

UTAH REGIONAL BROADBAND ACCESS PLANS



2014

A Statewide Summary

A review of strategic broadband plans developed by Utah's Regional Broadband Planning Councils including the identification of key issues and recommendations to improve access to high-speed Internet services throughout the State of Utah.

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Utah Regional Broadband Access Plans

A STATEWIDE SUMMARY

INTRODUCTION

The Utah Broadband Project is a joint effort between the Utah Governor's Office of Economic Development (GOED), the Public Service Commission (PSC) and the Department of Technology Services' Automated Geographic Reference Center (AGRC) to develop a statewide map of available broadband services and a plan to increase broadband deployment and adoption in the State of Utah. Similar programs have been undertaken in all 50 states through the State Broadband Initiative (SBI) program, which is being administered by the National Telecommunications and Information Administration (NTIA) and funded through the American Recovery and Reinvestment Act of 2009.

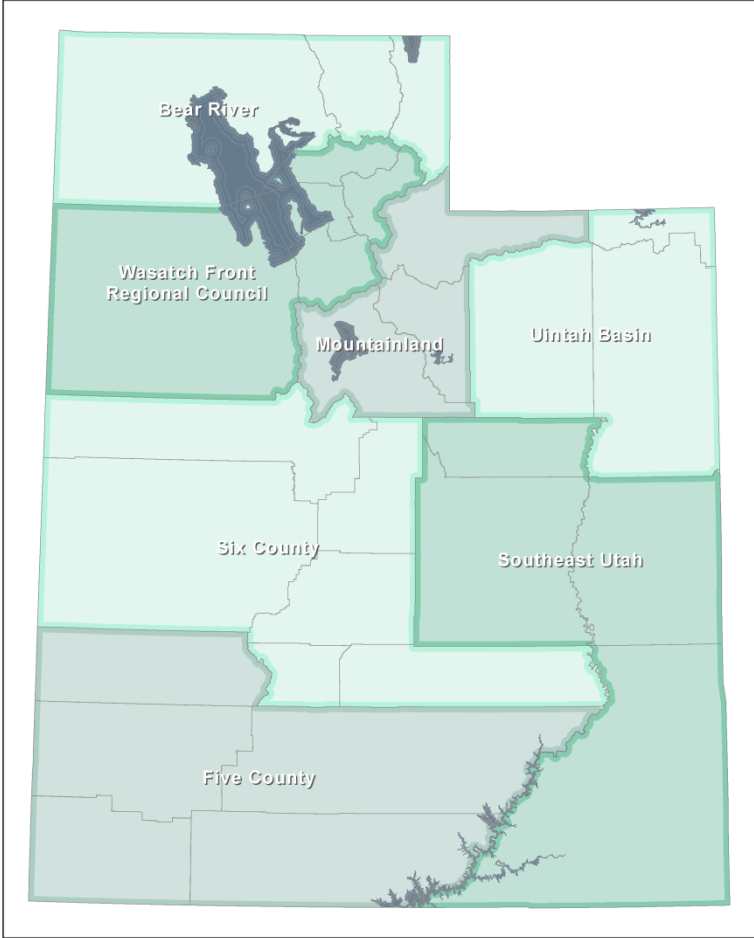
Though Utah is recognized nationally as having one of the highest per capita broadband Internet adoption rates, there is still room for improvement. Many communities throughout the state struggle to access broadband services due to a wide variety of factors such as geographic isolation, terrain, high-costs, speeds and reliability of service.

Just like utilities such as drinking water and electricity, broadband Internet service is becoming more and more universal in the public's view as a daily necessity. The impact of broadband availability plays a major role in public safety, health care, economic development, education, entertainment and quality of life.

In 2013, the Utah Broadband Project partnered with each of Utah's seven Associations of Governments (AOGs) to form regional broadband planning councils with the goal of assessing broadband availability and needs on a local level. These regional teams were tasked with identifying regional issues, priorities and goals related to broadband deployment and adoption to create community awareness about broadband-related issues.

This Statewide Broadband Planning Summary is a compilation of highlights from regional planning documents produced based on feedback and discussions held during meetings with local communities and Regional Broadband Planning Councils around the State of Utah. This document provides guidance for the advancement of broadband services and infrastructure by promoting key recommendations and best practices to help enhance broadband usage and demand throughout Utah. It also includes a framework to advise the State of Utah, local government officials, broadband providers and other stakeholders about broadband related topics and issues.

