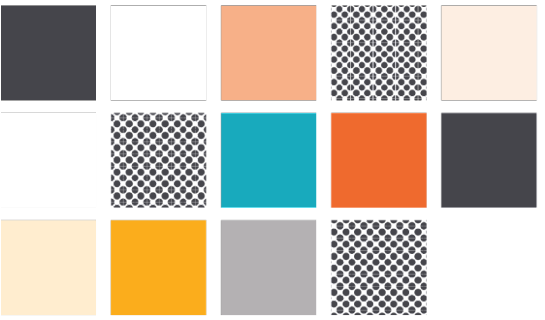


UTAH BROADBAND CENTER
CONNECTING UTAH

BEAR RIVER ASSOCIATION OF GOVERNMENTS (CACHE, RICH, BOX ELDER COUNTIES)
LOCAL BROADBAND PLAN

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1. EXECUTIVE SUMMARY

The purpose of the plan is to ensure every resident of the three county area has access to fast, affordable internet. This would include fiber wherever possible, but in some cases wireless technology.

VISION	The plan for the area is to make equitable high speed broadband service available to every household, business, and community anchor institution in the three county region. This would entail persons in the most remote parts of the counties to pay no more for the same service as those in cities.

KEY BARRIERS	Remote Homes	Limited resources	Geography	Technical Capacity
	Difficult to reach single dwellings miles from highways and fiber lines.	Because of the money being put into the BEAD program, contractors are hard to find.	Mountainous terrain and soils increase construction complexity costs.	Small communities lack understanding of franchising and utility infrastructure policy.

COVERED POPULATIONS	Individuals and households living at or below 150% of the Federal Poverty Level	Aging individuals	Remote rural households	Limited English Proficiency households	Low-income households
	Individuals with disabilities	Veterans	Racial or ethnic minorities	Incarcerated and formerly incarcerated individuals	New Americans including refugees and immigrants

GOALS	Incentivize fiber optic expansion to remote, underserved rural communities	Complete “middle mile” expansion of fiber optic networks between each community in the region	Encourage community adoption of “Dig Once” fiber optic conduit installation policies	
KEY STRATEGIES	Have a plan that works	Identify adequate service gaps	Involve UDOT & UETN in future development plans to maximize public resources	Incentivize “Open Access” conduit installation to protect competition in small markets

1 OVERVIEW OF THE LOCAL BROADBAND PLAN

1.1 VISION

The plan for the area is to make equitable high speed broadband service available to every household, business, and community anchor institution in the three county region. This would entail persons in the most remote parts of the counties to pay no more for the same service as those in cities.

1.2 GOALS AND OBJECTIVES

Complete “Middle Mile” installation of fiber optic backbones between each community in the region – prioritizing remote, underserved communities

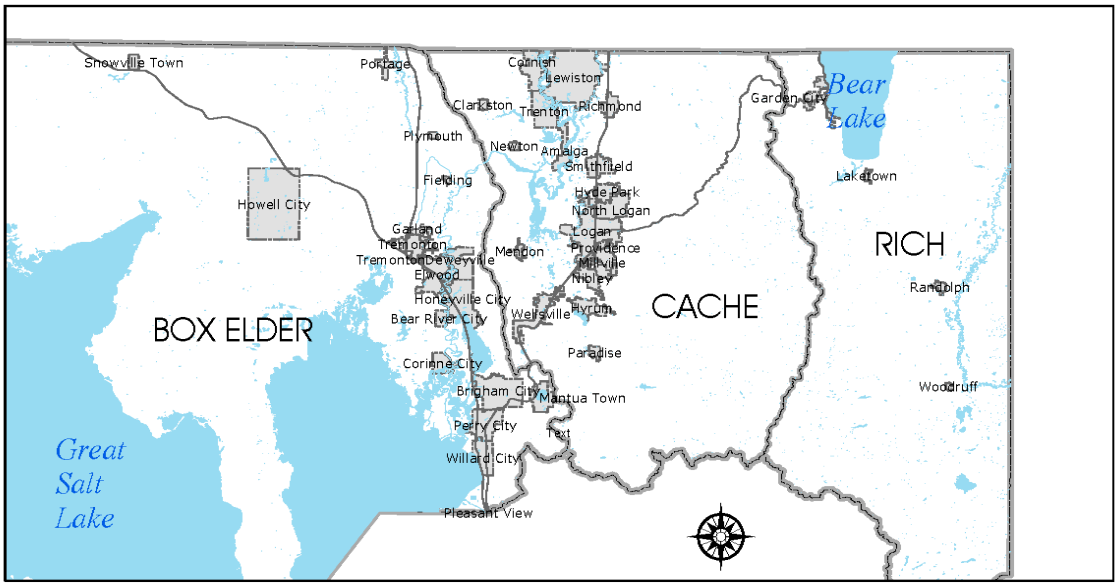
Increase public awareness of options to access ISP services, taking advantage of income-based subsidies when appropriate

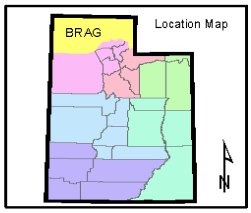
Access State and Federal funding to incentivize trunk line installation to make fiber optic service available to every household, business, and community anchor institution in the region

Coordinate with Utah Department of Transportation on trunk line installation along rural State Route rights-of-way to facilitate deployment to remote communities

