and plans, and the state of Utah provides an additional $3.25 per month. As of January 2023, The Universal Service Administrative Co[12] provides the following participation metrics for southeastern Utah:

[12] USAC, "Program Data," Lifeline Resources, https://www.usac.org/lifeline/resources/program-data/, accessed July 27, 2023

COUNTY NAME	TOTAL SUBSCRIBERS
CARBON COUNTY	471
EMERY COUNTY	98
GRAND COUNTY	92
SAN JUAN COUNTY	1,291

3.5 NEEDS AND GAPS ASSESSMENT

To ensure that all residents of Southeastern Utah have access to reliable, affordable, and quality broadband internet services, a needs and gaps assessment must be conducted. The Local Broadband Plan will provide an assessment of gaps between current state broadband deployment and the needs of Southeastern Utah residents and businesses. ISPs in the area, including Emery Telcom, have currently expanded fiber extensively in Carbon and Emery Counties and have plans for Grand and San Juan counties over the next six years. In section 3.5.1, we analyzed available data from the FCC's broadband map and federal funding opportunities within the region. By doing this, we hope to illustrate current needs and gaps within the region from available data without the inclusion of future plans of ISPs. By analyzing data collected in the region, policymakers and stakeholders can better understand and develop a plan to move forward in addressing these gaps.

Throughout the initial part of this plan, we illustrated the assets and connectivity of Southeastern Utah. Within the next section, we will analyze the gaps within the existing infrastructure and connectivity of the region. This pertains to availability, accessibility, affordability, and community needs.

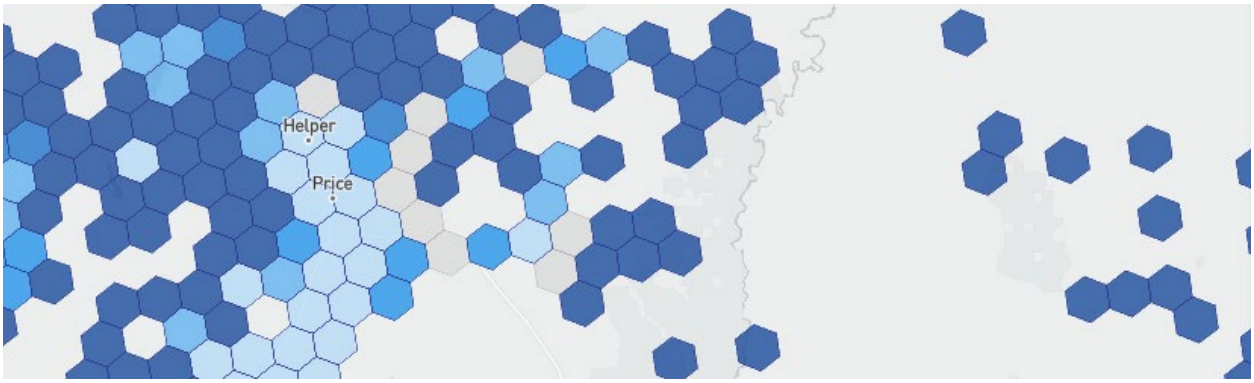
3.5.1 Broadband Availability

There are two different mapping segments provided below. The first group illustrates the areas in Southeastern Utah that do not have federal funding programs**.** This data was pulled from the funding map[13] provided by the FCC. The second group shows regions of southeastern Utah that are considered served with data provided by Emery Telcom that illustrates their fiber network and identifies unserved households.

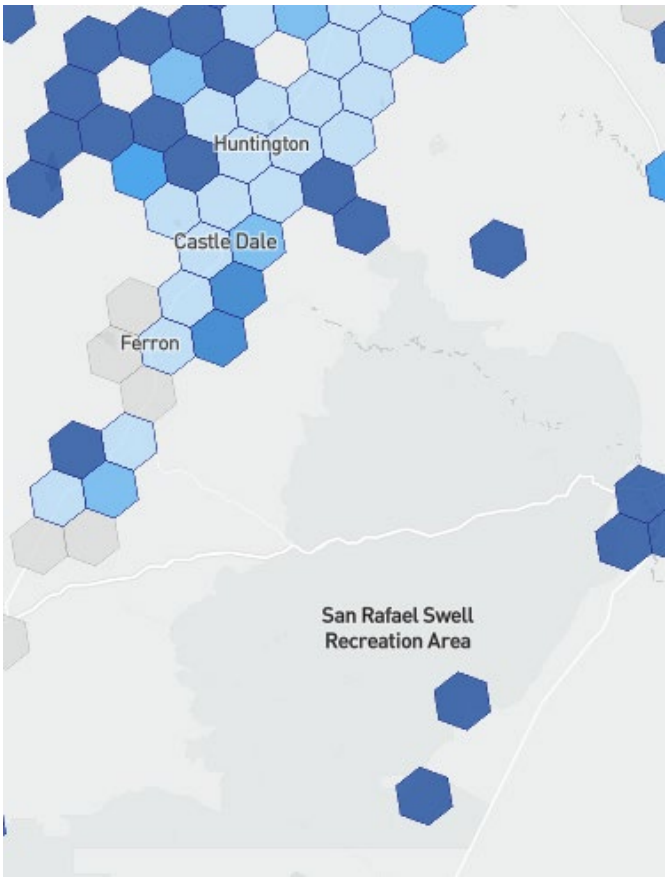
[13] Federal Communications Commission. (2023). Location Summary: Carbon County, Utah, United States. Retrieved July 18, 2023, from https://fundingmap.fcc.gov/location-summary?lon=-110.804953&lat=39.608067&addr_full=Carbon+County%2C+Utah%2C+United+States&zoom=7.38&vlon=-110.985708&vlat=39.664964&br=r&speed=100_20&tech=1_2_3_6_7