Utah's Seven Regional Associations of Governments



OVERVIEW OF REGIONAL PLANNING PROCESS

Regional Councils

Utah is divided into seven multi-county districts each with a regional AOG. The AOGs were established in the early 1970s to assist the state and local governments with multi-county planning, program integration and optimization of economies of scale. These regional organizations, directed by elected officials from member communities, provide shared staff to assist with regional planning and coordination on issues that cross jurisdictional boundaries between local governments and state and federal agencies.

The Utah Broadband Project elected to involve these regional planning organizations in order to capitalize on the relationships between local governments, service providers, businesses and other institutions that were already in place to develop regional broadband plans. The broad geographic and demographic differences in the state could then be broken down into smaller, more responsive bodies. This structure allowed the discussions to focus on issues that were most critical to each individual region.

Regional Planning Process

Recently the Utah Broadband Project along with Utah's AOGs released regional broadband plans. These plans document the regional information gathering efforts, identify regional issues and set forth priorities deployment and adoption for each specific region.

Each region established a Regional Broadband Planning Council, with membership consisting of representatives of various stakeholder organizations involved in the development and utilization of broadband Internet services. The exact makeup of these councils varied from region to region within the state; however, they frequently were comprised of experts and interested parties from the following sectors:

Broadband Providers	Business Leaders	County & Local Government	Economic Development
Education	Energy	Extension Offices & Agriculture	Healthcare
Libraries	Public Safety	Transportation	Tribal Leadership

Overall 21 counties, 19 cities, 12 elected officials, 40 Internet providers, 10 libraries, five healthcare institutions, four Native American Tribes, 49 businesses and 18 institutions of higher education participated in the regional broadband planning process throughout the state.

The Regional Broadband Planning Councils were tasked with identifying regional issues, priorities and goals related to broadband deployment and adoption; participating in regional and state broadband outreach; creating community awareness about broadband related issues; and formalizing a regional broadband plan.

Some regions divided into county-level sub-councils to better facilitate local participation due to geographic and demographic challenges. Others met as single bodies representing regional stakeholders and interests. Regional plan input was gathered through regular meetings conducted in person and via telephone conferences. Some councils collected additional data by providing targeted surveys to consumers such as residential and business Internet users to further refine issues. The Southwest Utah Regional Broadband Plan, Southeast Utah Regional Broadband Plan and Wasatch Front Regional Council Regional Broadband Plan contain specific information gathered from surveys and focus groups relative to distinct geographic areas and concerns. Six County Association of Governments meets annually with local communities to assess needs including broadband service and infrastructure availability.

Each Regional Council developed a local Broadband Access Plan to address issues and opportunities in the local planning process. Copies of these plans are available online at <http://broadband.utah.gov/resources/regional-planning/>.

REGIONAL PLAN HIGHLIGHTS & RECOMMENDATIONS

The Regional Broadband Planning Councils were tasked with developing strategic broadband plans that identified broadband issues and made recommendations to address local needs. These strategic plans focused on key issues recognized through the planning process and provided specific goals and objectives to help private and public institutions best address the needs and opportunities that were identified. Below are each region's main broadband recommendations.

Bear River Association of Governments

Economic Development	Increase economic opportunity through broadband technology.
Government Regulation	Reduce regulatory barriers for infrastructure expansion.
Healthcare	Improve access to healthcare services through technology.
Community	Improve public access to Internet services.
Broadband Awareness	Improve consumer knowledge on various service levels.

Five County Association of Governments

Economic Development	Market the Utah Broadband Map to communities.
Government Regulation	Reduce regulatory barriers to support infrastructure expansion.
Community	Develop local broadband plans for communities and continue regional broadband coordination.
Infrastructure	Establish a database with infrastructure information and project schedules.
Education	Improve coordination with the Utah Education and Telehealth Network (UETN).
Funding	Work to refine broadband grant policies.
Public Lands	Create a State Liaison Program to coordinate with public land agencies.

Six County Association of Governments

Economic Development	Develop a positive broadband environment to attract business and tourism and increase agriculture production.
Infrastructure	Establish coordination and communication to facilitate broadband deployment.
Broadband Awareness	Coordinate regional outreach and technology training for minority populations.

Mountainland Association of Governments

Economic Development	Market existing infrastructure.
Infrastructure	Increase coordination and cooperation to increase broadband deployment.
Funding	Research broadband funding options.
Broadband Awareness	Educate local officials on the importance of broadband.