2 BACKGROUND

2.1 SCOPE OF BEAR RIVER REGIONAL BROADBAND PLAN

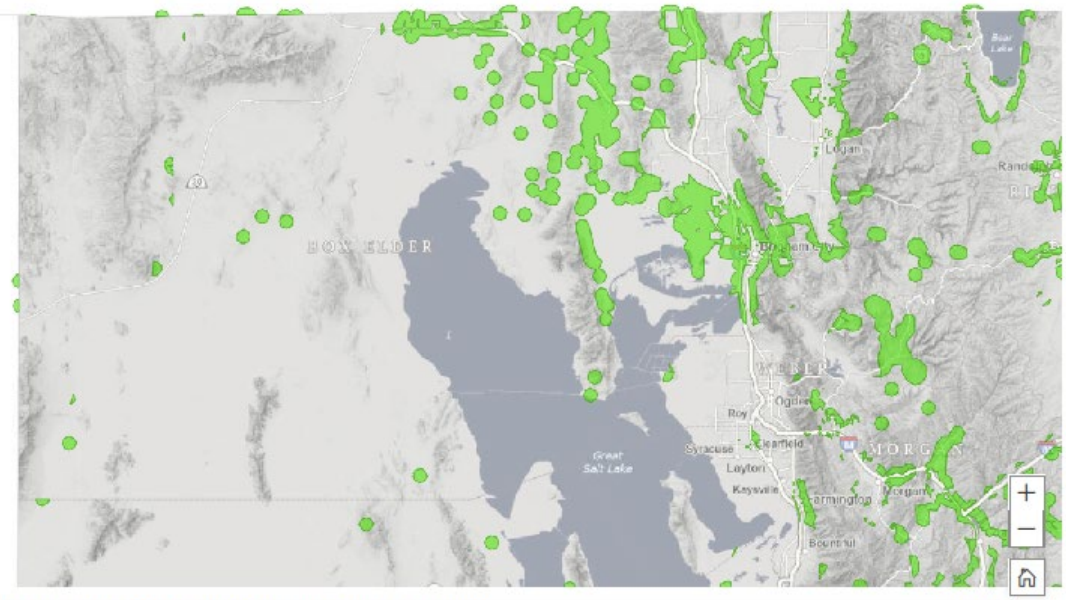




BEAR RIVER DISTRICT

Box Elder - Cache - Rich Counties

Green areas are underserved (Internet connection speeds of less than 100 Mbps)



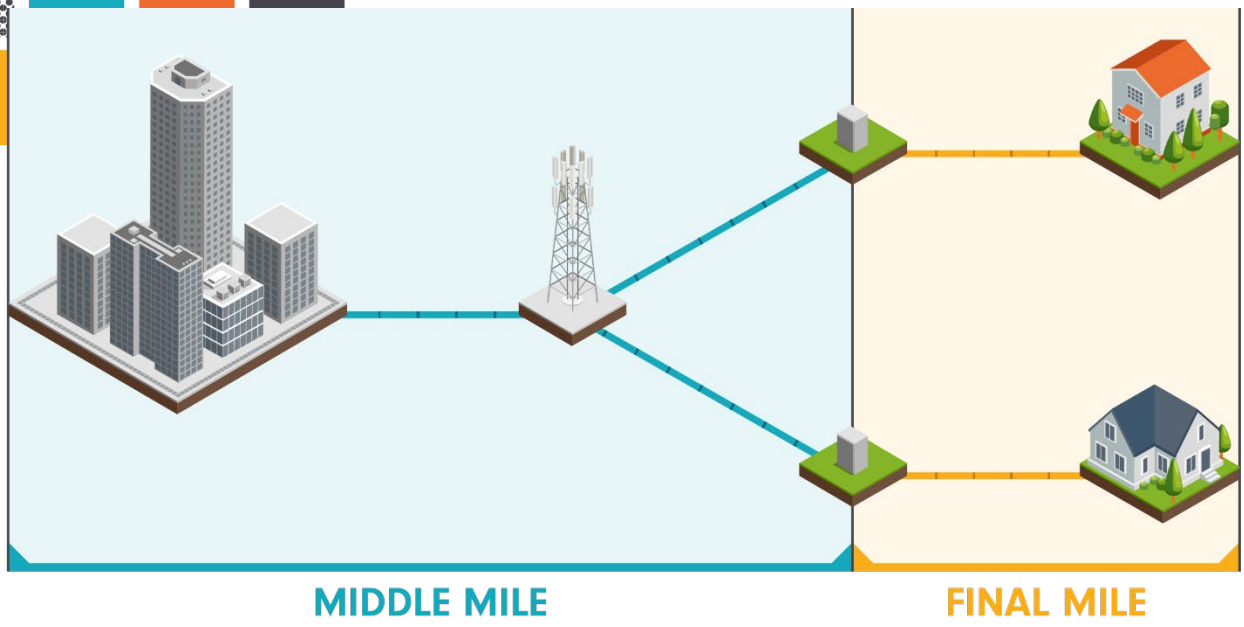
2.2 WHAT IS BROADBAND?

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). The FCC is proposing to redefine broadband as 100/20 Mbps.

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.

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 600 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 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. High speed internet enables a business in our area to ignore geography and be successful anywhere in the three county area. High-speed broadband internet is essential for success in the business world today. In today's world, broadband is a crucial element to grow the Bear River Region's economic outlook. As the core backbone of modern telecommunications, high-speed Internet is necessary to transmit engineering and construction documents, … Lewiston business park, schools and library access to educational media

While high-speed broadband internet is benefitting many regions across the globe, it is important to ensure that each of these three counties 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. In 2011, the State of Utah mandated that all school districts offer online learning options for students in grades 9-12. The State now provides this service through Utah Students Connect. This program is a great benefit to students in remote rural communities where travel to educational opportunities can be limited by geography and weather. In addition, many districts are also utilizing online learning on snow days and other times when it isn't 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. Physicians can use the service to communicate with a patient over a video call on a smart phone or laptop to perform basic diagnostic services for illness and injury. In the Bear River Region, many large healthcare providers now offer telehealth services, including Intermountain Health Care, Mountain Star Networks, and the Bear Lake Cache Valley Community Health Care Services. Some of the benefits of telehealth include decreased healthcare costs, access to specialists not available locally, travel time reductions, and reducing the 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 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 Box Elder, Cache, and Rich Counties. This planning team included the following individuals and/or organizations:

- Jeff Young, AllTech Communications
- Scott Lyons, Box Elder County Community Development
- Jeff Scott, Box Elder County Citizen
- Ryan Snow, Providence City
- Ky Sealy, Providence City Citizen
- Karen Nelson, Town of Mantua
- Mitch Poulsen, Bear Lake Regional Commission
- Brian Carver, Bear River Association of Governments
- Paul Davis, Bear River Association of Governments
- Jarom Hlebasko, Sunrise Engineers
- Mike Crapse, WiFiber Communications
- Greg Stevens, Beehive Broadband
- Daniel Parrish, Direct Communications
- Bartt Nelson, Cache County

The activities performed included:

- **Public Outreach:** Cache County Business Summit, Box Elder County Chamber of Commerce, Rich Chamber of Commerce, Cache Valley Media Group PSAs, Logan Herald Journal Online Edition
- **Public Surveys:** Surveys promoted at Chamber of Commerce events, survey links provided in local municipal newsletters, direct solicitation of elected officials throughout region
- **Internet Speed Tests:** BRAG promoted the use of the State Broadband Speed Test within the region
- **Stakeholder Meetings:** Met with stakeholder committee 3 times between March 1 and June 1, 2023
- **Meeting With Internet Service Providers:** Met with WiFiber, Beehive Broadband, AllTech, DotBar Communications, Comcast Communications
- **Existing Assets Assessment:** DOT/UETN networks, UTOPIA, other providers
- **Disparity Analysis:** Contractors evaluated areas lacking fiber deployment in each of the three counties in the region. Northeastern Box Elder County, northwestern and southern Cache County, and the entirety of Rich County are considered underserved in both reliable high-speed internet service and proximity to fiber infrastructure.
- **Research:** BRAG contracted with several service providers, including Beehive Broadband, Rocky Mountain West Telecommunications, WiFiber, Millennium Geospatial, and Sunrise Engineers to explore the potential of expanding fiber infrastructure and broadband access into underserved areas in the region.
- **Geographic Information System (GIS) Mapping:** Maps were created to show potential fiber trunk deployment to reach the greatest number of underserved households.

3.2 EXISTING RESOURCES

Existing programs include all the programs and activities that Bear River Association of Governments currently performs or has performed in the past.

Table 1. Current Broadband-Related Activities

Activity Name	Description	Intended Outcome(s)
Broadband Deployment Grant Management	Managing compliance with CDBG and ARPA funds used to construct fiber infrastructure in Box Elder County	Fiber-to-the-door service to the Box Elder County Communities of Bothwell, Marble Hills, Thatcher, Penrose, Elwood, Bear River City, Mantua, Willard, South Willard

Regional Broadband Access Planning	Coordinating planning and funding of regionally significant broadband investments	Close gaps in regional broadband access
Local Broadband Planning Technical Assistance	Assisting local communities in planning for broadband infrastructure deployment	Improve community relationships with internet service providers, increase popularity of dig-once infrastructure policies

Table 2. Current and Planned Full-Time and Part-Time Employees

Current / Planned	Full Time / Part Time	Position	Description of Role
Brian Carver	FT	Community & Economic Development Director	Facilitating communication on regional broadband service conditions, needs, and improvements
Paul Davis	PT	Assistant Community & Economic Development	Expeditor

Table 3. Current and Planned Contractor Support

Current / Planned	Full Time / Part Time	Position	Description of Role
Current	PT	Beehive Broadband	Needs analysis for Box Elder County; Installing fiber west of I 84 in Box Elder County
Current	PT	Sunrise Engineering	Needs Analysis for Rich County
Current	PT	WiFiber	Needs Analysis for Cache County
Planned	PT	Beehive Broadband	Box Elder County Deployment
Planned	PT	AllWest	Rich County broadband deployment
Planned	PT	DotBar	Rich County broadband deployment
Planned	PT	Direct Communications	Cache & Rich County Deployment
Planned	PT	CentraCom	Rich County Deployment

Table 4. Broadband Funding

Source	Purpose	Total	Expended	Available
NTIA BEAD	Planning	50,000	38,000	12,000
CDBG	Construction	416,000	416,000	0
Utah Broadband Program (Capital Projects Fund)	Construction	5,800,000	600,000	5,200,000

Box Elder County (ARPA)	Construction	1,400,000	400,000	1,000,000

3.3 PARTNERSHIPS

This section identifies existing and potential partners and community anchor institutions that are engaged for the development and implementation of the Bear River Association of Governments 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
Box Elder County	Project prioritization, funding assistance
Cache County	Prioritization of investments
Rich County	Data development, project prioritization

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*

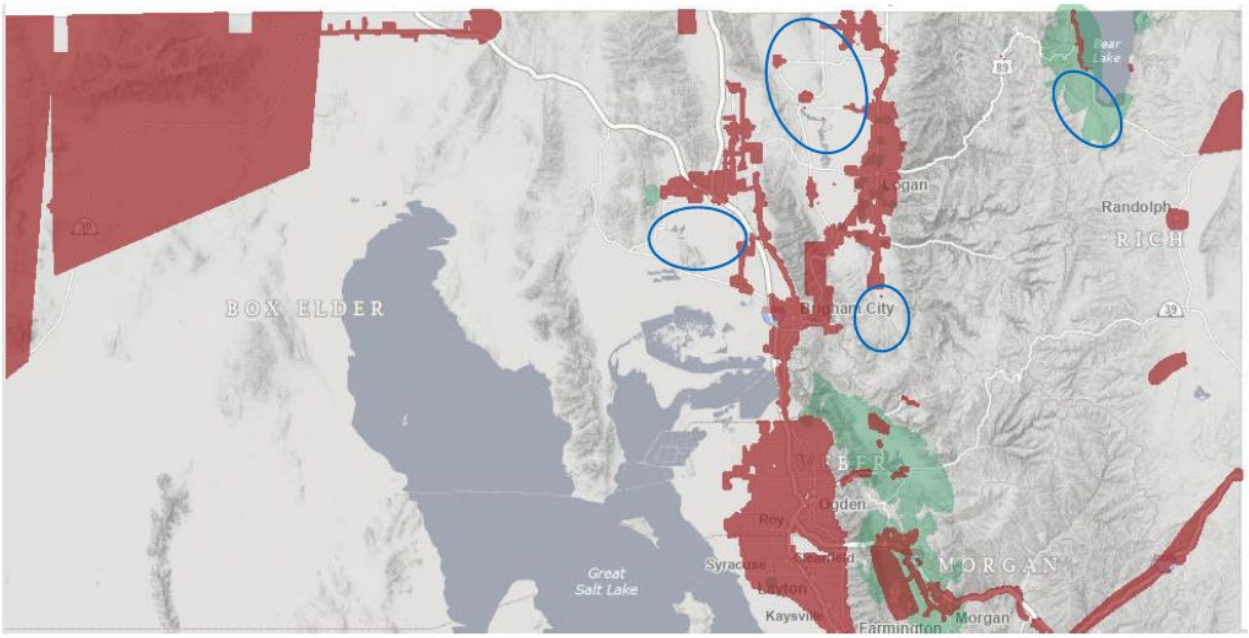
3.4 ASSET INVENTORY

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 the Bear River Region are described in section 3.4.1. The Bear River Region's soft assets are described in sections 3.4.2 and 3.4.3, below.

