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Utah Regional Broadband Planning Councils

TOOLKIT

Utah Governor's Office *of* Economic Development
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Governor's Office of Economic Development

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Dear Community Leader,

Thank you for participating in your Regional Broadband Planning Council. Your efforts are vitally important to our State's continued economic vitality and in making sure that all Utahns have access to affordable and reliable broadband services.

You have been chosen by your local Association of Government (AOG) to participate in this Council as a subject matter expert and community leader. Throughout the course of your region's meetings, you may be asked to share your thoughts, suggestions and best practices with other community leaders and to identify issues and proposed actions related to broadband access and use.

We invite you to use this Toolkit as a guide for your Regional Planning Council's efforts. The Toolkit provides your Council with several resources and exercises that will be useful in your broadband planning process:

- Maps and Data
- Strategic Planning Purpose and Process
- Sample Residential and Business Surveys
- Sector-Based Discusison Guide
- Sample Media and Community Relations Materials
- Regional Broadband Plan Outline

On behalf of the Utah Governor's Office of Economic Development (GOED) and Governor Gary R. Herbert, let me thank you in advance for the dedication you have already shown by committing to be part of your Regional Broadband Planning Council. We hope you will join us this fall for our State Broadband Summit (stay tuned to our website for more details) and look forward to working with each of you to improve broadband access and use in Utah.

Thank you,

Tara Thue
Manager, Utah Broadband Project

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UTAH REGIONAL BROADBAND PLANNING COUNCILS

Utah Regional Broadband Planning Councils Toolkit

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UTAH REGIONAL BROADBAND PLANNING COUNCILS

Milestones and Deadlines

Mission

To advance the availability of broadband services and infrastructure, and to enhance broadband usage and demand in your region.

Goals

To form Regional Broadband Planning Councils; identify regional issues, priorities and goals related to broadband deployment and adoption; participate in regional and state broadband outreach; create community awareness about broadband-related issues; and formalize a regional broadband plan.

Regional Broadband Planning Council Milestones/Deliverables	Deadline
• Sign Intergovernmental Agreement • Identify AOG key contact • Submit proposed plan of action and goals • Identify and recruit key Regional Council participants • Submit a summary of tasks accomplished and hours worked for quarterly reporting	May 31, 2013
• Conduct initial meetings • Identify key issues • Develop measureable milestones to explore key issues • Have milestones approved by AOG Coordinator and GOED staff • Submit a summary of tasks accomplished and hours worked for quarterly reporting	June 30, 2013
• Continue regional meetings • Conduct regional needs assessment • Submit topic session ideas and content for Utah Broadband Summit • Register participants for Utah Broadband Summit • Submit a summary of tasks accomplished and hours worked for quarterly reporting	September 30, 2013
• Continue regional meetings • Attend and assist with the execution of the Utah Broadband Summit • Submit a summary of tasks accomplished and hours worked for quarterly reporting	December 31, 2013
• Meet with AOG Coordinator and GOED to discuss milestone progress and Regional Broadband Plan • Submit draft of Regional Broadband Plan to AOG Coordinator to be submitted to GOED for final approval • Submit a summary of tasks accomplished and hours worked for quarterly reporting	March 31, 2014
• Submit finalized Regional Broadband Plan • Present Regional Broadband Plan to the Utah Broadband Advisory Council • Conduct final grant closeout activities • Submit a summary of tasks accomplished and hours worked for quarterly reporting	June 30, 2014

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UTAH REGIONAL BROADBAND PLANNING COUNCILS

Background of the Utah Broadband Project

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UTAH REGIONAL BROADBAND PLANNING COUNCILS

The Utah Broadband Project is a joint effort between the 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 adoption and deployment in the state.

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Economic development, energy efficiency, and advances in education and health care rely not only on broadband infrastructure, but also on the knowledge and tools to leverage that infrastructure. The Utah Broadband Project is working with broadband providers, local and state policymakers, consumers, community institutions, and other stakeholders to explore the state of broadband in Utah, improve efficiencies, and expand deployment and usage statewide.

This initiative is being undertaken across all 50 states through the State Broadband Initiative (SBI) Program, which is being administered by the National Telecommunications and Information Administration (NTIA). The SBI Program implements the joint purposes of the Recovery Act and the Broadband Data Improvement Act, which envisioned a comprehensive program, led by state entities or non-profit organizations working at their direction, to facilitate the integration of broadband and information technology into state and local economies.

"I am excited to support the Utah Broadband Project, which is important because it will provide a clear map to assess the unserved and underserved areas in the State. This is yet another milestone in a series of milestones to strengthen economic development opportunities in Utah, not only in our rural areas, but across the entire State."
-Governor Gary R. Herbert

FYI: Utah's Associations of Governments

The State of Utah established seven Associations of Governments (AOGs) in 1970 to assist the state and local governments with multi-county planning, program integration, and optimization of economies of scale. There are seven AOG regions in Utah:

- Bear River Association of Governments
- Wasatch Front Regional Council
- Mountainland Association of Governments
- Uintah Basin Association of Governments
- Southeastern Utah Association of Local Governments
- Six County Association of Governments
- Five County Association of Governments

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UTAH REGIONAL BROADBAND PLANNING COUNCILS

Broadband 101

Notes

UTAH REGIONAL BROADBAND PLANNING COUNCILS

Broadband Terms to Know

What is Broadband?

The term 'broadband' is typically used to describe an Internet connection that is faster than traditional dial-up Internet access. The National Telecommunications and Information Administration currently defines broadband as an Internet connection that moves data at speeds of 768 Kilobits per second (Kbps) downstream and 200 Kbps upstream.

How is Broadband Different from Dial-up Service?

- Provides higher-speed of data transmission—more content can fit in the "pipeline"
- Provides access to the highest quality Internet services—video, streaming media, VoIP (Internet phone), online business applications and interactive services
- Broadband is always on—does not block phone lines, no need to reconnect to the network
- Less delay when downloading or sending files

How Does Broadband Impact the Day-to-Day Lives of Utahns?

Capacity, choice and speed are some of the obvious benefits of expanded broadband. What may not be as obvious is the potential that comes about when technology opens the door to opportunity. While rural America has often struggled to gain access to the highest levels education, healthcare, retail or other services, the ability to connect people and ideas at the speed of light changes everything. Other benefits include:

- Economic Development—Broadband can provide access to regional, national and worldwide markets, enhancing the opportunities for current businesses, while providing the infrastructure to attract entrepreneurs, knowledge workers, and technology-based companies that would have not otherwise considered locating in particular areas of the state or region of the country.
- Education—All levels of the education continuum, including primary, secondary, post-secondary, home schooling, technical certification and continuing education programs, stand to gain incredible opportunities. High-speed connectivity offers the promise of remote class instruction, shared course offerings and teachers and administrators networking with peers. Broadband can overcome geographical and financial barriers to provide access to a wide range of educational and cultural opportunities.
- Healthcare—Telemedicine and telehealth have the potential to revolutionize healthcare in rural America by allowing rural providers and patients the opportunity of access to specialists retrieval of health records, improved emergency response, reduced transportation costs, the offering of new alternatives for home health and e-visits and connecting health professionals to their patients in real time—facilitating provisions of the highest quality of medical care to currently unserved and underserved populations.

The availability of expansive and affordable broadband access will also improve many other aspects of or citizens' lives, such as in the areas of agriculture, economic development, energy and the environment, healthcare, education, libraries, residential services, public safety, local government administration, small business, tourism and the overall quality of life in Utah. A guide to assess the impact of each of these sectors is detailed later on in this Toolkit.

Broadband Definitions

4G Abbreviation for fourth-generation wireless, the stage of broadband mobile communications that will supersede the third generation (3G). Characterized by both mobility and very high bandwidth. Usually refers to LTE and WiMax technology.

Backbone The part of a communications network that acts like the central nervous system, a central hub from which all parts of the network extend.

Broadband Commonly refers to Internet access that is always on and is faster than traditional dial-up access. For the purposes of Utah's broadband mapping and planning projects, the term broadband denotes high-speed Internet access equal to or above speeds of 768 kbps downstream and 200 kbps upstream.

BPL (Broadband Over Power Lines) Delivery of broadband over the existing low- and medium-voltage electric power distribution network at speeds that are comparable to DSL and cable modem speeds. BPL is an emerging technology with significant potential, as power lines are installed virtually everywhere.

Cable This technology allows cable operators to provide broadband using the same coaxial cables that deliver pictures and sound to your TV set, utilizing cable modem technologies. Most cable modems are external devices with two connections: one to the cable wall outlet, the other to a computer.

Community Anchor Institution (CAI) Schools, libraries, medical/healthcare providers, public safety institutions, government buildings, and other community support organizations or agencies that provide access, equipment and support services. CAIs often facilitate increased broadband availability to high cost, hard to serve areas in Utah by serving as an anchor tenant for private providers. CAIs also play a role in some areas in increasing the use of broadband services by underserved populations.

DSL (Digital Subscriber Line) Wireline transmission technology that transmits data faster than dial-up over traditional copper telephone lines installed to homes and businesses, historically provided voice services.

FCC (Federal Communications Commission) The FCC regulates interstate and international communications by radio, television, wire, satellite and cable providers. It operates as an independent agency, overseen by Congress. The agency is directed by five commissioners who are appointed by the President and confirmed by the U.S. Senate.

Fiber Optic This technology converts electrical signals carrying data to light and sends the light through transparent glass fibers about the diameter of a human hair. Fiber optic lines transmit data at speeds far exceeding current DSL or cable speeds. This service includes technologies such as: Fiber to the Node (FTTN), Fiber to the Home (FTTH) and Fiber to the Premise (FTTP).

FirstNet The First Responder Network Authority, or FirstNet, is an independent authority in the NTIA charged with the build out of the Nationwide Public Safety Broadband Network (NPSBN), which will offer ubiquitous 4G LTE mobile wireless coverage nationwide.

Fixed Wireless This technology enables wireless broadband service to a specific geographic location using spectrum that is either licensed to the Internet service provider or shared among multiple Internet service providers. This wireless service includes Wi-Fi and other similar technologies (e.g., WiMAX and other proprietary wireless systems).

Last Mile Infrastructure consisting of facilities used to provide broadband service between end-user equipment and the appropriate access point, router or first significant aggregation point in the broadband network. In basic terms, this is the infrastructure that connects homes and small businesses to the high-speed Internet.

Maximum Advertised Speed The speed that a broadband provider advertises in an area. This usually represents the maximum download speed that the network can provide. Actual performance depends on a number of factors that may include your computer, network congestion due to other users, and the location of your home or business, among others.

Middle Mile Refers generally to the transport and transmission of data communications from the central office, cable headend or wireless switching station to an Internet point of presence.

Mobile Wireless This technology enables wireless broadband services in a specific geographic location using spectrum that is dedicated to an Internet service provider and targeted for mobile use by consumers within the area. This wireless service is generally offered by cellular phone providers, and includes technologies such as LTE, mobile WiMAX, CDMA2000 (EVDO), and UMTS (HSPA).

NTIA (National Communications and Information Administration) An Executive Branch agency responsible for advising the President on telecommunications and information policy issues. NTIA's programs and policymaking focus largely on expanding broadband Internet access and adoption in America, expanding the use of spectrum by all users.

RUS (Rural Utilities Service) A division of the U.S. Department of Agriculture's Rural Development office that provides funding opportunities in the form of payments, grants, loans, and loan guarantees, for the development and commercialization of vital utility services, including increasing access to broadband and 21st century telecommunications services.