The legend for these funding maps are:

- 80 - 100% without federal funding
- 60 - 80% without federal funding
- 40 - 60% without federal funding
- 20 - 40% without federal funding
- 0 - 20% without federal funding

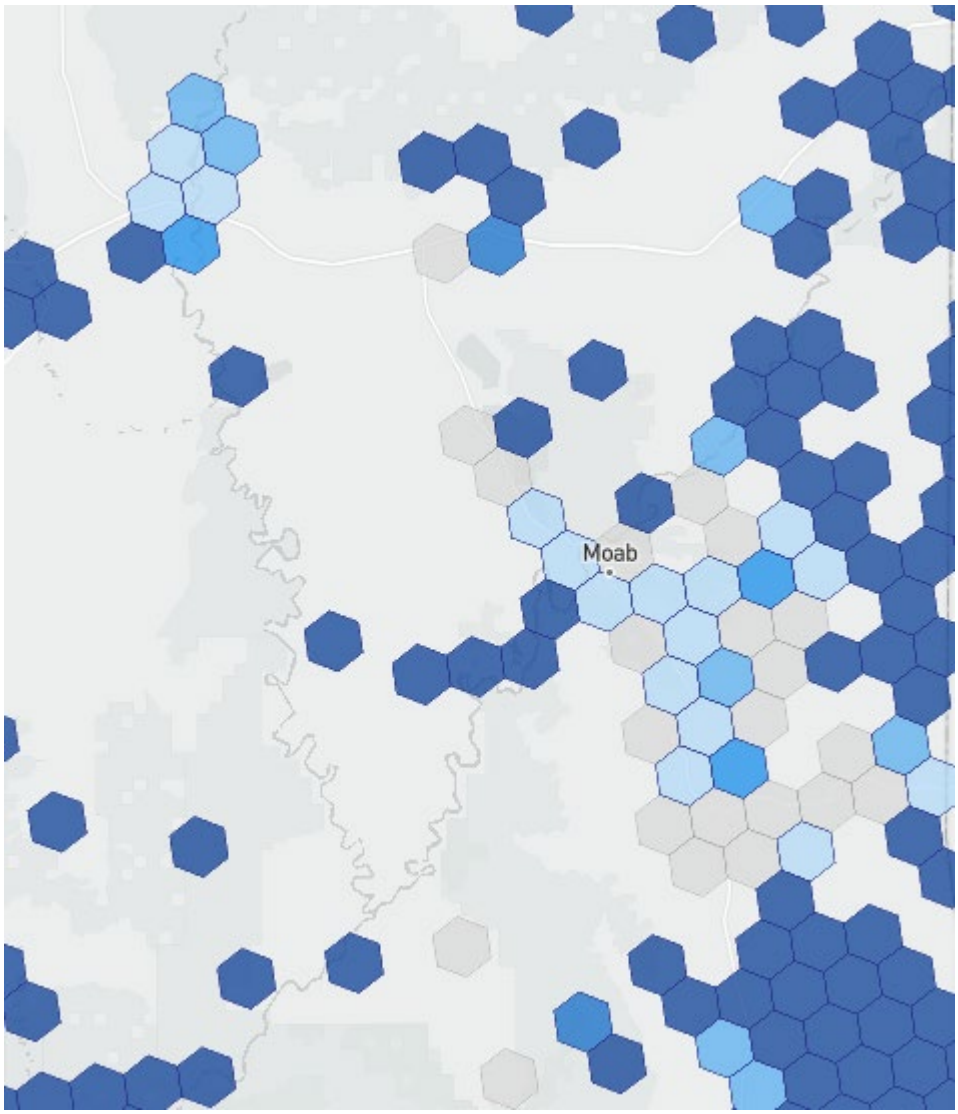


Carbon County without federal funding



Emery County without federal funding

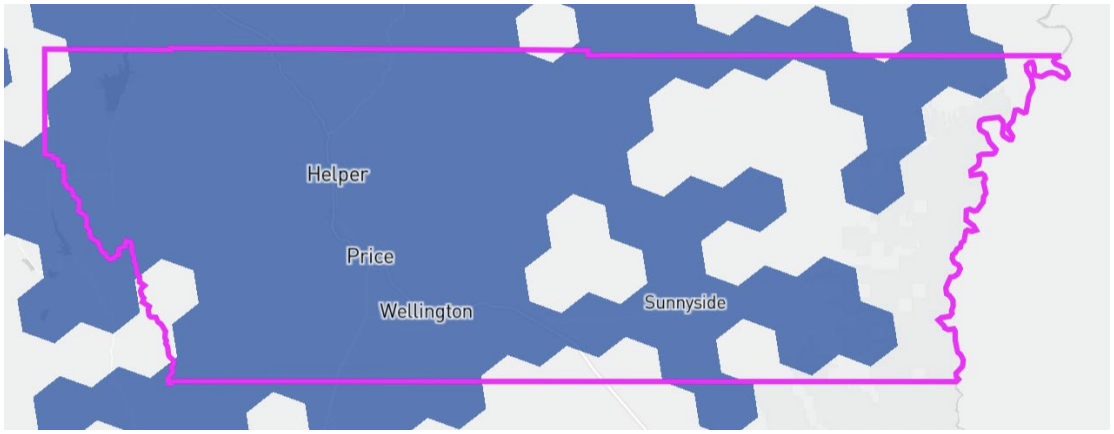
San Juan County without federal funding