Wasatch Front Regional Council	
Economic Development	Increase collaboration with public and private economic development organizations.
Infrastructure	Expand broadband infrastructure and improve broadband deployment through coordination, communication and cooperation.
Demand	Pursue and promote strategies, partnerships and best practices.
Community	Foster broadband availability, use and access.
Broadband Awareness	Increase and promote opportunities to learn about the benefits and use of broadband.

Southeastern Utah Association of Local Governments	
Economic Development	Coordinate between existing businesses and Internet providers.
Infrastructure	Improve communication and coordination between providers and communities.
Government	Work with communities to encourage broadband deployment.
Education, Healthcare and Public Safety	Improve coordination with the UETN and FirstNet.
Funding	Develop strategies to utilize local funding to encourage infrastructure deployment.
Broadband Awareness	Develop a regional strategy to increase tribal broadband access.

Uintah Basin Association of Governments	
Economic Development	Work with economic development agencies to market infrastructure.
Infrastructure	Identify gaps in service and develop strategies to expand.
Government	Streamline regulation and encourage redundancy.
Public Safety	Improve the public safety network by utilizing broadband infrastructure.
Funding	Encourage competition and seek funding assistance to subsidize appropriate costs.
Broadband Awareness	Promote the use of broadband and additional computer literacy training.

While each region developed plans to address specific needs identified by local stakeholders, many common themes emerged from regional broadband council conversations. As the communities, service providers and other entities within the different regions continue to address broadband issues, cooperation and collaboration on shared problems and opportunities will improve local results.

Each of the seven Regional Broadband Plans contain maps, statistics and a list of key local issues and priorities focused on incremental improvements to broadband infrastructure and service delivery. In every plan, local

broadband issues were identified as well as strategic broadband goals and specific objectives to work toward. Statewide issues were also identified that may require further coordination and leadership from state and federal sources.

INFRASTRUCTURE EXPANSION

The planning capacity to communicate with service providers and the resources to incentivize infrastructure expansion and promote service redundancy in critical geographical areas are challenges of rural communities and tribal organizations.

Prepare for Future Growth

Both the Mountainland and Wasatch Front regions recommended the identification of priority locations for infrastructure investments. The Wasatch Front Regional Council has the Wasatch Choice 2040 tool to assist policy makers in determining likely locations associated with new housing, business growth, transportation and other planned infrastructure.

In the Mountainland region, education for citizens and elected officials on the importance of network expansion and investment was highlighted. Intelligent Transportation System (ITS) infrastructure for the Utah Department of Transportation (UDOT) and other local transportation infrastructure managers have been useful to encourage installation as fiber and other broadband infrastructure is necessary to serve the traffic management system. These ITS systems are growing in popularity in urban and rural areas and will be an integral part of further infrastructure investment.

Several regions identified the importance of continually gathering data on business sector broadband concerns. The Six County region meets regularly with elected officials, while the Wasatch Front, Southeastern Utah, Five County and the Bear River regions collected data through surveys and individual visits to learn more about business sector needs and growth initiatives.

The Mountainland, Southeastern, Uintah Basin and Bear River regional plans all documented the ability to work with existing regional Economic Development Districts to plan for and prioritize community and business broadband infrastructure needs. They also recommended discussing and identifying broadband services as priorities in local planning documents, codes and procedures.

Create Opportunities & Incentives to Help Expand Infrastructure & Connectivity in Rural Areas

Continuing the communication and coordination between local jurisdictions and agencies providing resources for expansion of infrastructure is a critical step in the implementation of the regional plans. GOED's Utah Broadband Project and Rural Development Office staff can act as important links between state and federal agencies providing grant and other financial resources. Regional planning staff at the state's seven AOGs can also work to share information on available resources with local jurisdictions and organizations needing assistance. The state and regional staff members should coordinate with the United States Department of Agriculture, Federal Communications Commission, UETN and other state incentives to see that community infrastructure needs are directed to the appropriate resource for assistance and identify any new opportunities to improve connectivity to broadband technology.

Increase Competition to Improve Service & Reduce Costs

Around the state, some rural communities still suffer from marginal or non-existent service. A lack of competition impacts speeds, reliability and pricing structure. Communication between local governments and service providers is crucial to closing the gaps in rural access to broadband services that will contribute to the overall quality of life in rural Utah.

ECONOMIC DEVELOPMENT

There is wide recognition around the state of the importance broadband service plays in economic development. All regional plan documents highlighted the need to effectively gauge and market broadband service levels to potential customers.

Access to broadband Internet technology and services is a key component in economic development planning for communities of all sizes. While individual subscriber needs may vary, consistent and affordable access to broadband services is becoming a necessary expectation instead of a luxury.