Satellite Satellite-delivered broadband services are offered across the United States by several companies to provide high-speed access to the Internet at broadband speeds. These satellite-based broadband services are available to customers with a clear view of the southern sky. Satellite Broadband Service providers include: Hughes, WildBlue, and StarBand.

Typical and Actual Speeds Refers to the typical or actual speed, not the advertised speed, of an Internet connection. The typical download or upload speeds that subscribers can achieve consistently during expected periods of heavy network usage are usually slower that the broadband network's unfettered maximum download or upload speed. Actual performance depends on a number of factors that may include your computer, network congestion due to other issues, and the location or your home or business, among others. In addition, different providers may use different methods or assumptions in estimating advertised speeds.

Underserved Area An area where basic broadband services may be available, but mitigating factors such as pricing, poor service quality, lack of competition, or high demand for better services would qualify the area as underserved.

Unserved Area An area where basic broadband services are not available to most of the area's population.

VoIP (Voice Over Internet Protocol) Technology that delivers voice and multimedia sessions over IP networks, such as the Internet.

WISP (Wireless ISP) An Internet service provider that provides fixed or mobile wireless services to its customers. Using Wi-Fi or proprietary wireless methods, WISPs provide last mile access, often in rural areas in and around smaller towns and cities.

Why Broadband Speed Matters

When residents and business representatives discuss broadband, or high-speed Internet access, they often do so in relationship to applications, or uses of broadband-enabled technologies. The following **"Speed Chart*"** illustrates the relationship between broadband speeds, the types of broadband providers who offer those speeds and the common applications each level of broadband can support.

Speed Chart: *Broadband Speeds, Service Types and Applications*			
Download Speeds	**Upload Speeds**	**Type of Service**	**Typical Applications**
≥768 Kbps but <1.5 Mbps	≥200 Kbps but <768 Kbps	Cable DSL Fiber Satellite Fixed Wireless Mobile Wireless	• Basic email • Web browsing • YouTube video • Basic VoIP
≥1.5 Mbps but <3 Mbps	≥768 Kbps but <1.5 Mbps	Cable DSL Fiber Satellite Fixed Wireless Mobile Wireless	• Streaming music • Standard definition (SD) video • Remote surveillance • Telecommuting
≥3 Mbps but <6 Mbps	≥768 Kbps but <1.5 Mbps	Cable DSL Fiber Fixed Wireless Mobile Wireless	• File sharing (small/medium files) • Enhanced Definition Digital Video • SD Internet Protocol TV
≥6 Mbps but <10 Mbps	≥1.5 Mbps but <3 Mbps	Cable DSL Fiber Fixed Wireless Mobile Wireless	• Gaming • Video on-demand • Streaming HD video content • Photo upload/download
≥10 Mbps but <25 Mbps	≥3 Mbps but <6 Mbps	Cable DSL Fiber Fixed Wireless Mobile Wireless	• Telemedicine • Remote education • High Definition (HD) IPTV • Two-way IP video calling
≥25 Mbps but <50 Mbps	≥6 Mbps but <10 Mbps	Cable DSL Fiber	• HD video surveillance • Advanced remote access to applications
≥50 Mbps but <100 Mbps	≥10 Mbps but <50 Mbps	Cable Fiber	• Video conferencing with multiple users • Remote supercomputing
≥100 Mbps but <1 Gbps	≥100 Mbps but <1 Gbps	Fiber	• Real-time data collection • Real-time medical image consulting
≥1 Gpbs	≥1 Gpbs	Fiber	• Advanced business operations

*Chart derived from information published by the California Broadband Task Force and the Missouri Broadband Planning Initiative, MO Broadband Now.

Broadband services provide many essential applications through the rapid transmission of voice, data, and video over a variety of platforms, including but not limited to DSL, Cable, Fiber, Mobile Wireless, Fixed Wireless and Satellite. The Speed Chart helps to illustrate not only the different levels of service capable from each technology, but also helps to provide a real world view point of what services will work smoothly at each level of service.

Another key measure of broadband is how quickly users can download content while online. This feature of broadband is based on how many *bits* of information can move per second. For example, Kbps, refers to "a thousand bits of information per second." Mbps is much faster, measuring a million bits per second. Faster broadband means less time waiting on a download to occur and opens up the possibility for more efficient use of time. Faster broadband also means new considerations of what you can accomplish online, creating an entrepreneurial environment for our future.

Speed Comparison Reference Table

Approximate time it takes to perform specific downloads at various speeds

Description	Digital Photo 2 MB file	Audio Track 4 MB file	30 Min TV Show 240 MB file	HD Movie 1.5 GB file
≤200 Kpbs	2 min	4 min	6:15 hr	39 hr
≥200 Kpbs but < 768 Kpbs	46 sec	1.33 min	2:20 hr	10 hr
≥768 Kpbs but < 1.5 Mpbs	23 sec	46 sec	47 min	5 hr
≥ 1.5 Mpbs but < 3 Mpbs	11 sec	23 sec	27 min	2:30 hr
≥ 3 Mpbs but < 6 Mpbs	6 sec	15 sec	13 min	1:45 hr
≥ 6 Mpbs but < 10 Mpbs	2 sec	4 sec	5 min	1 hr
≥ 10 Mpbs but < 25 Mpbs	.67 sec	1 sec	3 min	30 min
≥ 25 Mpbs but < 50 Mpbs	.67 sec	1 sec	1.1 min	7 min
≥ 50 Mpbs but < 100 Mpbs	.67 sec	.67 sec	42 sec	4 min
≥ 100 Mpbs but < 1 Gpbs	.67 sec	.67 sec	4 sec	1 min
≥ 1 Gbps	.67 sec	.67 sec	2 sec	20 sec

*Chart derived from information published by the Missouri Broadband Planning Initiative, MO Broadband Now.

In some households, broadband capacity is also an issue. Even though a house may have adequate broadband speeds, the network can become strained because of the number of devices, users, or applications simultaneously operating. Use the chart below to compare minimum download speed (Mbps) needs for light, moderate and high household use with one, two, three, or four devices at a time (such as a laptop, tablet or game console).

Key: Basic= 1 to 2 Mbps; Medium=6 to 15 Mbps; Advanced=More than 15 Mbps

	Light Use (Basic functions only: email, web surfing, basic streaming video)	Moderate Use (Basic functions, plus *one* high-demand application: streaming HD, video conferencing, OR online gaming)	High Use (Basic functions plus *more than one* high demand application running at the same time)
1 user on 1 device (e.g., laptop, tablet, or game console)	Basic	Basic	Medium
2 users or devices at a time	Basic	Basic	Medium/Advanced
3 users or devices at a time	Basic	Basic/Medium	Advanced
4 users or devices at a time	Basic/Medium	Medium	Advanced

*Chart derived from FCC Household Broadband Guide: http://fcc.gov/guides/household-broadband-guide

Broadband Maps and Data

The Utah Broadband Project collects data on the availability, speed, technology and coverage areas for residential and commercial broadband services. The Project's mapping team works directly with Utah broadband providers to ensure data quality.

The Project also collects information about the broadband services utilized by community anchor institutions, including schools, libraries, public safety buildings, government buildings, etc.

The purpose of gathering this data is to connect with broadband providers, identify unserved or underserved broadband areas, support broadband planning and policy, research broadband trends, and to support stakeholders from various sectors. The mapping data can be used for visual and geographic analysis, and also to create maps to support broadband-related initiatives.

Currently, the Project updates the mapping data on a 6 month cycle with releases in April and October. Our team works directly with broadband providers to gather data on speeds, availability, and coverage. The Mapping Team has a data processing system to validate all of the broadband mapping data, and works to verify the data is accurate, which includes asking the data sources to verify accuracy.

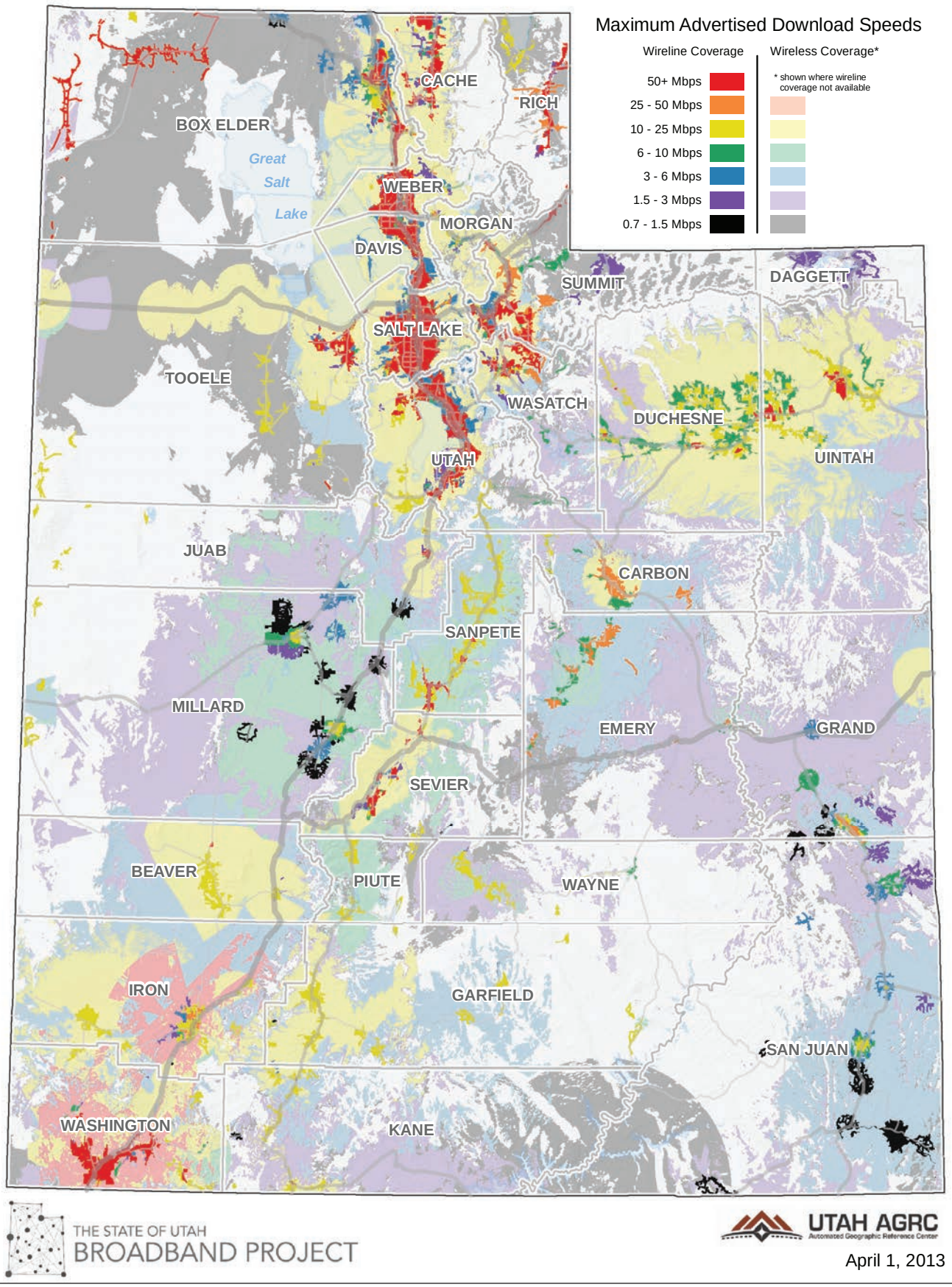
There are various ways to access maps and the mapping data for regional planning purposes. The statewide interactive broadband map (http://broadband.utah.gov/map/) is a great way to explore the data and has many built in filters to explore speed ranges, technologies, and individual provider coverage footprints. Other ways to access maps and data include:

- Static broadband maps that are updated at least every 6 months: http://broadband.utah.gov/about/about-the-interactive-map/mapresources/
- View our "Map of the Month" series, which is published monthly on the project blog: http://broadband.utah.gov/about/blog/
- For those with GIS capabilities, the data is available for download: http://gis.utah.gov/data/utilities/broadband-internet/
- For those without GIS capabilities, KMZ files, which are viewable in Google Earth, are available on request.
- Metrics on household units covered by varying levels of broadband service are available here: http://tinyurl.com/mwbr9ut. *Note that the different sheets at the bottom of the page reflect different topic areas of focus, and include a methodology sheet.*

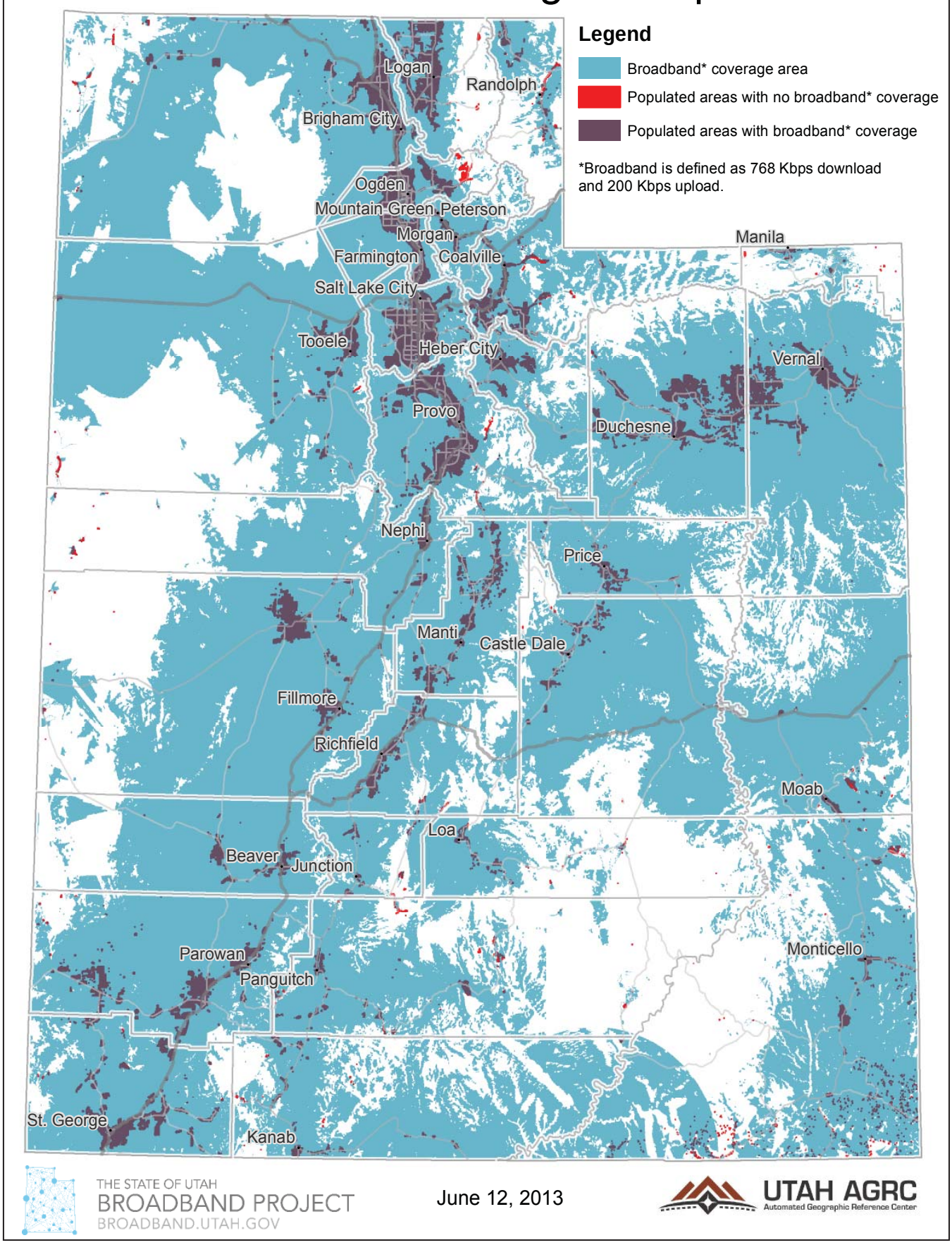
Custom map requests: The Project's Mapping Team is available to work with broadband stakeholders to create custom maps for the purposes of the Regional Broadband Planning Councils. For data and map requests, beyond what is available online, or for further information, contact Jessie Pechmann, the Project's Mapping Coordinator, at jpechmann@utah.gov or (801) 538-3037.

The following pages of maps are examples of static broadband maps and "Maps of the Month" that are available on our website.

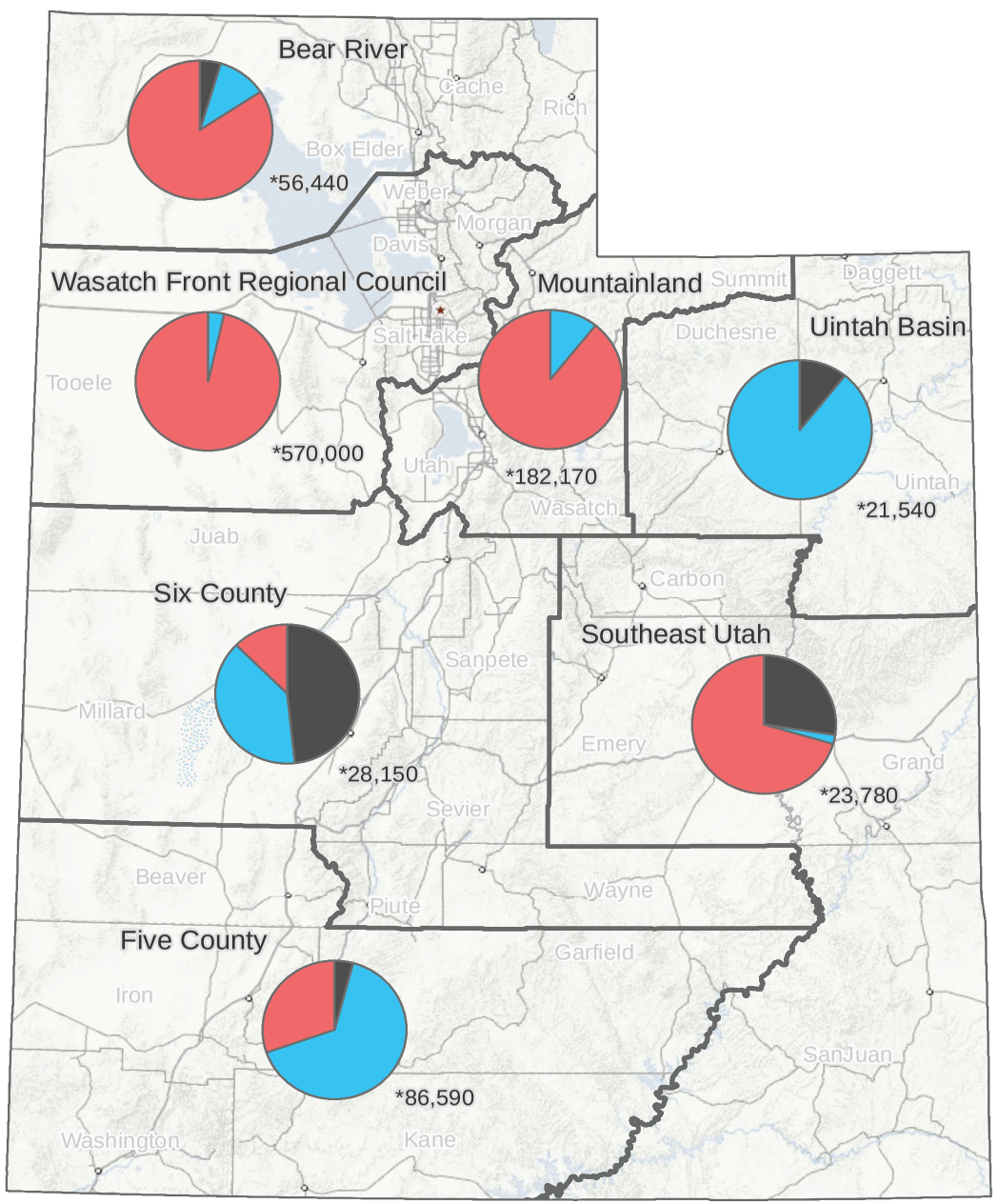
Consumer Broadband Availability by Speed



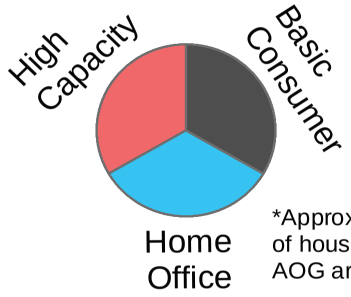
Utah Broadband Coverage & Population



Highest Broadband Service Level for Housing Units, By Utah AOG Area (Spring 2013)



The pie charts on the map show the highest of three broadband service levels available to housing units within each regional Association of Government (AOG) area.



*Approximate number of housing units within AOG area (2010 Census)

High Capacity

Availability of at least 25 Mbps download and 10 Mbps upload. These speeds allow for broadband internet needed for residential and small businesses with high volume data usage.

Home Office/Education Broadband

Residential availability of at least 10 Mbps download and 3 Mbps upload. Allows for basic functionality, plus video streaming and photo upload and download.

Basic Consumer Broadband

Residential availability of at least 3 Mbps download and 768 Kbps upload. Allows for basic broadband internet functionality, such as browsing webpages and checking email.