3.4.1 Broadband Availability

If satellite and fixed-wireless services are included, adequate broadband service is available throughout most of the populated geography of the region. However, these wireless solutions are still subject to service disruptions by weather and topographical features. Additionally, most fixed-wireless providers do not meet the definition of “high-speed” at 100 Mbs download and 20 Mbps upload speeds.

The following map illustrates the residential service coverage for the Bear River region at a 100/20 Level of Service. Areas in red are served by Fiber, Cable, or DSL. Areas in green are served by Fixed Wireless technology. Areas lacking reliable service of either cable, DSL, or fiber optic providers are indicated in blue.



Map credit Utah Broadband Center

3.4.2 Digital Access

Access to digital services by household can not only be limited by the availability of infrastructure, but also by economic status, language, and familiarity with technology.

BRAG is working closely with the UBC and CAP Utah to provide technical assistance to households of lower income status and Limited English Proficiency in enrolling in the FCC’s Affordable Connectivity Program. BRAG is advertising availability of the service through local community partners such as libraries, senior centers, school districts, immigrant and refugee support services.

Table 7. Technology Available to Region’s Population

	Percent of Population				
CITY	DSL	FIBER	CABLE	WIRELESS	OTHER

Tables 8 through 11: Broadband Speed Tables

Below, Tables 8 and 9 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 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	CITY A	CITY B	CITY C	CITY D	CITY E
3 Mbps					
10 Mbps					
25 Mbps					
100 Mbps					
1 Gbps					

Table 9. Wireline Broadband Availability: Upload Speeds

	Percent of Community Population With Available Upload Speeds				
UPLOAD SPEED	CITY A	CITY B	CITY C	CITY D	CITY E
3 Mbps					
10 Mbps					
20 Mbps					
100 Mbps					
1 Gbps					

Table 10. Wireless Broadband Availability: Download Speeds

Percent of Community Population With Available Download Speeds

DOWNLOAD SPEED	CITY A	CITY B	CITY C	CITY D	CITY E
3 Mbps					
10 Mbps					
25 Mbps					
100 Mbps					
1 Gbps					

Table 11. Wireless Broadband Availability: Upload Speeds

	Percent of Community Population With Available UPload Speeds				
UPLOAD SPEED	CITY A	CITY B	CITY C	CITY D	CITY E
3 Mbps					
10 Mbps					
20 Mbps					
100 Mbps					
1 Gbps					

3.4.3 Broadband Affordability

Table 12. Providers and Prices

Provider	Price	DESCRIPTION OF SERVICE TIER, ADVERTISED SPEEDS, AND AFFORDABILITY	Participates in Affordable Connectivity Program?
Comcast	$34 - $289	10 Mbps – 1Gbps	Yes
CenturyLink	$25 - $175	10 Mbps – 1Gbps	Yes
CentraCom	$35.95 $55.95 $69.95 $119.95 $129.95 $139.95	50 Mbps/5 Mbps 75 Mbps/10 Mbps 100 Mbps/20 Mbps 250 Mbps/25 Mbps 500 Mbps/50 Mbps 1 Gbps/100 Mbps	Yes

ATC Communications	$70 $80 $90 $110 $160 $210	25 Mbps 75 Mbps 150 Mbps 250 Mbps 500 Mbps 5 Gbps	Yes
AllWest	$59.95 $89.95	300 Mbps/300 Mbps 1 Gbps/1 Gbps	Yes
Beehive Broadband	$34.95 - $99.95	250 Mbps – 1 Gbps	Yes
Frontier	$49.99	45 Mbps/3 Mbps	Yes
Rise Broadband	$45.00 $45.00	25 Mbps 50 Mbps	Yes
Dot Bar	$49.00 $74.00 $109.00 $149.00	100 Mbps 250 Mbps 500 Mbps 1 Gbps	Yes
Blue Spring Broadband	$39.95 $49.95 $69.95	10 Mbps/2 Mbps 25 Mbps/5 Mbps 50 Mbps/10 Mbps	Yes
Wi-Fiber	$50 $70 $100+	50 Mbps/10 Mbps 100 Mbps/20 Mbps 1 Gbps/1 Gbps	Yes
T-Mobile	$50	338.12 Mbps (median speed)	Yes
Verizon	$50	338.12 Mbps (median speed)	Yes
Starlink	$120	25-220 Mbps	Yes
HughesNet	$49.99 $74.99 $150	15 Mbps 25 Mbps 50 Mbps (usage capped at 200 Gb)	Yes

3.5 NEEDS AND GAPS ASSESSMENT

Box Elder County

Utilizing the current grant monies to expand broadband access west of I 15 the largest remaining area lies north of Brigham City. Building north would incorporate utilization of the existing fiber under I15 and SR 30. This plan would prioritize areas such as Collinston, Riverside, Fielding, Plymouth, and Beaver Dam. Hopefully UDOT would assist in this by allowing fiber installations in SR 13 and SR 102. This would facilitate less expensive route approvals and would hopefully allow overhead fiber to cover remaining distances. Competition is needed to encourage current providers to upgrade their systems to offer higher speeds.

Cache County

Looking at the urgent locations in Cache County, the focus is on the low areas of Amalga and Benson, and the remote areas of Paradise, Avon, Cornish, and Trenton. Integral to this plan is what level UDOT is willing to install fiber on state roads, especially SR 23 and SR 165. Currently most of these areas rely on wireless connectivity and it does not even meet underserved criteria. Remote areas such as Mount Sterling and county farms will also be a challenge. SR 142, 218, 101 and 61 all play into what the costs and plans will entail. It is our hope that UDOT will assist in coordinating these routes for underground fiber installations. Where it is impossible to reach a remote location with fiber for a reasonable cost we will be asking to allow wireless connections. Many homes in some towns are listed as having Comcast and other providers available, but the homeowners are saying they cannot get high speed so working with existing providers will be critical to reaching all homes.