All regions recognized that reliable high-speed Internet access is a valuable resource for economic development and job creation in rural areas. The Five County region especially focused on providing services for “Lone Eagle” professionals such as engineers, computer programmers or specialty retailers. The Wasatch Front regional broadband plan included recommendations that future investments in improvements to access in employment centers be selected by objective criteria such as housing, transportation infrastructure, emerging growth centers and government receptiveness.

Partner with Service Providers to Promote Availability of Broadband Infrastructure to Prospective Businesses

Both the Wasatch Front and Five County plans contained significant language describing the need to coordinate the promotion of existing and proposed broadband infrastructure to facilitate economic development. The Utah Broadband Project has already collected considerable levels of data and could continue to work with providers to publicize one to 10-year deployment plans. If necessary, this data could be collected and used privately under limited disclosure agreements.

On a statewide level, the Economic Development Corporation of Utah (EDCUtah) could coordinate the dissemination of information regarding the availability of different levels of infrastructure to encourage commercial development dependent on broadband technologies. Cooperation with providers to include such availability in the existing Sure Sites program would provide necessary information to businesses seeking to locate or expand operations in Utah while affording an additional venue for service providers to advertise their products with little or no additional expense to the state and providers.

Address Rural Technology Needs

The need for coordination and collaboration between providers and local governments, as well as the need to improve service redundancy – especially in rural areas – were key points statewide. Both the Five and Six County regions emphasized the importance of broadband Internet service in the agricultural industry. Five County’s plan discussed the reliance on technology to compete in global commodity markets and the difficulties small operators in remote areas experience when service is unreliable or unaffordable. Six County, in Central Utah, encouraged the adoption of technologies such as Global Positioning Systems (GPS), Geographic Information Systems (GIS) and livestock tracking systems to gather useful data for agricultural operators. Working with the local university extension offices, Snow College and other educational institutions, training and education can be provided to help industrial operators take full advantage of these tools.

Address Tribal Broadband Needs

An important element of both Southeastern Utah and Six County’s regional plans was tribal involvement, and to increase broadband access for tribal areas. Both plans recommended the development of strategies to increase tribal access through relationships established by UETN, including better access to tribal centers and existing utility rights-of-way in order to better connect providers to customers such as energy development companies. The Utah Broadband Project and regional broadband councils could act as critical resources.

Support Business Development and Tourism

The Five County, Southeastern, Bear River and Wasatch Front regions all recognized the importance of wireless data service to local tourism industries. This service is critical both as the expected communication venue for visitors and as a tool for tourism businesses to market and sell their goods and services. Visitation rates to these areas can be used as contributing data for the prioritization of infrastructure investment in remote areas.

The communities and resort owners of many recreational destinations along the Wasatch Front in Weber, Davis, Salt Lake and Utah Counties are excellent examples of areas proactively working with providers to ensure adequate facilities to address seasonal demand for services and technology.

Six County AOG also recommended the development of leadership summits in cooperation with local Chambers of Commerce to provide information to elected officials and policy makers on the vital role broadband services play in industry and tourism.

Local regional Broadband Planning Councils can continue to play an important role in coordinating and organizing these educational events. Especially as they partner with the regional Economic Development Districts present in each of the AOGs. Uintah Basin's regional broadband plan recommended working with local economic development agencies to educate potential businesses of existing broadband infrastructure.

Additional trainings could be offered to local businesses through Business Resource Centers and other institutions to help build websites, utilize Internet services, and increase the demand for broadband service to reduce costs and grow competition.

REDUCING REGULATION

Government regulation can unnecessarily burden broadband service providers with rules and expenses that prohibit or slow expansion of infrastructure and other technology deployments.

Reducing regulatory barriers in land use and construction permitting was emphasized along the Wasatch Front and in the Uintah Basin as a strategy to speed up the expansion of services and increase competition. Treating broadband infrastructure as a utility and requiring its consideration at the subdivision and permitting stages of new developments will facilitate the growth of services to new areas.

The Mountainland and Five County regional broadband plans also recommended the reasonable removal or reduction in local regulatory barriers to broadband infrastructure during permitting, scheduling and inspection.

ACCESS FOR EDUCATION, HEALTHCARE & PUBLIC SAFETY

Broadband Internet service is rapidly becoming a necessity to effectively deliver public safety, education and other critical public services. Technology is also opening new doors to provide healthcare services and grow job opportunities in small communities. Access to high-speed data services, particularly wireless communication, is a critical component of emergency response services.