Grand County without federal funding

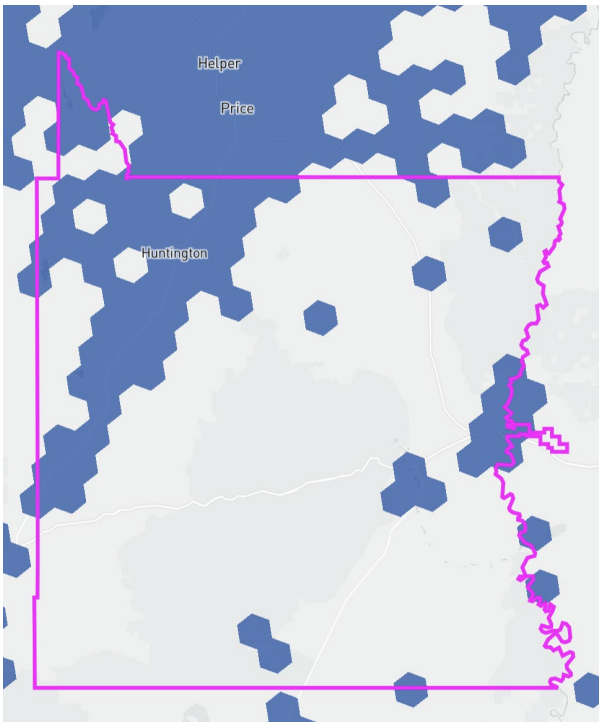
The following maps[14] illustrate the served units within southeastern Utah. As can be seen, there is broad connectivity and areas that are considered served throughout the major population zones. The gray units represent areas that are underserved.

- 80 - 100% Served
- 60 - 80% Served
- 40 - 60% Served
- 20 - 40% Served
- 0 - 20% Served
- 0% Served