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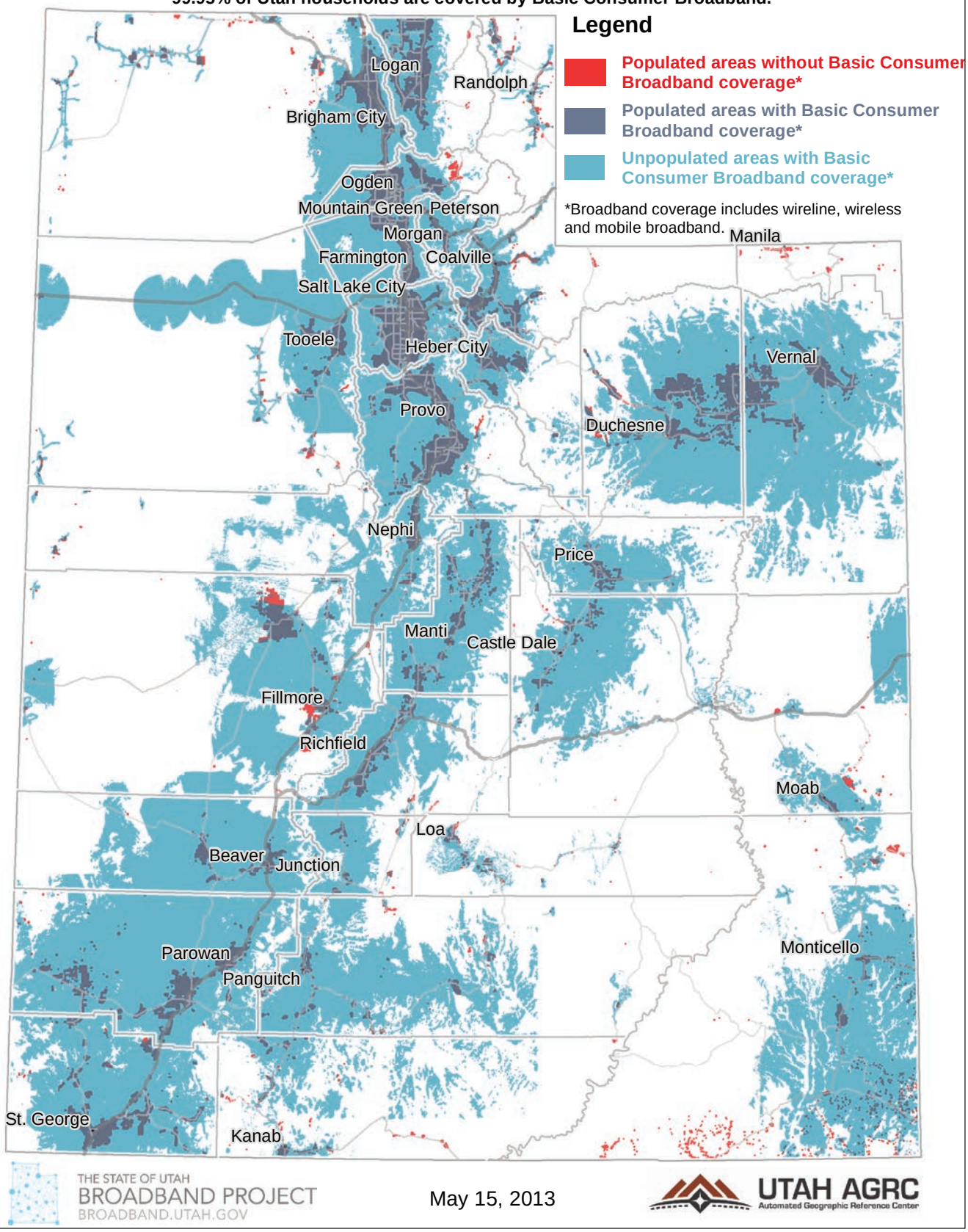
UTAH AGRC Automated Geographic Reference Center

Basic Consumer Broadband

Basic Consumer Broadband is defined by residential availability of at least 3 Mbps download and 768 Kbps upload. Allows for basic broadband internet functionality, such as browsing webpages and checking email.

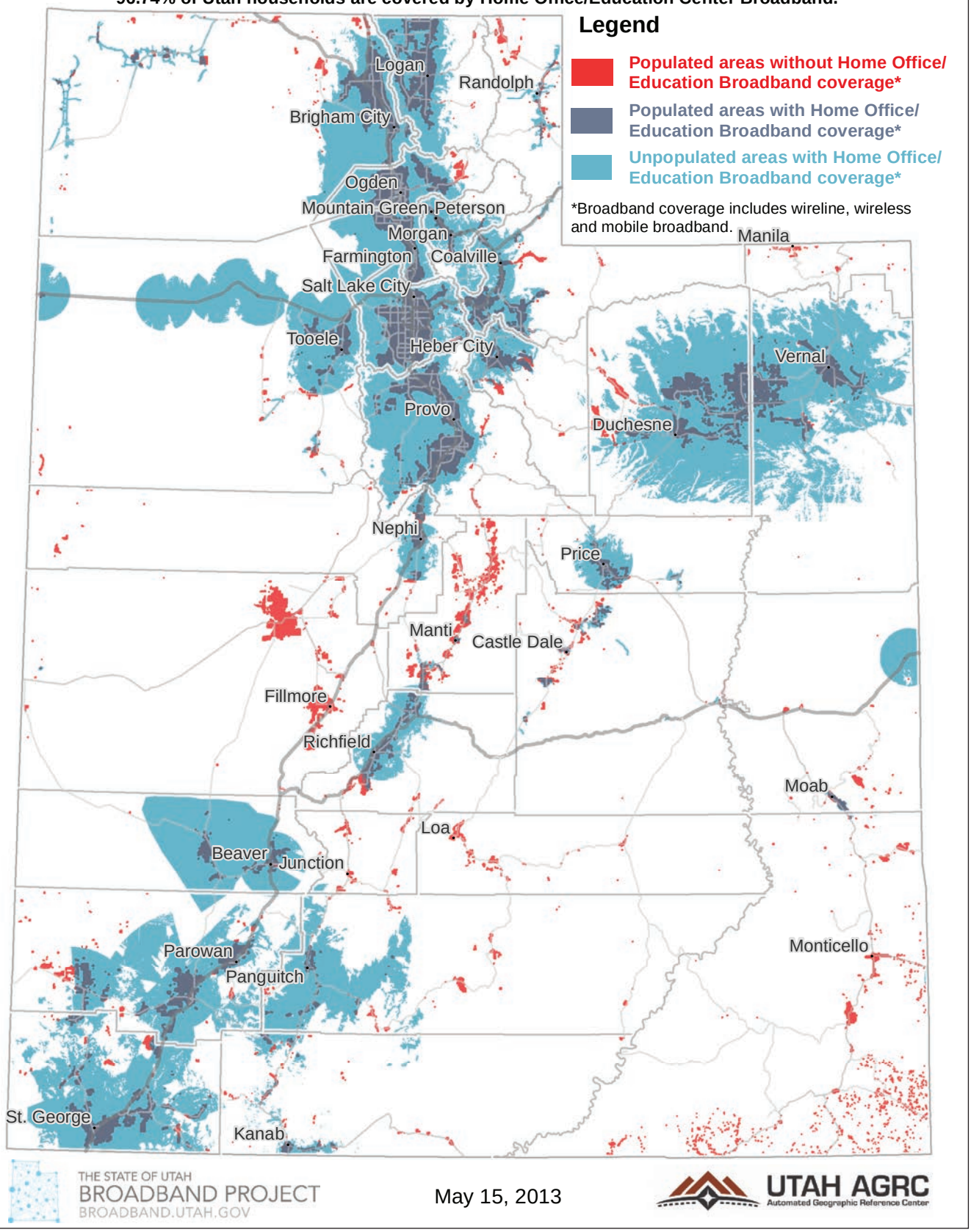
99.95% of Utah households are covered by Basic Consumer Broadband.



Home Office/Education Broadband

Home Office/Education Broadband is defined by residential availability of at least 10 Mbps download and 3 Mbps upload. Allows for basic functionality, plus video streaming and photo upload and download.

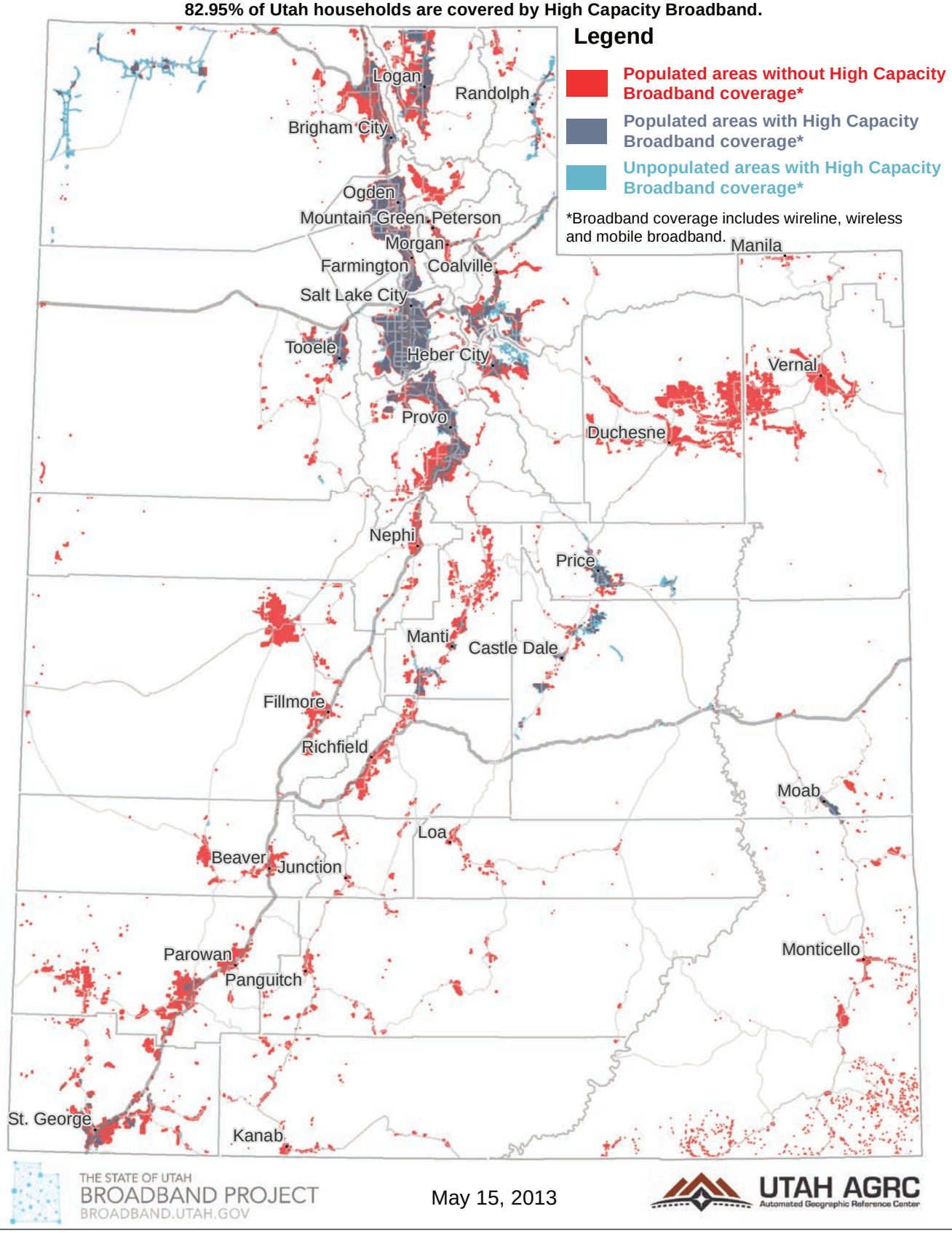
96.74% of Utah households are covered by Home Office/Education Center Broadband.