Partner with FirstNet to Support Public Safety

Each region recommended continuing to build the state's relationship with the First Responder Network Authority (FirstNet), which is working to provide emergency responders with the first high-speed nationwide network dedicated to public safety. The regional broadband plans recommend working with FirstNet to identify available funding and technical assistance to help increase wireless coverage and grow broadband access to improve reliability and interoperability in underserved communities.

Continue Efforts to Develop State and Nationwide Network for Emergency Services & Public Safety

Complex issues emerge when broadband systems go down or are overloaded during an emergency. Each region recognized the critical importance of reliable broadband service for public safety and stressed the need to have plans to efficiently reestablish connections that might be lost in the event of a natural disaster. The Wasatch Front broadband plan also recommended the development and inclusion of language in local emergency response plans to address service interruptions in the case of natural disasters or other emergencies.

The State Department of Public Safety should continue to work with cities, counties and other jurisdictions to expand and enhance the broadband communications network necessary to provide emergency services and public safety activities. Expanding consultation and participation with the national FirstNet network, which plans to implement the Nationwide Public Safety Broadband Network (NPSBN) should be a high priority.

The U.S. Department of Homeland Security provides resources and plans for interoperability of broadband services during emergencies, including a public safety network. Visit www.dhs.gov/statewide-communication-interoperability-plans for more information on this program.

The State of Utah recently completed a Statewide Communication Interoperability Plan. Several regions in the state have also completed local Interoperability plans to facilitate communication in emergencies. Download a copy of the state plan at siec.utah.gov/scip/documents/UT_RevisedSCIP_20130624_Draftv2.pdf

As these local interoperability plans are revised in the future, the importance of broadband service and infrastructure planning must be highlighted.

Ensure Sufficient Access for Educational Institutions & Tribal Centers

The Five County regional broadband plan identified successes in the delivery of 1 Gigabit download speed Internet service to each school in the region along with 10 Gigabit download speed to regional institutions of higher learning. These successes are contrasted with the continual increase in demand for bandwidth as devices per student and data consumption continue to rapidly grow.

Carbon County School District located in the Southeastern region has developed a plan to increase wireless broadband capacity in schools to facilitate meeting the goal of placing wireless technology devices such as tablet computers in the hands of each student. The Southeastern regional broadband plan has also created a goal to continue to work with UETN to identify schools and libraries that do not currently have high-speed Internet access and connect them with the appropriate resources to obtain high-speed broadband.

The Southeastern Utah Association of Local Governments serves a broad geographical area and includes several sovereign tribal jurisdictions. The need for broadband infrastructure and services on tribal holdings is acute. Great efforts are being made to bridge the gap between local governments and tribal participation. A growing partnership with the Navajo Nation, UETN and the AOG is working to address needs in remote tribal areas. Minority and ethnic population involvement in Six County and Southeastern AOGs is also producing not only results on the ground, but examples of outreach and communication methods that can be replicated in other regions and activities.

Ensure Sufficient Access for Healthcare Institutions

The Bear River and Five County regions discussed how the demand for telemedicine services will continue to grow, particularly in rural areas. This technology will add additional strain to current networks and the AOGs recommend UETN work with providers to continue to build strong networks that respond to growth. The Bear River region also noted that additional data is necessary on the needs of clinics and hospitals to maintain premium communication abilities. These network users will need access to additional funding to continue to grow.

The Bear River AOG is working to pair UETN with healthcare service providers for a pilot project to expand healthcare access to individuals in remote rural communities that may have difficulties receiving routine medical

care due to transportation issues. Placing equipment and technology in the hands of healthcare providers that can visit technology dependent or otherwise homebound individuals can delay or prevent unnecessary emergency services or long term care. Additional work with the State of Utah will be necessary to facilitate changes to Medicaid eligibility and other regulatory issues.

Before these services become widespread, additional research is necessary into whether federal programs such as Medicaid and Medicare and private insurance companies will consider such activities eligible under current organizational and legal structures.

BROADBAND ADOPTION

Access to information for education, public services and economic opportunity is increasingly dependent on broadband Internet access. Communities must work with service providers and advocacy organizations to increase the ability for underserved or non-adoptive populations to access broadband services when needed.

Utah has a relatively high penetration rate of broadband infrastructure and an already high adoption rate. However, additional information for consumers on the availability and accessibility of existing services – especially in rural areas – would continue to grow the demand for services.

Increase Broadband Availability in Community Spaces

The development of public access to broadband Internet through public facilities was a common theme in most regions. In the Wasatch Front, low income populations were targeted through community centers, libraries and other public venues. In the Six County and Southeastern regions, tribal centers were targets for enhanced services. The Utah Broadband Project has already contributed significant work to identifying existing public access points and potential sites for broadband access.