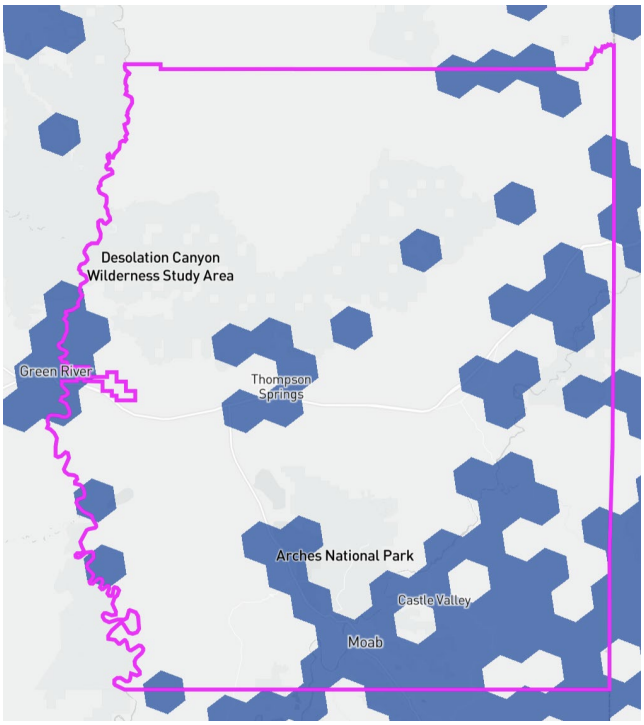


Carbon County served & underserved areas

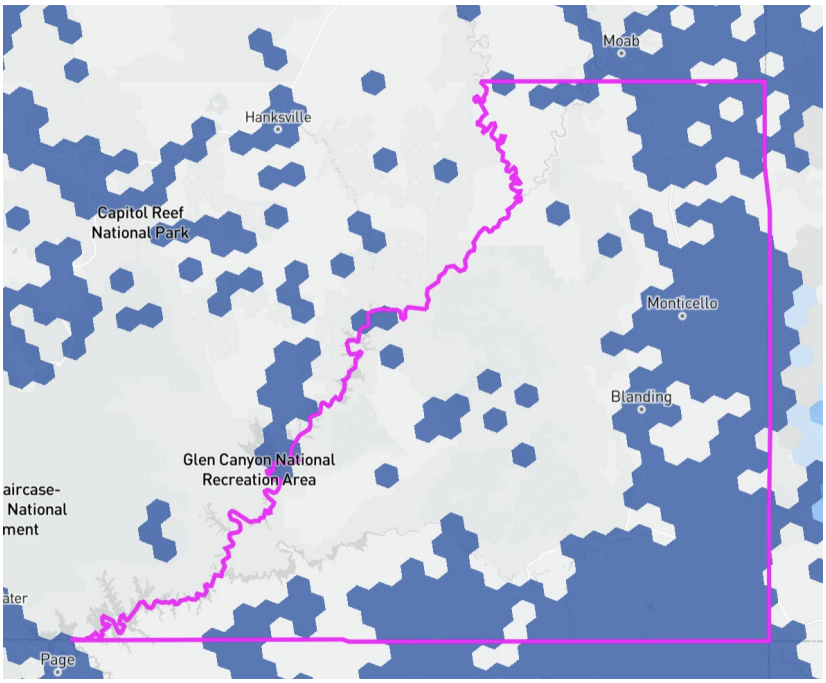
[14] Federal Communications Commission. (2023). Location Summary: Carbon County, Utah, United States. Retrieved July 18, 2023, from https://broadbandmap.fcc.gov/area-summary/fixed?version=dec2022&geoid=49007&type=county&zoom=8.88&vlon=-110.560703&vlat=39.641014&br=r&speed=100_20&tech=1_2_3_4_5_6_7_8



Emery County served & underserved areas



Grand County served & underserved areas



San Juan County served & underserved areas

3.5.2 Digital Access

The chart below shows digital access data for both the area of study and four counties from Northern Utah. The purpose for the inclusion of these four counties is to represent an urban population that houses the majority of Utah's citizens. A comparison between the two areas shows gaps and disparities in digital access. The data below was obtained from the 2020 US Census population data.[15]

County	Households with a Computer	Households with Broadband Internet Connection
Weber	96.10%	92.10%
Davis	97.40%	92.80%
Salt Lake	96.90%	91.90%
Utah	98.50%	89.90%
Carbon	90.50%	81.40%
Emery	92.70%	83.50%
Grand	93.80%	85.70%
San Juan	74.00%	58.90%

3.5.3 Broadband Affordability

The following chart using data from the 2020 US Census shows the median household income and percentage of persons in poverty in the following Utah counties: Weber, Davis, Salt Lake, Utah, Carbon, Emery, Grand, and San Juan. The purpose of including the non-Southeastern Utah counties is to show disparities in incomes between Utah's most urban areas and the region of study.

[15] US Census Bureau. "United States Census Bureau." census.gov. https://www.census.gov/quickfacts/UT?. Accessed 25 May 2023.

County	Median Household Income	Percent of Persons in Poverty
Weber	$74,345	9.30%
Davis	$92,765	6.40%
Salt Lake	$82,206	8.80%
Utah	$82,893	8.10%
Carbon	$51,725	15.90%
Emery	$61,234	11.80%
Grand	$51,433	11.10%
San Juan	$52,400	26.80%

Southeastern Utah consumers have fewer broadband service options than those offered in Utah's cities. With fewer options for similar prices, the counties in the region, whose households on average, make $28,854 less than those in the four urban counties, are being charged relatively higher rates. [16]

4 OBSTACLES OR BARRIERS

Southeastern Utah has unique features that may present challenges for developing and implementing the Local Digital Connectivity Plan. These barriers include:

- The geography of Southeastern Utah is unique and rugged. Certain areas may have canyons or mountains that present challenges to building new broadband infrastructure. For example, there may be households in remote areas which makes running cables or placing towers more difficult.
- Unlike Utah's more urban counties, people are spread across large land distances. Low population densities create little incentive for internet service provider companies to expand in a region. If just a few people live within a few square miles of each other, companies will be hesitant to invest in new broadband infrastructure.
- Low population density also creates limited competition. There are not as many service providers in an area because there are fewer potential customers and lower potential revenue.
- In some areas, there may be old or outdated infrastructure that cannot support an improved broadband network. In order to be on the same level as the broadband speeds of urban areas, these will require a significant investment to update.