High Capacity Broadband

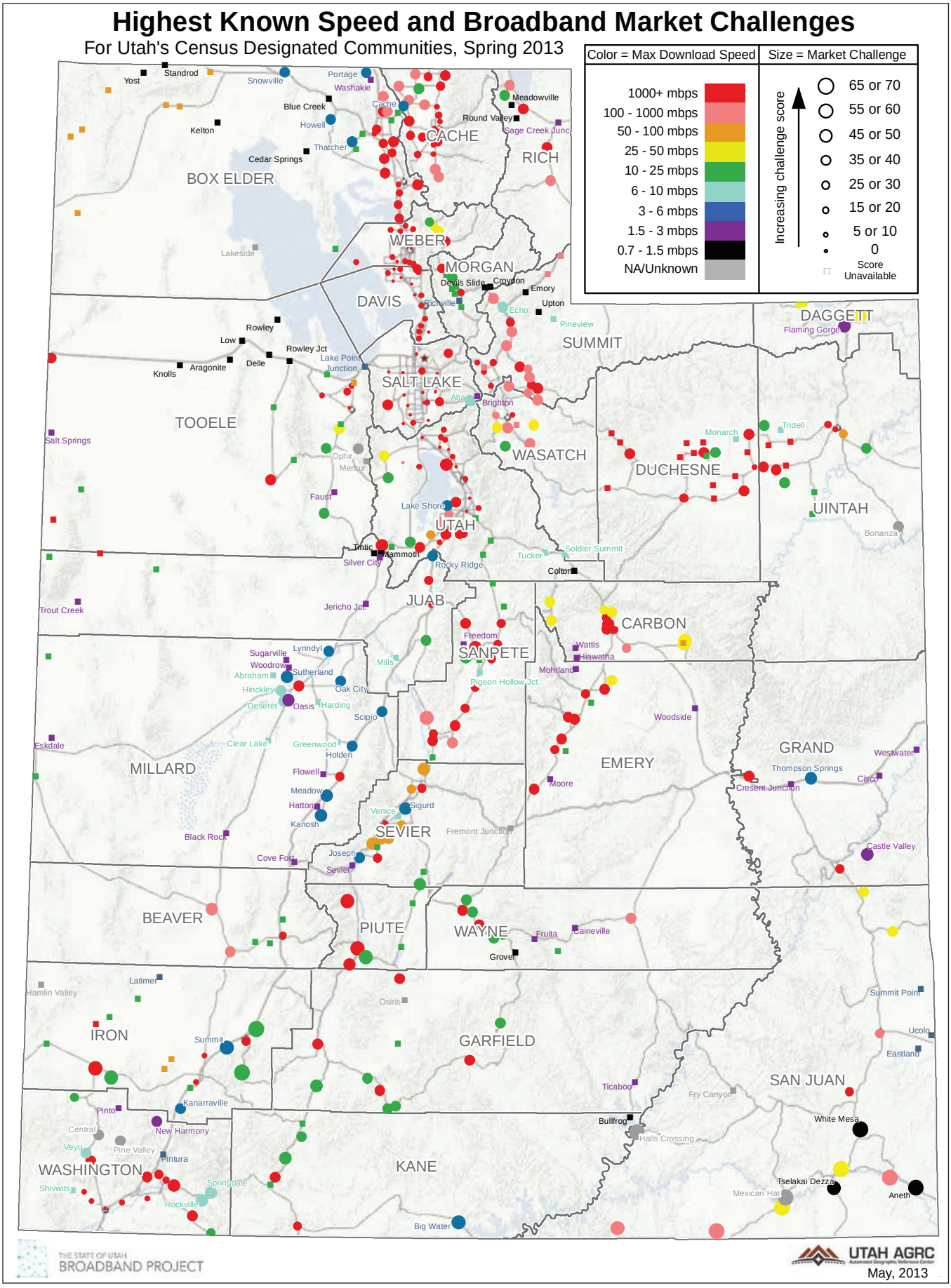
High Capacity is defined by residential availability of at least 25 Mbps download and 10 Mbps upload. These speeds allow for residential and small businesses with high volume usage.

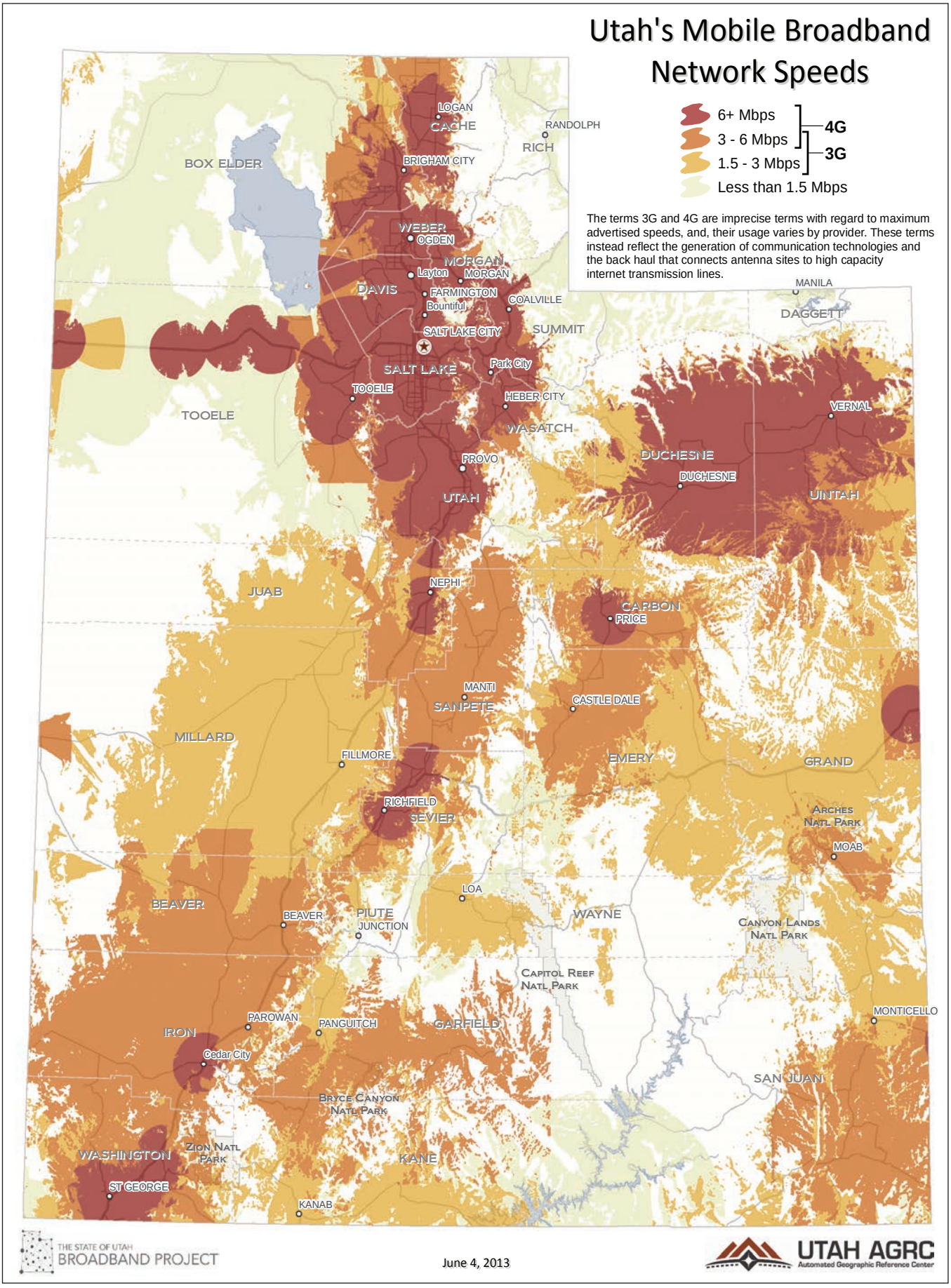
82.95% of Utah households are covered by High Capacity Broadband.



Highest Known Speed and Broadband Market Challenges

For Utah's Census Designated Communities, Spring 2013




Utah's Mobile Broadband Network Speeds
6+ Mbps
3 - 6 Mbps
1.5 - 3 Mbps
Less than 1.5 Mbps
4G
3G
The terms 3G and 4G are imprecise terms with regard to maximum advertised speeds, and, their usage varies by provider. These terms instead reflect the generation of communication technologies and the back haul that connects antenna sites to high capacity internet transmission lines.
LOGAN
CACHE
RANDOLPH
RICH
BOX ELDER
BRIGHAM CITY
WEBER
OGDEN
MORGAN
Layton
MORGAN
DAVIS
FARMINGTON
Bountiful
COALVILLE
MANILA
DAGGETT
SALT LAKE CITY
SUMMIT
SALT LAKE
Park City
TOOELE
HEBER CITY
TOOELE
VERNAL
WASATCH
DUCHESNE
PROVO
DUCHESNE
UTAH
UINTAH
NEPHI
JUAB
CARBON
PRICE
MANTI
SANPETE
CASTLE DALE
MILLARD
FILLMORE
EMERY
GRAND
RICHFIELD
SEVIER
ARCHES NATL PARK
MOAB
LOA
BEAVER
BEAVER
PIUTE
JUNCTION
WAYNE
CANYON LANDS NATL PARK
CAPITOL REEF NATL PARK
MONTICELLO
PAROWAN
PANGUITCH
GARFIELD
IRON
Cedar City
SAN JUAN
BRYCE CANYON NATL PARK
WASHINGTON
ZION NATL PARK
KANE
ST GEORGE
KANAB
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June 4, 2013
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Utah Broadband Adoption Survey (2011)

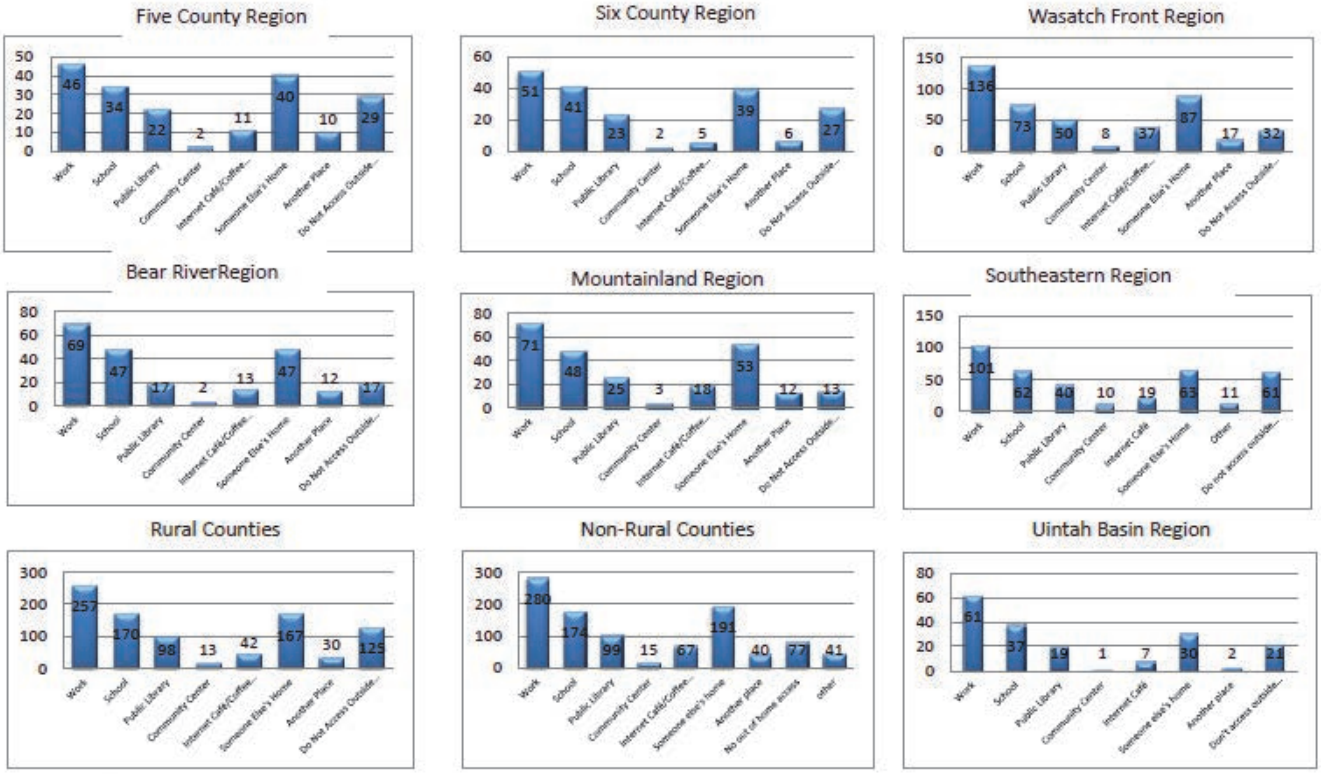
In 2011, the Utah Broadband Project commissioned a survey and report through the Center for Public Lands and Rural Economics at Utah State University and Southern Utah University. The Report surveyed the level of broadband penetration in Utah through interviews conducted with 900 respondents in October 2011. Thirty-two percent of respondents were contacted on mobile phones and the reminder on land line telephones. An oversampling of rural areas was used, limiting responses from urban counties to no more than half of the sample.