The plan for the Wasatch Front region highlighted efforts to expand access to public Wi-Fi services at key community and neighborhood locations such as Utah Transit Authority (UTA) stops along TRAX and FrontRunner lines, on express buses, and in libraries and schools. St. George City also provides public access Wi-Fi service in certain public gathering spaces. Additionally, many private establishments such as restaurants, hotels and banks make Wi-Fi accessible to clients. As new accessible Wi-Fi systems come online, communities and industry groups could compile and publish available access sites as a community resource. Careful concern must be made to incorporate appropriate security and filtering methods to provide safety and security in the public realm.

Provide Options for Low-Income Nonadopters

In addition to providing public access locations, as mentioned above, the Wasatch Front region noted that several service providers already offer broadband services to lower income households on sliding scale fee rates to promote access. Five County AOG and the Uintah Basin council recommended that this service structure be expanded to include senior citizens, disabled adults and other underserved populations. Increasing affordability has been discussed as a primary method to increase adoption rates, especially in rural areas.

Raise Public Awareness of Existing Programs & Services

There are many commercial and informational efforts in place to raise awareness of broadband Internet services. However, more coordination could be developed between broadband service providers, local Chambers of Commerce, community and educational institutions, tribal organizations and public advocacy organizations particularly in non-urban markets where targeted advertising is limited. The contact network developed by the Utah Broadband Project puts GOED in a strong position to coordinate this communication.

The Bear River AOG recommended creating a market education plan to help consumers understand what different capacity types are available and what each technology does to address different needs.

All seven regions recommended the development of outreach programs to increase general public knowledge regarding the uses and advantages of broadband Internet services and technology.

The concept of developing targeted advertising in non-metropolitan areas was raised by several regional councils. The Southeastern Utah, Wasatch Front Regional Council and Mountainland broadband plans all include recommendations to encourage broadband service providers to create targeted advertising materials that can make potential customers aware of pricing and services available in small rural markets instead of using regional or statewide marketing materials that may advertise services unavailable outside of major population centers. While this activity could increase provider marketing costs over the short term, it could increase local adoption of services in small areas, promoting growth and competition in underserved areas. The Wasatch Front plan also emphasized the importance of including education on filtering systems and services to block dangerous and offensive materials, especially in public venues.

PUBLIC LANDS COORDINATION

The ability to deploy broadband infrastructure and technology in remote rural communities of Utah often depends on the ability to access rights-of-way across public lands. Coordination between the state, federal and local jurisdictions is imperative to make the necessary policy changes that will facilitate the expansion of markets and services in the West.

Facilitate Public Lands Coordination

In a state where over 60 percent of the total land is controlled by the federal government, challenges to expanding infrastructure in remote rural geographic locations include establishing rights-of-way across public land, environmental permitting, and communication between various levels of bureaucracies. Each of the seven regional plans detailed concerns with these obstacles to infrastructure deployment, even along the metropolitan Wasatch Front.

All regions in the state must consider public land management agencies in the planning and deployment of infrastructure. Even the Wasatch Front contains high public land ownership. Installing infrastructure across public lands requires considerable effort to comply with state and federal regulation. The Five County regional plan detailed these compliance steps and stressed the importance of a coordinated effort to partner with public land managers to expand infrastructure to isolated rural communities.

The Five County regional plan offered specific recommendations on providing statewide leadership and coordination to address this critical issue. The State Public Lands Policy Coordinating Office and GOED are two high-level state agencies that would be well-suited to facilitate discussions on public lands and other environmental issues due to their existing relationships with federal land management agencies and the executive-level communication with other state entities. These offices are in position to invite appropriate stakeholders and policy makers to engage in formulating the solutions needed for the communities and service providers in the State of Utah and leveraging appropriate federal cooperation to work towards implementation of a statewide approach to public lands issues.

FUNDING OPPORTUNITIES

Several regions identified the need to develop a funding assistance program with loans and grants to promote expansion to underserved areas. Southeastern Utah recommended the development of strategies to grow local investment in infrastructure deployment such as investigating the application of local, state and federal funding sources such as the following:

- Governor's Office of Economic Development Opportunity Grants
- US Department of Agriculture, Rural Development
- US Department of Commerce, Economic Development Administration
- US Department of Housing and Urban Development

- Rural county “Payment in Lieu of Taxes” or PILT
- The Utah Permanent Community Impact Fund
- Private endowments
- Co-operative services
- Boutique taxes or other options as appropriate

Partnerships and dedicated funding will be necessary to help sustain providers through long periods of return on investment created by geographic distances and small populations.