[16] US Census Bureau. "United States Census Bureau." census.gov. https://www.census.gov/quickfacts/UT?. Accessed 25 May 2023.

5 IMPLEMENTATION PLAN

5.1 PRIORITIES

Through thorough analysis of available speed data, GIS data, and broadband mapping, priorities have been identified based on community broadband needs. **Table 13, Priorities for Broadband Deployment and Digital Access** below, categorizes the priority tiers.

Table 13. Priorities for Broadband Deployment and Digital Access

Priority	Ranking	Description
Putting in place high-speed internet in eligible areas that are currently unserved	High	Highest priority is to serve those without current internet access. Towns with unserved populations in Grand and San Juan counties will be top priority.
Connecting previously underserved communities with communities that currently have high-speed internet access	Medium	Utilizing existing infrastructure to branch off of current fiber infrastructure and ensure those in rural areas have reliable access
Eliminated underserved outliers in largely served communities	Medium	Create infrastructure that will provide sufficient speeds to residents that are still without service in urban areas
Providing higher speeds to those in unserved communities	Low	Those with speeds below the 100/20 download/upload speed threshold will be prioritized, but only after those with no internet access at all

5.2 PLANNED ACTIVITIES

The objective of this plan is to outline activities that will support reliable, affordable, and accessible broadband service to the region.

1. Key Players:
    a. Local Governments:
        i. Maintain and utilize a Broadband Implementation Team
        ii. Ensure efforts are coordinated across various departments, such as IT, planning, and community development.
    b. Internet Service Providers (ISPs):
        i. Continue collaborating with ISPs to expand and maintain network coverage and improve quality.
        ii. Encourage ISPs to participate in public-private partnerships to reach underserved areas.
    c. Schools and Educational Institutions:
        i. Provide digital literacy programs and training.
        ii. Integrate broadband access and digital tools into educational initiatives.
    d. Nonprofit Organizations:

i. Engage local nonprofits to assist in digital inclusion and community development.
ii. Leverage their resources and networks to amplify outreach efforts.

2. Activities Supporting Universal Service:
    a. Infrastructure Development:
        i. Deploy fiber-optic networks to underserved areas as needed.
        ii. Install Wi-Fi hotspots in public spaces, community centers, libraries, and school buses and shuttles.
        iii. Establish and maintain a reliable network of cell towers for wireless connectivity.
    b. Digital Literacy and Skills Training:
        i. Conduct digital literacy programs targeting underserved populations.
        ii. Organize workshops and training sessions to enhance digital skills.
        iii. Collaborate with schools and educational institutions to integrate digital literacy into curricula.
    c. Community Engagement and Outreach:
        i. Develop public awareness campaigns to promote the benefits of broadband access.
        ii. Organize community forums and town hall meetings to gather feedback and understand specific needs.
        iii. Establish partnerships with local organizations, nonprofits, and community leaders to foster engagement.
3. Funding Sources:
    a. Government Grants:
        i. When necessary, seek federal, state, or regional grants specifically allocated for broadband infrastructure and digital inclusion initiatives.
    b. Public-Private Partnerships:
        i. Collaborate with private entities to secure funding for infrastructure development and digital literacy programs.
    c. Municipal Budget Allocation:
        i. Use municipal budget funds to support broadband implementation and community engagement activities.
    d. Philanthropic Support:
        i. Partner with foundations and philanthropic organizations that prioritize digital inclusion initiatives.
4. Expected Outcomes:
    a. Broadband Availability:
        i. Increased broadband coverage across the region, particularly in underserved areas.
        ii. Reduced broadband deserts and improved connectivity options for all residents.
    b. Digital Access:

i. Enhanced digital literacy skills among underserved populations.
ii. Increased access to affordable internet services for low-income households.

c. Broadband Affordability:
   i. Introduction of affordable broadband plans targeted at underserved communities.
   ii. Adoption of programs to provide subsidies or discounts for low-income residents.

5.3 KEY EXECUTION STRATEGIES

1. Infrastructure Investment

- Allocate sufficient funds for building or upgrading the necessary infrastructure, such as laying fiber optic cables or deploying wireless towers.
- This investment is critical to provide reliable and high-speed connectivity to rural areas.