Initially, the researchers assumed that there was a residential broadband gap between rural and non-rural Utah. That is, broadband had lower use rates in rural Utah. However, according to the survey results they found that there is no rural/non-rural gap. Despite geographic and demographic differences, rural Utahns have comparable access to and use of broadband service. The researchers also tested a number of hypotheses related to broadband access in rural vs. urban areas. The results of these tests are detailed in the summary table below.

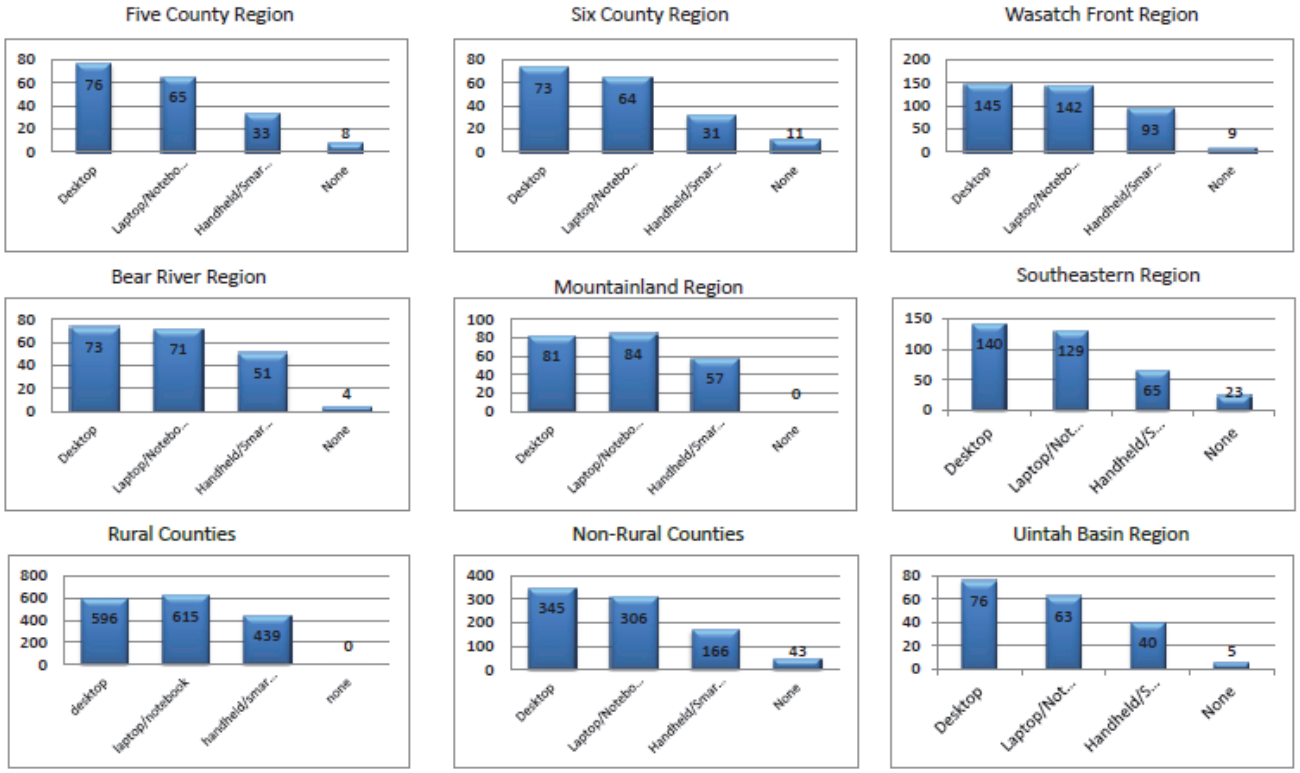
Hypothesis	Confirmed
H1. Utah's rural communities will have lower broadband adoption rates than their non-rural counterparts.	No
H2. Respondents in Utah's rural communities will identify fewer broadband internet options in their communities than their non-rural counterparts.	Mixed
H3. Utah's rural communities will report higher prices for internet service than their non-rural counterparts.	No
H4. Respondents in Utah's rural communities will express a lower willingness to pay for broadband speed internet than their non-rural counterparts.	No
H5. Rural Communities in Utah will have exhibit substantially different demographic profiles than their urban counter-parts on: *Age* *Employment Status* *Education Level* *Access to Technology*	Yes
H6. Rural Communities will exhibit a lower probability of broadband adoption than their non-rural counterparts.	No

The following pages of graphs summarize a number of survey results detailed in the Report. The graphs allow for instant comparisons between rural, non-rural, and Association of Government regions.

Do you or any member of your household access the internet at any of the following locations outside the home?

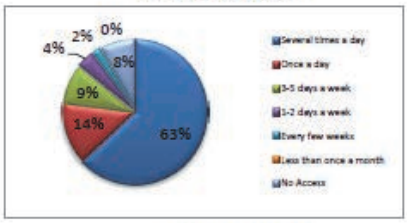


At home, do you or any member of your household own or use any of the following computers?

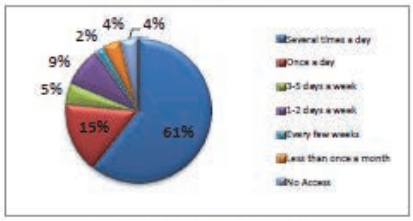


About how often do you access the internet?

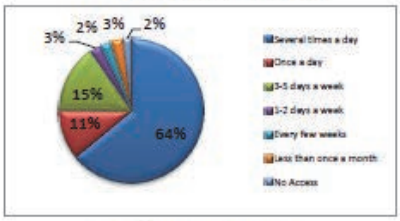
Five County Region



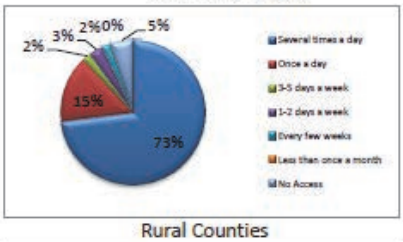
Six County Region



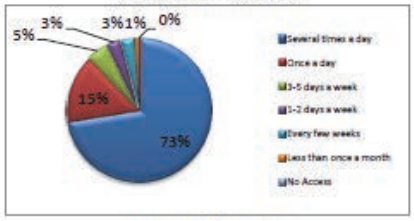
Wasatch Front Region



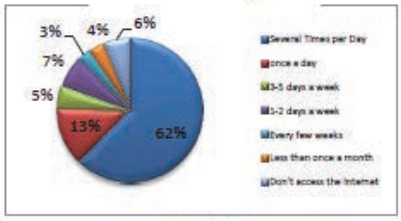
Bear River Region



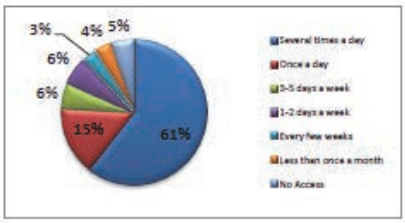
Mountainland Region



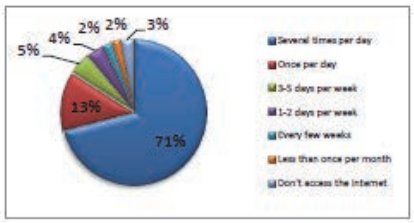
Southeastern Region



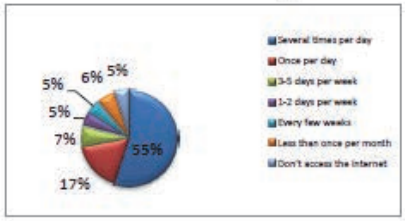
Rural Counties



Non-Rural Counties

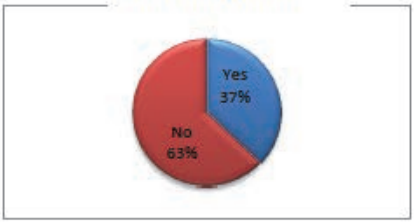


Uintah Basin Region

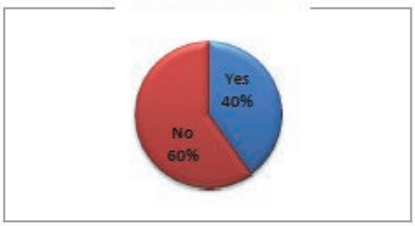


Do you know how many providers of high-speed internet service are in your area?

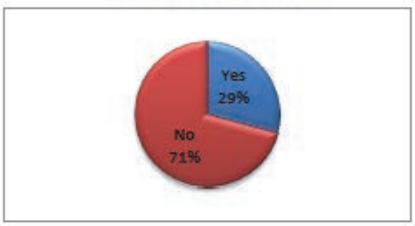
Five County Region



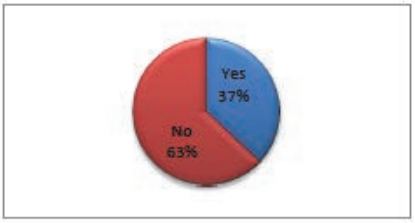
Six County Region



Wasatch Front Region

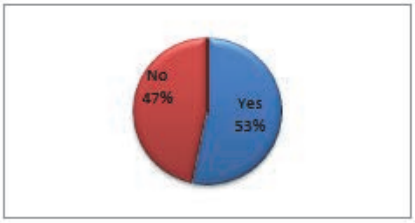


Bear River Region

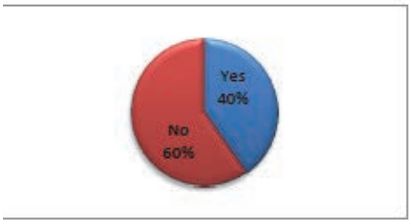


Mountainland Region

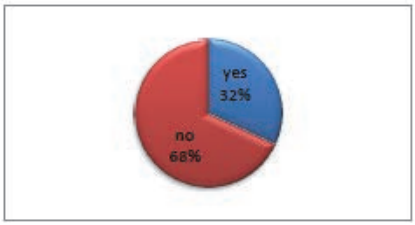
Southeastern Region



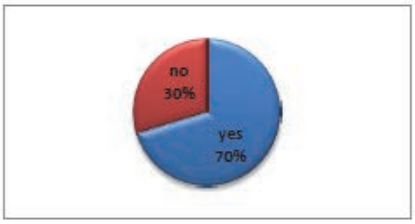
Rural Counties



Non-Rural Counties

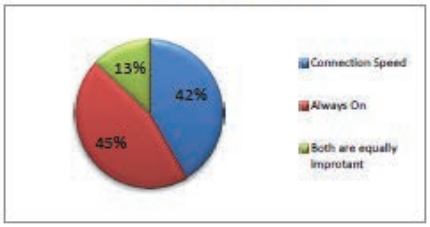


Uintah Basin Region

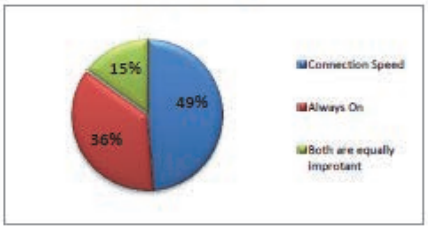


Which would you say matters more to you with respect to your home broadband connection?