Mountainland recommended that as these potential funding sources are developed and new sources identified, they be catalogued and published with regular updates on the Utah Broadband Project website.

The Five County plan also recognized many of the existing grants and funding opportunities available to encourage technology and infrastructure deployment in rural areas. However, many of these grants could be restructured to be more accessible to small and rural providers. Oftentimes the subscriber base or population density is not high enough in rural communities to qualify for funding assistance.

Additionally, the State of Utah could develop a broadband investment fund to assist in the early investment of infrastructure in small communities and rural areas. These investments could be made through public/private partnerships to reduce risk and minimize costs.

COORDINATION & DISSEMINATION OF INFORMATION

The Mountainland region also recommended using existing meetings and public boards to disseminate materials from regional plans, research and data from the Utah Broadband Project and other broadband educational sources.

The 2013 Broadband Tech Summit was a valuable resource to community leaders, service providers and other policy makers. The Mountainland region recommended continuing this program through public/private partnerships to further enhance communication and education on broadband issues in the state.

BEST PRACTICES

All of the regional broadband plans included best practices that can be implemented to encourage the deployment of broadband infrastructure. The plans pointed out the importance of communication between private service providers and public agencies regarding coordinating construction opportunities with streets, utilities and other major public works projects.

These best practices can be implemented in any community and often result in significant cost savings. These practices could be promoted through county and municipal education programs.

COORDINATION & COOPERATION

- Work with the Utah Broadband Project to maintain a list of Internet providers and their service area throughout the state to help facilitate communication between cities, counties and providers (WFRC).
- Meet regularly with broadband providers to review future infrastructure plans and make recommendations for deployment priorities (UBAOG).
- Use AOGs as a forum for consumer and provider coordination, education and consideration of broadband infrastructure in regional and local planning efforts (Five County AOG).

PLANNING DOCUMENTS & POLICIES

- Include broadband-related infrastructure goals as elements of local government comprehensive plans (WFRC).
- Update zoning laws to respond to new infrastructure needs (WFRC).
- Evaluate feasibility of public structures for potential wireless service installations (WFRC).
- Include broadband alongside other utilities in the subdivision process (WFRC).
- Set up a reporting schedule and project mapping system to coordinate with city departments, developers and providers (WFRC).
- Utilize the Utah Broadband Project and AGRC resources to provide information on networks and services available as well as future provider plans to enhance local comprehensive plans (WFRC).
- Draft language for communities and cities that can be incorporated into city or county General Plans about deploying infrastructure (All AOGs).
- Encourage local government to include broadband infrastructure in their comprehensive plans and as a routine part of capital facilities project planning (WFRC).
- Work with the Utah League of Cities and Towns, Utah Chapter of the American Planners Association and the Utah Public Works Association to disseminate best examples of such policies and ordinances. (BRAG).
- Design guidelines for “stealth” tower installations that mimic natural features or vegetation to meet community aesthetic preferences (WFRC).
- Work with AOGs to rate and rank the prioritization of public infrastructure and service investments. These organizations would be well-suited to perform similar services for any future funding that might be identified to address broadband investments. This would ensure that regional priorities are being address through local governance (SEUALG).

DIG-ONCE STRATEGIES

- Work to develop and adopt a “dig-once” policy to encourage or require broadband service providers to coordinate with other utilities and public works agencies on the installation of infrastructure while a trench is open for other purposes. This reduces the need to dig additional trenches, a major obstacle in both time and cost to infrastructure expansion (All AOGs).
- Encourage communities to work with providers to install conduit during existing public works projects (SEUALG).
- Create a subcommittee of the Utah Broadband Advisory Council to create a website/database of local and statewide construction and trenching schedules and opportunities (WFRC).
- Hold annual or periodic meetings with providers to determine lead time needs for trench coordination and potential cost sharing policies including organizations such as Blue Stakes, trench and installation companies (WFRC).
- Create a centrally coordinated database for trench construction and cost sharing policies. This database could include a reporting schedule on major projects from UDOT, counties, cities and providers (MAG).
- Create public/private partnerships to work with city and county officials and local Internet providers to increase communication and coordination when deploying broadband infrastructure (UBAOG, SEUALG).
- Model plan language to incorporate broadband-specific infrastructure planning in local documents and processes is available in both regional plans produced by Five County and Mountainland AOGs. These examples of local ordinances and planning language can be effective in facilitating the consideration and growth of broadband infrastructure in new and existing development with local communities.