2. Public-Private Partnerships

- Nurture collaborations between government entities, Telecommunication companies, and local communities to share the cost and expertise required for broadband deployment and foster new collaborations if necessary. Public-private partnerships can accelerate the implementation process and ensure sustainable operations.

3. Broadband Mapping and Planning On a State and Federal Level

- Conduct a thorough analysis of the targeted rural areas to identify coverage gaps and determine the most effective solutions.
- This includes mapping existing infrastructure, assessing demand, and devising a comprehensive implementation plan.

4. Last-Mile Connectivity

- Address the challenge of connecting individual households and businesses to the broadband network.
- Continue to promote and develop fiber to the home and fiber to the businesses where not already existing.

6. Digital Literacy and Skills Development

- Invest in training programs and initiatives to enhance digital literacy and skills among residents of rural areas.
- This helps them make the most of broadband connectivity for education, healthcare, entrepreneurship, and other opportunities.

7. Regulatory Support

- Streamline permit processes, reduce bureaucratic barriers, and provide incentives to service providers to encourage their participation.

8. Monitoring and Evaluation:

- Continuously monitor the implementation progress and evaluate the impact of broadband connectivity in rural areas.
- Regular assessments help identify challenges, measure success, and make necessary adjustments for further improvement.

5.4 ONGOING STAKEHOLDER ENGAGEMENT

Continued stakeholder engagement is critical to the success of this plan. To implement a broadband plan, touchpoints must be created in collaboration with stakeholders that accurately reflect the needs of the community. Necessary steps to maintain stakeholder communication between the public and ISPs will include:

- **Public Outreach:** The Comprehensive Economic Development Strategy Committee holds routine meetings that engage with the public. Maintaining an open dialogue between the public, ISPs, and Stakeholders will be important as broadband connectivity is finalized in currently underserved regions.

- **Stakeholder Meetings:** Routine meetings with stakeholders and the public will be important to gather feedback and input on ongoing broadband connectivity in southeastern Utah. SEUALG will be a great resource in facilitating communication between stakeholders and ISPs.

- **Establishing a Working Broadband Focus Group:** Using the above outreach methods, a diverse group of individuals from a variety of roles will become an established focus group to ensure wide support from this and future broadband projects. This group will include community influencers, municipal leaders, business leaders, and educators.

5.5 ESTIMATED TIMELINE FOR UNIVERSAL SERVICE

Refer to the below Table 14, Estimated Timeline for Broadband Implementation (Project) for an estimated timeline of necessary activities for broadband service implementation.

Table 14. Estimated Timeline for Broadband Implementation (Project)

PHASE	TIMEFRAME	
Conceptual Design	60-120 days	
Fielding and final design and engineering	150-200 days (Approximately 5-7 months)	

Permitting	Up to 730 days (Dependent upon region and locality. Additional time may be needed for projects that cross tribal or public lands)	
Construction	365-730 days	

Expected Timeline

Based on this approximate timeline, the minimum expected time for completion of every phase of the project is 1305 days. Additional days have been built into the timeline for unforeseen delays and special circumstances.

There is also a possibility that project completion could occur more rapidly than the expected timeline if multiple phases are being worked on concurrently. For example, construction on some segments of the infrastructure may be able to be completed while permits are being approved for other segments. This kind of simultaneous progress will potentially cause the project to advance ahead of the expected timeline in some aspects.

Regular communication and monitoring of the project's progress will be necessary to ensure that the project remains on schedule and mitigate potential delays.

5.6 ESTIMATED COST FOR UNIVERSAL SERVICE

The primary ISP, Emery Telcom, in the region is focused on expanding the fiber network to the region's unserved and underserved areas. To that end, they have mapped out each unserved household in the region. Due to the focus on fiber, our estimates for the universal cost of service is the expansion of fiber to each household and identified unserved areas utilizing the mapping Emery Telcom provided. The ISP has already connected the majority of residents in each of these counties, however, there are rural regions up within mountainous areas that have yet to be connected due to geographic challenges and low population density. That is the case for most of the unserved areas calculated within this estimated cost for universal service.

San Juan County utilizes a different method because its plan is being created solely for that county. Please reference the San Juan County Local Broadband Plan for that information.

The remaining unserved and underserved areas lay within mountainous and rocky regions which increases the cost and difficulty of laying fiber. The estimated cost of this is $20 per foot due to this difficulty. Using this number we multiplied the distance between current fiber connectivity to the unserved regions giving us the approximate universal costs.