Rich County

Rich County has significant underserved areas due to geographical distances between full-time residents. Fiber trunks have been extended along Highway 26 from Evanston, Wyoming through Woodruff and Randolph in order to provide UETN access to the school district and Bridgerland Technical College branch. CentraCom provides a fiber trunk along Highway 30 through Laketown and Garden City to serve the school in Laketown and the Garden City offices.

3.5.1 Broadband Availability

Box Elder County Speed Test Results

Box Elder County

Households	17,326
Population	49,975
Test locations	451
Total Tests	675
Percent participation	2.60%
Participation goal (10%)	1,733

Download

* No Service	5	1.1%
*0-25 Mbps	236	52.3%
*25-11 Mbps	134	29.7%
*100+ Mbps	76	16.9%

Upload

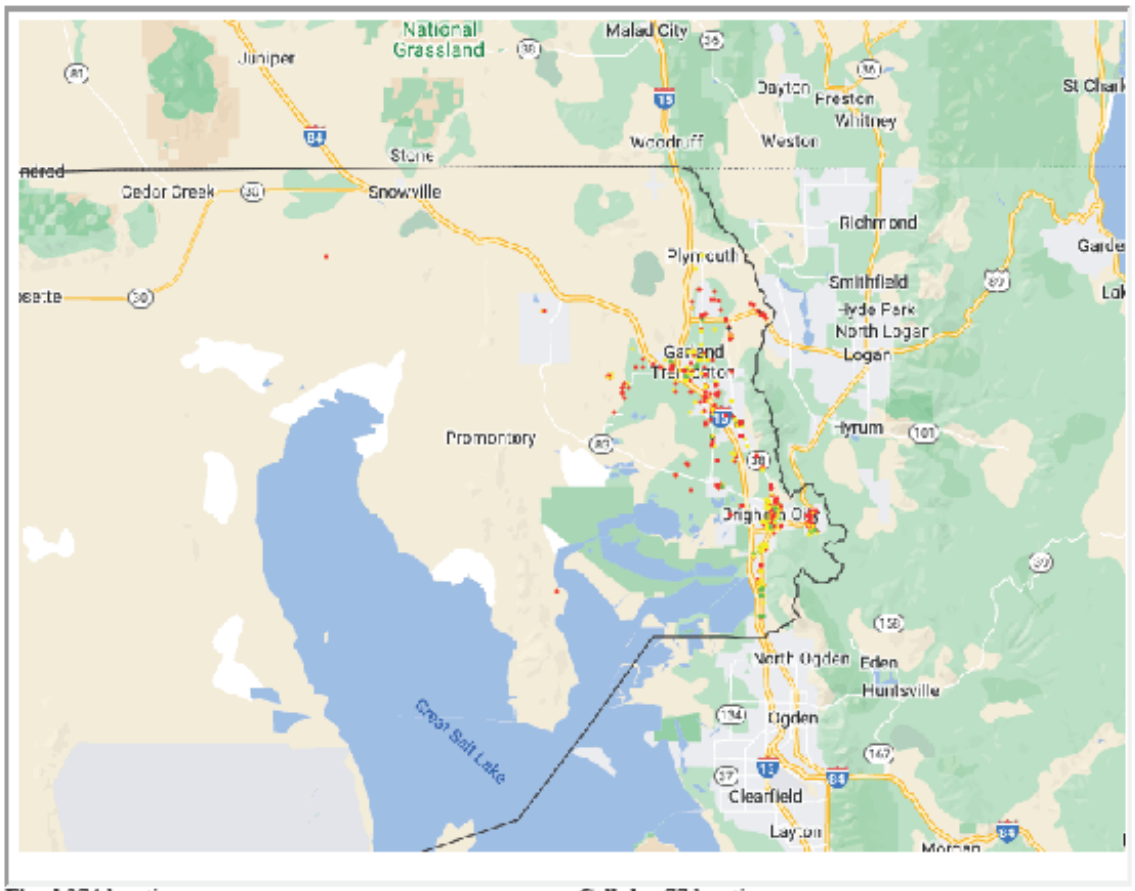
No Service	5	1.1%
<3 Mbps	122	27.1%
3-25 Mbps	236	52.3%
25-100 Mbps	59	13.1%
100+ Mbps	29	6.4%

	Min	Max	Med Mbps
Download	0.01	931.18	21.10
Upload	0.01	911.95	5.76

No service reasons: may total>100%

Not Available	100.00%
Too Expensive	40.00%
Physical Issues	20.00%

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Fixed 374 locations

Download			Upload		
No Service	5	1.3%	No Service	5	1.3%
0-25 Mbps	187	50.0%	<3 Mbps	91	24.3%
25-100 Mbps	112	29.9%	3-25 Mbps	198	52.9%
100+ Mbps	70	18.7%	25-100 Mbps	51	13.6%
			100+ Mbps	29	7.8%

Cellular 77 locations

Download			Upload		
0-25 Mbps	49	63.6%	<3 Mbps	31	40.3%
25-100 Mbps	22	28.6%	3-25 Mbps	23	29.9%
100+ Mbps	6	7.8%	25-100 Mbps	15	19.5%
			100+ Mbps	8	10.4%

Cache County Speed Test Results

Cache County

Households	37,024
Population	112,656
Test locations	1,191
Total Tests	1,797
Percent participation	3.22%
Participation goal (10%)	3,702