- More tips on best practice approaches for comprehensive community planning to increase broadband access can be found at the Fiber to the Home Council website at www.ffthcouncil.org for more information.

REGULATORY BARRIERS

- Reduce regulations that impact local efforts to address broadband needs (WFRC, SEUALG, UBAOG, BRAG, MAG, Five County AOG).
- Address regulatory barriers to sharing major utility rights-of-way easements in ways that don't compromise safety and security of existing systems (WFRC).
- Review local permitting processes to reduce barriers to deployment, e.g., modify zoning laws to allow installations on buildings of various heights (MAG).

ADOPTION & AWARENESS

- Use existing services such as regional Applied Technology Colleges, Utah State University Extension, or local Business Resource Centers to promote and offer training in the use of broadband services (UBAG).

BEST PRACTICES IN ACTION

- UDOT acts as a cooperative partner in working with providers to install conduit along state and county rights-of-way in exchange for access to services for traffic and safety coordination.
- UETN works with local telecommunications service providers to secure E-Rate funding to connect over one thousand Utah public schools and districts, charter schools, colleges, universities and libraries, most with gigabit-speed connections.
- St. George City has developed a utility notification system to inform telecommunication companies and other private utility providers when public utility projects are planned to coordinate installation of infrastructure reducing the costs associated with independent trenching. Many regions have expressed a need for this such as Mountainland, Five County and Wasatch Front Regional Council.
- Layton City currently coordinates the installation of conduit with new road construction, signal installation and re-construction projects. Broadband providers receive final subdivision plans and are invited to pre-construction meetings to coordinate installation in new subdivisions.

CONCLUSION

The use of broadband technologies and services has become commonplace throughout the State of Utah. While Utah's overall adoption rate is among the highest in the country, there are still gaps in service coverage and hurdles to expansion such as geographical distances or the rapid pace at which technology changes. Through the regional planning processes outlined in this document, the seven Regional Broadband Councils each identified needs and opportunities unique to their jurisdictions as well as those shared across the state.

Though many broadband issues have been known for some time, the regional planning activities helped identify new subjects for research and gave participants the opportunity to prioritize and refine specific concerns into achievable goals and milestones. Additional leadership is necessary to address issues of statewide importance, but with planning documents and – more importantly – communication systems and processes in place, the communities, businesses and consumers of Utah are now better-suited to tackle the complex tasks of expanding and maximizing the effective use of broadband services to improve their quality of life.

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Participants are sorted by industry and highlighted by the regions they served in.

Industry	Participant	Region
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	Mike Giles, Frontier Communications	Bear River
	William Shaw, Baja Broadband	Five County
	Randy Crosby, InfoWest	Five County
	Craig Baird, Xpressweb	Five County
	Lynn Beecher, Skywire Fiber	Five County
	Matt Weller, All West Communications	Mountainland
	Jens Mickelson, JM Network	Six County
	Steve Clark, CentraCom	Six County
	Scott Bartholomew, Gunnison Telephone	Six County
	Jared Anderson, Emery Telcom	Southeast
	Brock Johanson, Emery Telcom	Southeast
	Shane Baggs, BEH Communications	Southeast
	Jason Chappell, River Canyon Wireless	Southeast
	Kraig Kaizumi, Frontier Communications	Southeast
	Jeff Goodrich, STRATA Networks	Uintah Basin
	Jared Hoskins, Century Link	Wasatch Front
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	Glenn Greenhalge, Juab County IT	Six County
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	Tony Dayish, Utah Navajo Royalties Holding Fund	Southeast
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	Lavern Dennison, Mexican Water Chapter	Southeast
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	Jennifer Davila, La Posada Pintada	Southeast
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	Holly Yocom, Utah Film Center	Wasatch Front
	Jason Myers, Utah Film Center	Wasatch Front
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	Jim Smith, Davis County Chamber of Commerce	Wasatch Front
	Albert Wilde, Morgan County Chamber of Commerce	Wasatch Front
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	Dave Fields, Snowbird Ski Resort	Wasatch Front
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	Ken Mumford, Iron County School District	Five County
	James Matthews, Southern Utah University	Five County
	Trent Wilde, Utah State University	Six County
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	Dave Brotherson, Duchesne County School Districts	Uintah Basin
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	Jami Carter, Tooele City Library	Wasatch Front
	Scott Jones, Weber County Library	Wasatch Front
	Jerry Meyer, Davis County Library	Wasatch Front
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