	SOUTHEASTERN UTAH		
AREA	Total Length (Miles)	Total Cost (Dollars)	# Of Unserved Locations
Carbon	189.62	20,023,872	50
Emery	66.85	7,059,360	24
Grand	109.45	11,557,920	38
San Juan	SEE SAN JUAN COUNTY PLAN	SEE SAN JUAN COUNTY PLAN	SEE SAN JUAN COUNTY PLAN

5.7 ALIGNMENT

The Southeastern Utah Local Broadband Plan is closely aligned with the community's local broadband priorities. It is specifically tailored to address the unique needs and priorities of the region. It is designed to ensure comprehensive coverage, reliable infrastructure, and equitable access to high-speed internet for all residents, businesses, and institutions in Southeastern Utah. The following are local priorities that align with and are addressed by the Local Broadband Plan.

1. **Prioritize Unserved and Underserved Areas:** The plan places a strong emphasis on connecting unserved and underserved areas within Southeastern Utah. By identifying these areas and targeting them for broadband deployment, the plan aims to bridge the digital divide and provide equal access to high-speed internet for all communities in the region. Emery Telcom has already done a great job in this and has found most if not all of the unserved areas within the region.

2. **Strengthen Infrastructure:** Recognizing the importance of reliable infrastructure, the alignment plan focuses on the deployment of fiber optic networks. By prioritizing the connection of critical infrastructure to fiber, such as schools, healthcare facilities, and government buildings, the plan enhances the reliability and resilience of essential services, promoting socio-economic growth and technological advancements in the region. Most of the communities have a solid infrastructure of fiber connectivity, making expansions as communities grow as seamless as possible.
3. **Leverage Partnerships and Resources:** Building upon existing initiatives, the plan seeks to establish strong partnerships with internet service providers (ISPs) and leverage available funding and resources. By collaborating with ISPs and coordinating efforts, the plan maximizes the impact of available resources, avoids duplication, and ensures a strategic allocation of funds to effectively address the region's broadband priorities.
4. **Address Specific Regional Needs:** The broadband plan recognizes the specific needs and challenges faced by Southeastern Utah. It takes into account the unique geographic and demographic characteristics of the region, allowing for tailored solutions that address the connectivity requirements of rural and remote areas. By addressing these specific needs, the plan ensures that all communities in southeastern Utah have access to reliable and high-speed broadband internet.
5. **Drive Equitable Access and Economic Growth:** The plan aligns with the goal of achieving equitable access to broadband connectivity, fostering economic growth, and enhancing the quality of life for all residents of Southeastern Utah. By providing reliable and high-speed internet access to individuals, businesses, and institutions, the plan enables opportunities for education, healthcare, entrepreneurship, and innovation, driving economic development and improving overall well-being.

Through the strategic execution of The Southeastern Utah Local Broadband Plan, the region is committed to establishing high-speed internet in unserved areas, bringing connectivity to underserved areas, strengthening infrastructure, and partnering with ISPs to serve the entire region. This comprehensive approach is in close alignment with community priorities and will bridge the digital divide, promote economic growth, and ensure a prosperous future for all communities in Southeastern Utah.

5.8 TECHNICAL ASSISTANCE

Southeastern Utah encompasses a lot of landmass within Utah. While not densely populated, it has a lot of ground to cover to provide universal broadband service in the region. The current ISP in the region is working to provide universal connectivity in the region. They feel they have successfully provided connectivity to Carbon and Emery County. There is further work needed to provide the same level of connectivity within Grand and San Juan. When asked if they need any technical assistance to provide this service, they remarked, “We attend and participate in broadband meetings. Emery Telcom doesn’t need any assistance from a technical standpoint.

The meetings have been very productive, and a lot of good things have come from those meetings." For successful implementation of the Local Broadband Plan, the Utah Broadband Center's support to local ISPs by facilitating these discussions and maintaining up-to-date maps will be incredibly important. As Emery Telcom is the primary ISP in the region, working with them will be important to provide full connectivity.

This assistance will provide the region with much-needed help while dealing with the intricacies of deploying broadband in the region. A partnership between the Utah Broadband Center, Southeastern Utah, and Emery Telcom will ensure that deployment of the local broadband plan will be effective in its goal of providing broadband to underserved areas in the region.

6 CONCLUSION

The Southeastern Utah Local Broadband Plan's purpose includes identifying existing broadband resources and capabilities, availability and digital access, affordability, and obstacles to providing broadband service in the region. After conducting research into these areas, the key priorities developed. These priorities include:

- Putting in place high-speed internet in eligible areas that are currently unserved
- Connecting previously unserved communities with communities that currently have high-speed internet access
- Providing higher speeds to those in underserved communities

Any community that has less than 100/20 Mbps is considered an underserved community. The goal of this Local Broadband Plan will be to serve as groundwork to provide these communities with the minimum speeds of 100/20 Mbps. To do this, there should be an emphasis on:

- Private-public partnerships: Having partnerships in place with local stakeholders and elected officials with internet service providers and other private partners will be key in developing long-lasting relationships and plans to connect previously underserved areas. These partnerships will be important to maintain accessible, reliable, and affordable broadband services. The current ISPs have already done a great job in connecting these communities and have led out in fiber connectivity. Enhanced communication between ISPs, Stakeholders, and entities like SEUALG will be important as more communities are connected and communities grow.
- Technical assistance: Assistance from the Utah Broadband Center and other partners will be key in the deployment of effective broadband. Those with technical expertise and knowledge are needed to ensure plans in place make sense for all parties involved.
- Infrastructure investments: Investments in broadband infrastructure will be key in "future-proofing" the broadband infrastructure in the region. This includes prioritizing fiber connectivity and wireline broadband services to ensure reliable, accessible, and

affordable internet to all communities in the region. The emphasis on fiber connectivity in the region will serve to future-proof southeastern Utah's broadband connectivity.

These priorities and emphasis were informed by research conducted. Even though the region is largely rural and there are major geographic challenges, ISPs in the region have done a great job in connecting the region to broadband connectivity. As these communities grow, additional broadband will be necessary. Keeping an open dialogue between the ISP's stakeholders, elected officials, and other entities will be important to ensure full connectivity now and into the future.

7 APPENDIX A

Stakeholder engagement and public outreach: Between the months of June 2023 and July 2023, the broadband team engaged with stakeholders within southeastern Utah. Those stakeholders include representatives from the Major ISP Emery Telcom, Carbon County elected officials and residents, Grand County economic development team and residents, Emery County elected officials, and San Juan representatives and citizens.

- Carbon County Stakeholder meetings: These meetings aimed to understand the region's connectivity, satisfaction with services provided, and if they saw any challenges or obstacles with further broadband development. The findings illustrated that elected officials, stakeholders, and residents were happy with their current service provider and the connectivity they provide. They see themselves as lucky to have such great connectivity for being a rural community. The majority of their community is connected through Emery Telcom's fiber network. The concerns listed were minimal. Those concerns were predominantly that they expect their community to grow and will need to continue to develop their broadband connectivity if current economic development plans come to fruition. They recognized the importance of harnessing the power of broadband as they see themselves as a bedroom community to Provo and Spanish Fork and would like to encourage more remote working within their communities. They see this as an important avenue to develop and grow their community.
- Grand County Stakeholder meetings: Within Grand County, they were also happy with their current level of connectivity. However, it does depend on where you live. Some have access to Emery Telcom's fiber network, but this is still being fully built out. The participants all had Fiber connections but had heard other residents who are connected with ISPs other than Emery Telcom have complaints about their level of connectivity. They see their current level of connectivity as farther along than other communities of their size. Their concerns for broadband expansion are the more rural parts of their community like the La Sals. They estimate this is five years from being fully built out. Once this community is connected with broadband connectivity, they expect it to become a large tourism attraction akin to the Heber Valley and Park City. They see broadband infrastructure as driving development in these rural areas. When asked about complaints about connectivity, they remarked that they hear more complaints about cell phone connectivity rather than broadband. The challenges they recognized moving forward is their environment is rough and challenging to deploy broadband. Further, there is only one true internet provider in the region, Emery Telcom, and they are worried about possible monopolization as they don't have competition. In the long term, they are concerned that they will end up paying more for connectivity due to this. They see broadband connectivity as a huge economic incentive to the region as people can come and still work remotely.
- Emery County Stakeholder meetings: Emery County had identical responses to Carbon County as they are also very well built out with fiber connectivity through Emery Telcom. They have fiber to the home and to the business. They are happy with their level of service, affordability, and

speed. One small complaint was the need to have a landline to have an internet connection. There was also a concern about additional broadband expansion as the community grows. However, they are confident in the ability of Emery Telcom as they have been proactive in the past and are confident they will make any growth work with broadband expansion. In Emery County, the libraries and city offices provide free wifi for locals and visitors. They can connect through hotspot areas giving anyone in the area internet access. They didn't see any potential deployment challenges of broadband connectivity. One large topic was that as we move forward they think enhanced communication between the County, ISP, and the state will be incredibly important. There is already great communication between the county and the ISP; however, they want to ensure that as grants become available and businesses would like to locate to the County that there are open lines of communication so they are on the cutting edge of internet connectivity and technology.

- San Juan County Stakeholder Meetings: 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. The workshop for San Juan County was held on December 6, 2022, at the Monticello Hideout Building. Ten individuals participated, representing groups including San Juan County administration, economic development and planning, San Juan School District, Blanding City, Monticello City, and Southeastern Utah Association of Local Governments (SEUALG). Workshop conversations were centered around the following topics:
    - Current broadband/connectivity status (providers, affordability, barriers/challenges, devices, permitting processes)
    - Education needs
    - Priority areas of needed coverage and key areas for development
    - Future benefits
    - Anchor institutions
    - Digital literacy
    - Translation needs
    - Media relations