Download

No Service	12	1.0%
0-25 Mbps	387	32.5%
25-11 Mbps	446	37.4%
100+ Mbps	346	29.1%

Upload

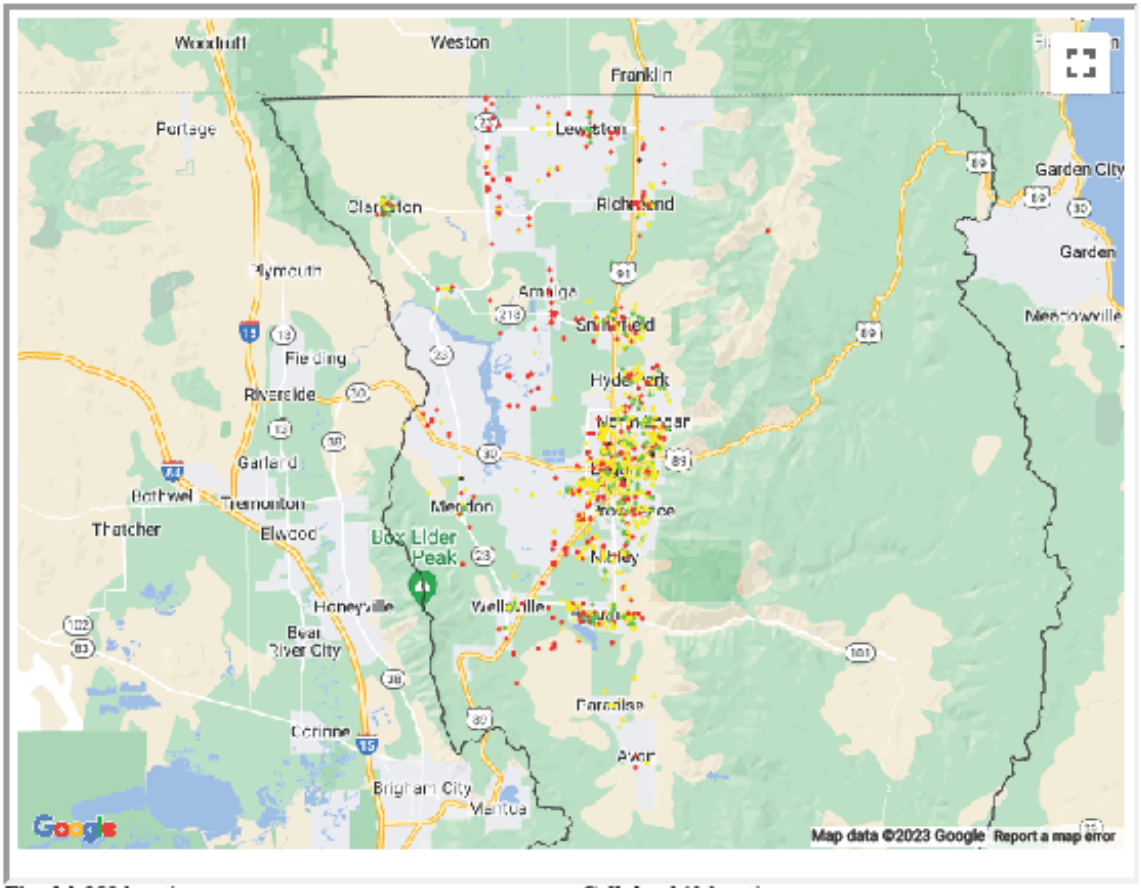
No Service	12	1.0%
<3 Mbps	162	13.6%
3-25 Mbps	804	67.5%
25-100 Mbps	178	14.9%
100+ Mbps	35	2.9%

	Min	Max	Med Mbps
Download	0.16	925.67	54.60
Upload	0.04	920.46	7.55

No service reasons: may total>100%

Not Available	40.00%
Use Public	10.00%
Privacy	10.00%
Don't Need	20.00%
Too Expensive	20.00%

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Fixed 1,050 locations

Download			Upload		
No Service	12	1.1%	No Service	12	1.1%
0-25 Mbps	329	31.3%	<3 Mbps	136	13.0%
25-100 Mbps	409	39.0%	3-25 Mbps	705	67.1%
100+ Mbps	300	28.6%	25-100 Mbps	167	15.9%
			100+ Mbps	30	2.9%

Cellular 141 locations

Download			Upload		
0-25 Mbps	58	41.1%	<3 Mbps	26	18.4%
25-100 Mbps	37	26.2%	3-25 Mbps	65	46.1%
100+ Mbps	46	32.6%	25-100 Mbps	34	24.1%
			100+ Mbps	14	9.9%

Rich County Speed Test Results

Rich County

Households	2,834
Population	2,264
Test locations	44
Total Tests	64
Percent participation	1.55%
Participation goal (10%)	283

Download

* No Service	3	6.8%
*0-25 Mbps	19	43.2%
*25-11 Mbps	17	38.6%
*100+ Mbps	5	11.4%

Upload

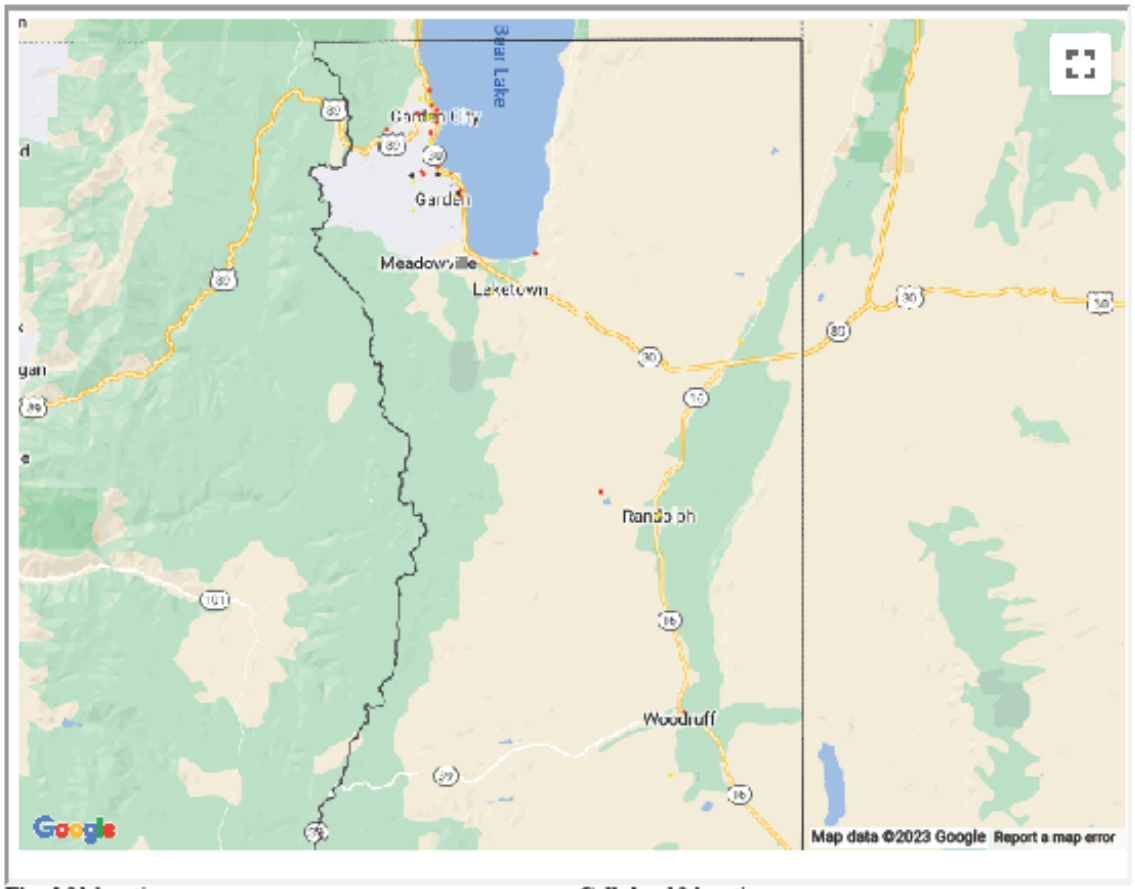
No Service	3	6.8%
<3 Mbps	14	31.8%
3-25 Mbps	18	40.9%
25-100 Mbps	7	15.9%
100+ Mbps	2	4.5%

	Min	Max	Med Mbps
Download	4.05	246.02	32.76
Upload	0.79	179.35	5.54

No service reasons: may total>100%

Not Available	100.00%
Too Expensive	33.33%

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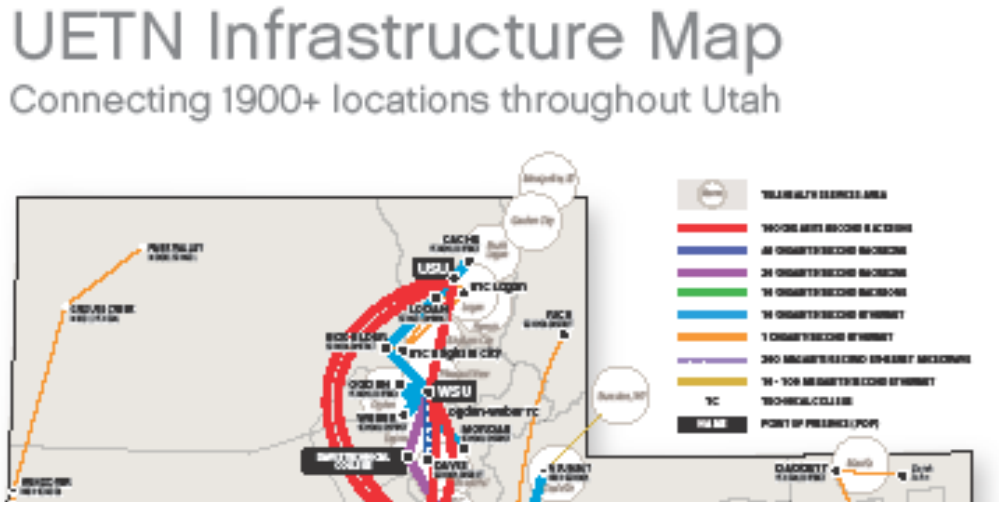
Fixed 31 locations

Download			Upload		
No Service	3	9.7%	No Service	3	9.7%
0-25 Mbps	14	45.2%	<3 Mbps	10	32.3%
25-100 Mbps	11	35.5%	3-25 Mbps	12	38.7%
100+ Mbps	3	9.7%	25-100 Mbps	4	12.9%
			100+ Mbps	2	6.5%

Cellular 13 locations

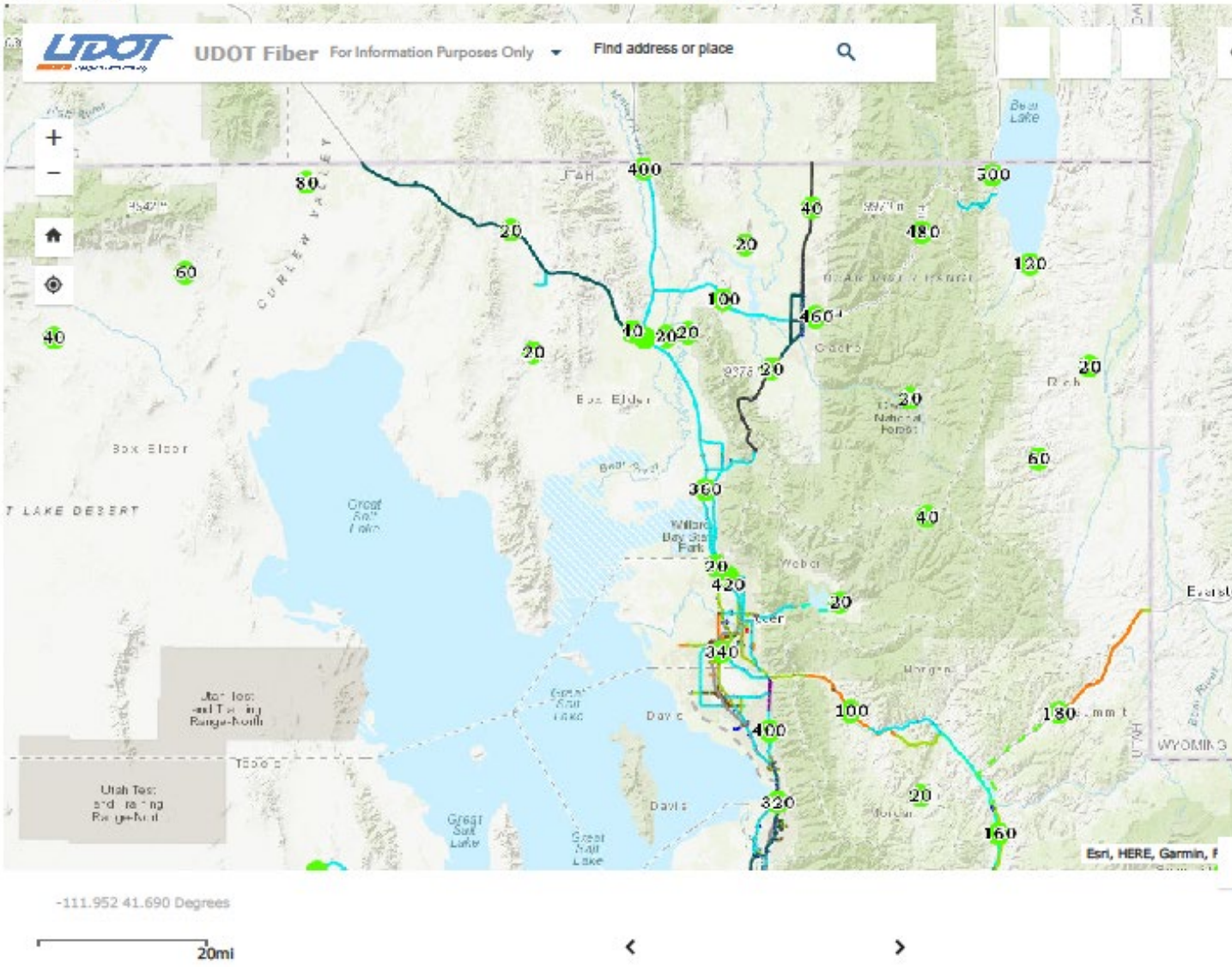
Download			Upload		
0-25 Mbps	5	38.5%	<3 Mbps	4	30.8%
25-100 Mbps	6	46.2%	3-25 Mbps	4	30.8%
100+ Mbps	2	15.4%	25-100 Mbps	2	15.4%
			100+ Mbps	3	23.1%

UETN Service



The UETN provides service directly, or through contract to every school, library, and community health clinic in the region. Great opportunity is available here to create access points off of the infrastructure investment that already exists in many remote communities such as Fielding and Laketown because of this service.

UDOT Fiber Network



3.5.2 Digital Access

3.5.3 Broadband Affordability

The biggest questions now are, “How important is fiber optic infrastructure deployment?” Are short-term connections using fixed-wireless and other technologies sufficient to address needs? Wireless point-to-point technology is improving in service quality and can be deployed at much lower costs than fiber cable construction. This construction cost savings can then be passed on to consumers in lower subscription fees. It also allows for faster deployment on smaller State and Federal funding awards.

4 OBSTACLES OR BARRIERS

Geographic barriers such as mountains and steep canyons can make it difficult for line-of-site services such as satellite and fixed-wireless providers to access certain remote communities. Additionally, physical separation from larger communities by distance is cost-prohibitive for providers to expand services beyond major population centers and trunk infrastructure, leaving small communities on the fringe of the region without high levels of service.

5 IMPLEMENTATION PLAN

5.1 PRIORITIES

BRAG will continue to work with the UBC and the established Broadband Access Committee communicate availability of potential funding sources, both public and private, to build out the infrastructure necessary to serve the entire region.

BRAG and the Committee will provide technical assistance to any prospective applicant or consortium of applicants for assistance to build out additional infrastructure.

Table 13. Priorities for Broadband Deployment and Digital Access

Priority	Ranking	Description
Northeastern Box Elder County	High	Plymouth, Fielding, Collinston, Beaverdam, Honeyville & Deweyville
Rich County Bear Lake (Garden City, Laketown)	High	Improved access throughout Garden City & Laketown
Rich County Plateau (Randolph, Woodruff)	High	Improved access throughout Randolph & Woodruff
Northwestern Cache County	High	Improved access throughout Cornish, Trenton, Lewiston, Richmond, Newton & Clarkston
Southern Cache County	High	Improved access through Paradise & Avon

5.2 PLANNED ACTIVITIES

BRAG will continue to work with providers and communities to determine the prioritization of service implementation based on categories such as full-time population, median household income, existing levels of service, economic impact, etc.

5.3 KEY EXECUTION STRATEGIES

Identify available State and Federal funding resources

Identify local matching funds from private and public sources

Determine capabilities of potential development partners

Determine where fixed-wireless solutions can address temporary needs until additional resources are available for wired buildout

Procure development partnerships

5.4 ONGOING STAKEHOLDER ENGAGEMENT

The Bear River Regional Broadband Access Committee will continue to meet to identify and address potential development opportunities.

5.5 ESTIMATED TIMELINE FOR UNIVERSAL SERVICE

With an ideal combination of local, State and Federal financial resources being available, the region could be at universal buildout in seven years, based on contractor availability. See engineering timeline estimates in Appendix B.

5.6 ESTIMATED COST FOR UNIVERSAL SERVICE

$50,000,000 will complete buildout of back-haul fiber optic infrastructure to the remaining underserved communities in Box Elder, Cache, and Rich Counties. See engineering cost estimates in Appendix B.

5.7 ALIGNMENT

This regional Broadband Access Plan aligns with regional plans to address needs in economic opportunity. See Bear River Regional Comprehensive Economic Development Strategy at brag.utah.gov/ceds.

5.8 TECHNICAL ASSISTANCE

Emphasize dig-once infrastructure policies in local and State development

Build awareness in State policy makers and stakeholders to the extent of need

Provide assistance in identifying and securing funding for public investment

UDOT coordination with local communities on sharing access to infrastructure and easements

6 CONCLUSION

Broadband is essential to modern life. It is an engine of economic possibility, educational opportunity, civic engagement, and access to health care. People and communities that lack

broadband and the means to use it are falling behind. Residents in less populated areas have much less access to broadband services. But lack of broadband is not just a matter of geography or density; income, education, disability status, age, race, and ethnicity all correlate with lower broadband adoption. In other words, the poor, the less-educated, the differently abled, seniors, and people of color also feel the costs of the digital divide. The COVID-19 pandemic has reinforced our reliance on broadband—and the importance of closing the divide. With school, work, and health care increasingly—or completely—available online as a public health imperative, Utahns' ability to access and use broadband became the difference between being able to fully engage in life, and being cut off. In light of these challenges. Besides our own research on national best practices, we reviewed 70 written comments and listened to ideas and concerns raised by many organizations and more than 600 persons that took part in the speed test to identify service shortfalls.