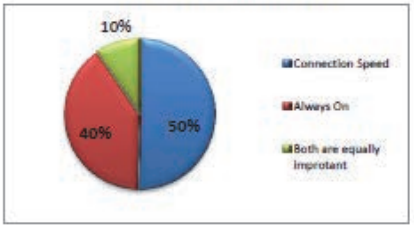
Five County Region



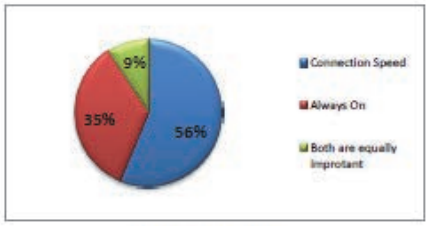
Six County Region



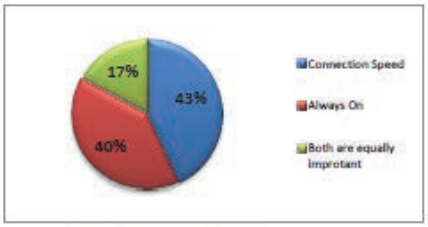
Wasatch Front Region



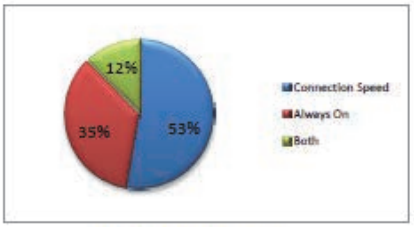
Bear River Region



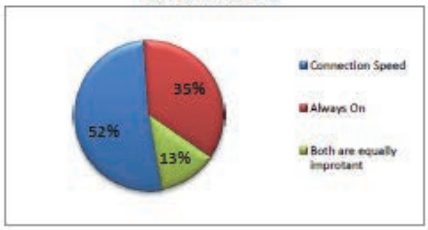
Mountainland Region



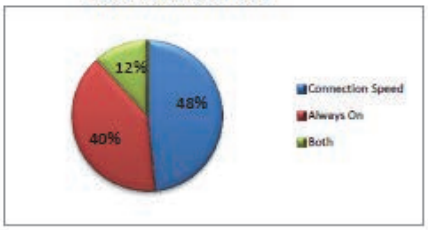
Southeastern Region



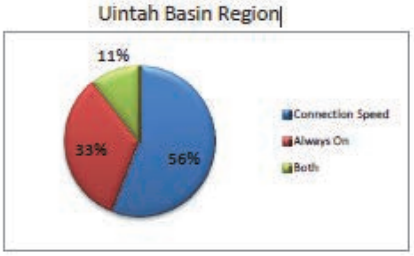
Rural Counties



Non-Rural Counties

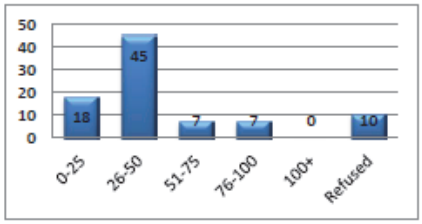


Uintah Basin Region

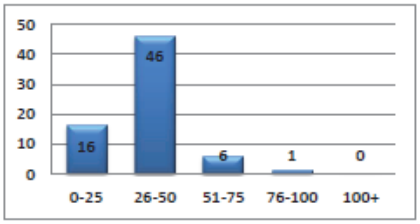


To the nearest dollar, how much per month do you pay for internet service?

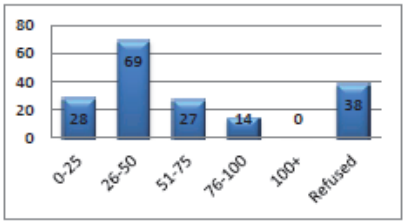
Five County Region



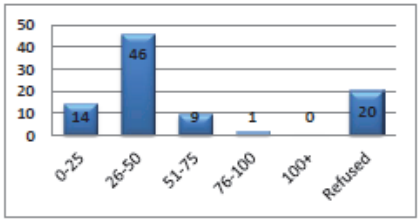
Six County Region



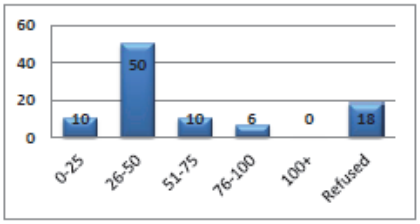
Wasatch Front Region



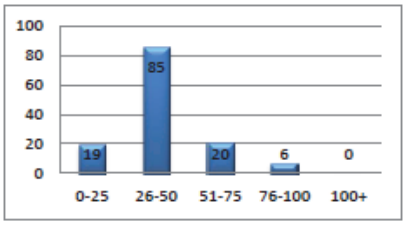
Bear River Region



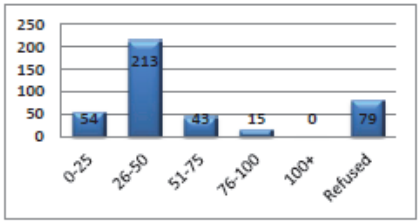
Mountainland Region



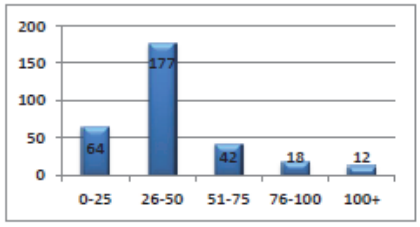
Southeastern Region



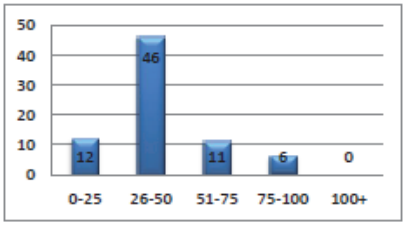
Rural Counties



Non-Rural Counties

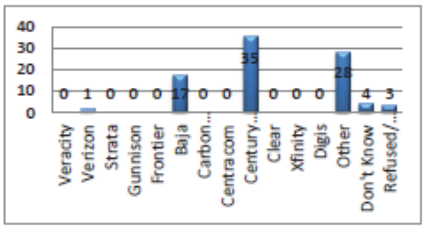


Uintah Basin Region

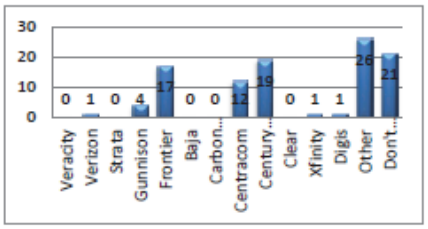


Thinking about your internet service at home, which company provides that service?

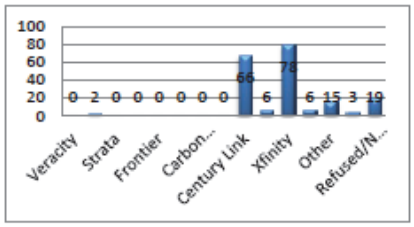
Five County Region



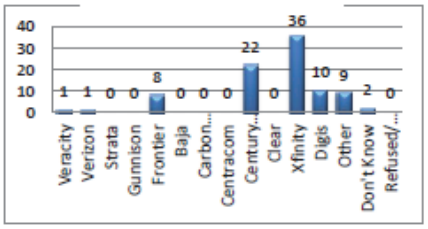
Six County Region



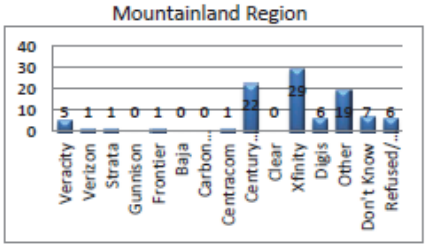
Wasatch Front Region



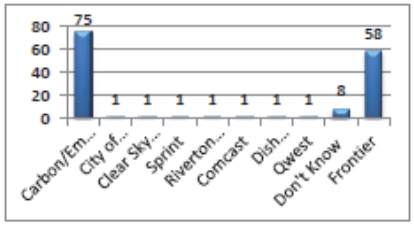
Bear River Region



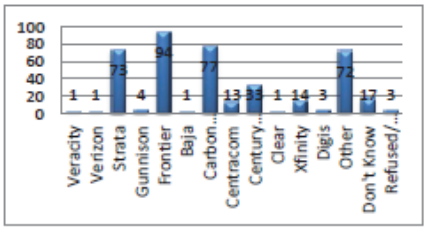
Mountainland Region



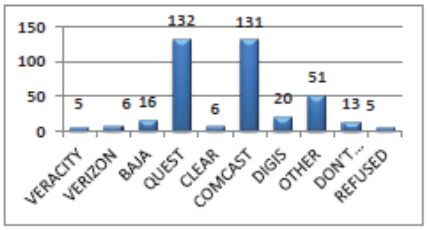
Southeastern Region



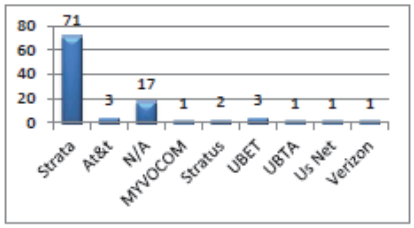
Rural Counties



Non-Rural Counties

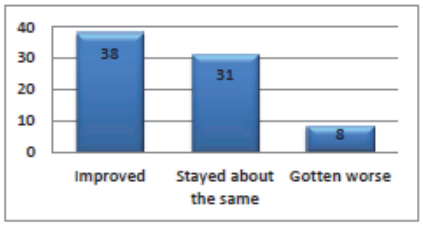


Uintah Basin Region

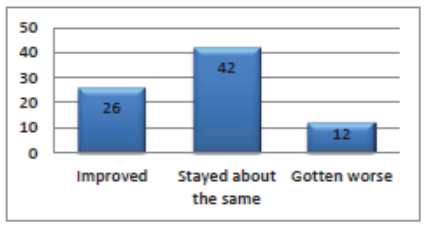


Since you first got high-speed internet at home would you say the quality of your high-speed connection has:

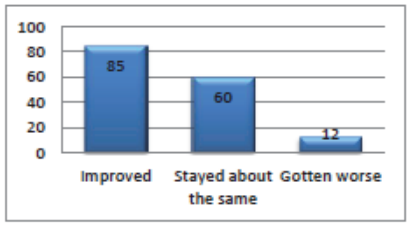
Five County Region



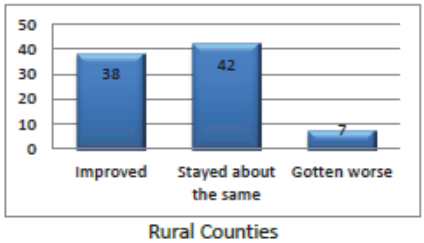
Six County Region



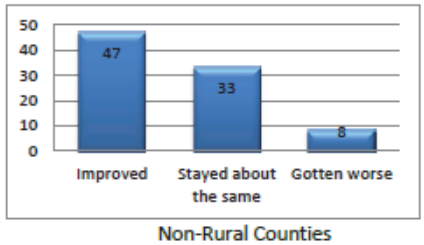
Wasatch Front Region



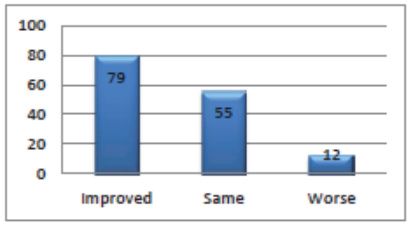
Bear River Region



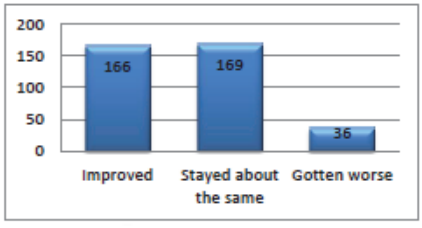
Mountainland Region



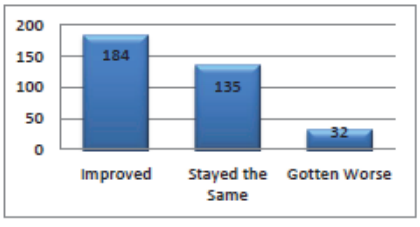
Southeastern Region



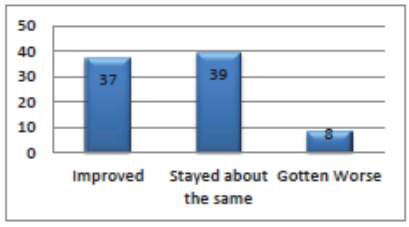
Rural Counties



Non-Rural Counties

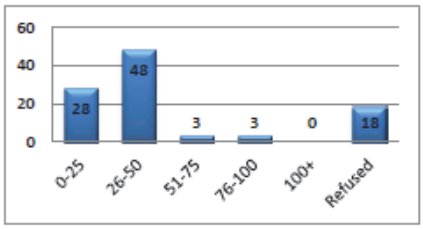


Uintah Basin Region

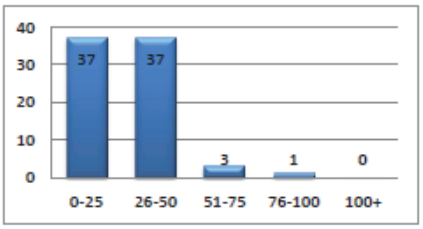


What do you think a reasonable price for high-speed internet would be?

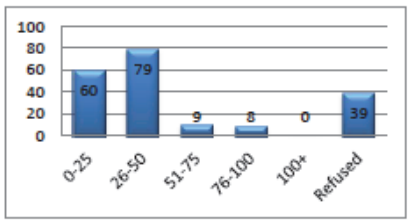
Five County Region



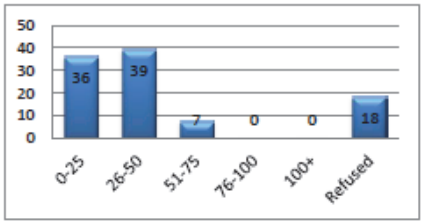
Six County Region



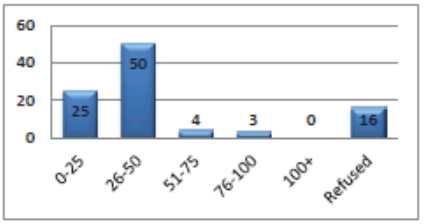
Wasatch Front Region



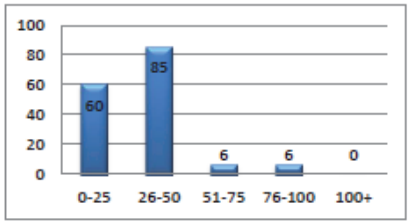
Bear River Region



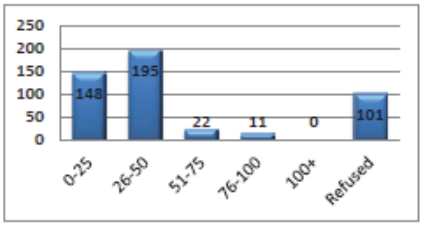
Mountainland Region



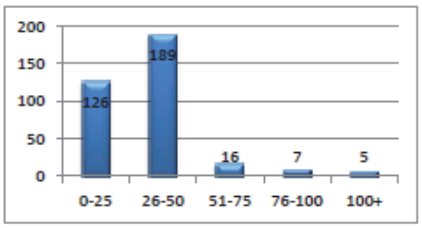
Southeastern Region



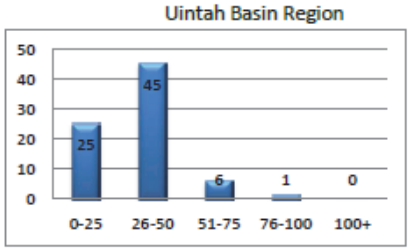
Rural Counties



Non-Rural Counties

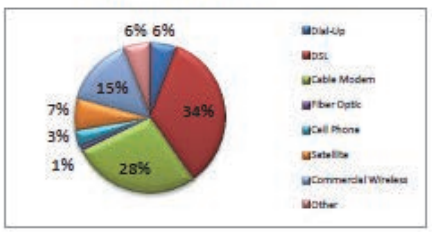


Uintah Basin Region

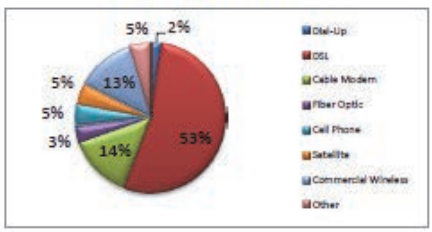


At home do you access the internet using:

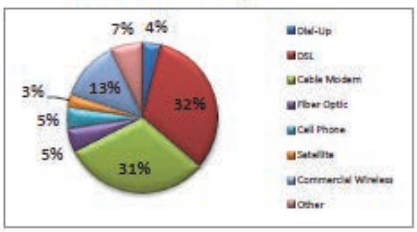
Five County Region



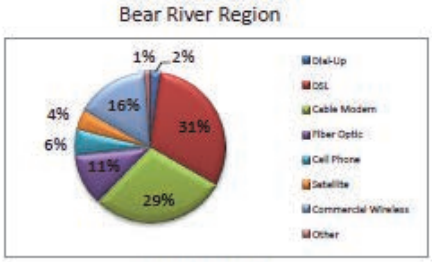
Six County Region



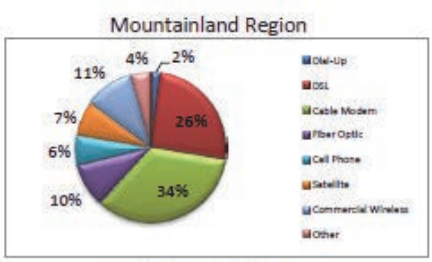
Wasatch Front Region



Bear River Region



Mountainland Region



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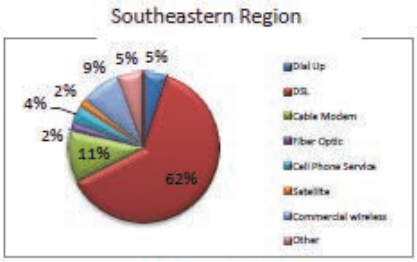
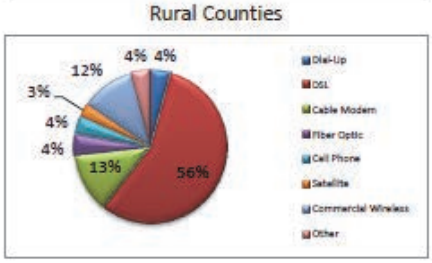
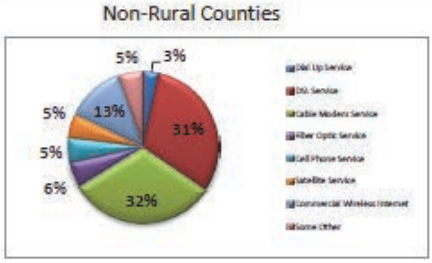


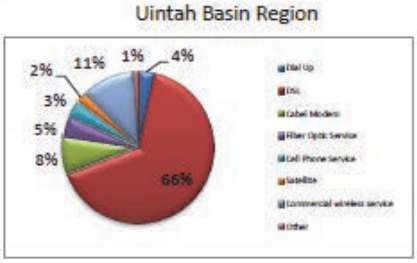
Rural Counties



Non-Rural Counties



Uintah Basin Region



Utah Broadband Advisory Council

The Utah Broadband Advisory Council was formed in 2011 and convenes regularly to discuss the status of broadband adoption and deployment in the State of Utah. Council members represent a diverse group of interests including economic development, State and local government, broadband providers, legislators, technology-related businesses, health care, education, libraries, public safety, and tribal entities.

The Utah Broadband Advisory Council Report, released June 19, 2012, summarizes the discussions, findings, and accomplishments of the Council during its first year and intends to provide Governor Gary R. Herbert, the Utah State Legislature, and other interested parties an overview of the Council's recommendations and policy guidance. The Report details the programs and organizations that have made Utah a leader in broadband adoption and deployment and highlights the recommendations made by the Council to continue coordinating efforts to expand broadband access and use. *The following is a summary of the recommendations of the Report, organized into specific categories affected by broadband policies:*

Scan on your smartphone to view the report online

Education

- Support UEN efforts and promote the continued aggregation of discounted funding for broadband services to schools, libraries and State offices, which is vital for connectivity in rural and low-income communities.
- Complete broadband service to all K-12 public and charter schools.

Libraries

- Educate librarians about the benefits of using broadband technologies.
- The State Library should work with libraries to address local needs for broadband access, technology planning, and computer usage.

Economic Development

- Meet with local economic developers to collaborate on strategies to improve local broadband planning efforts.
- Improve outreach to small businesses, particularly in rural areas, to promote broadband use and digital literacy.

Public Safety

- Advise and coordinate State involvement in the Nationwide Public Safety Broadband Network (NPSBN) and FirstNet.
- Support a transition from the current voice-based 9-1-1 system to a standardized IP-based system.

Health Care

- Encourage FCC adoption of permanent rules and funding based on the success of the pilot program.
- Collaborate as health care delivery expands to non-traditional places such as homes, schools, and the workplace.

Transportation

- Support and promote the continuation of the UDOT fiber partnership and trade model.
- Improve coordination with cities/counties and encourage them to lay conduit during road construction projects.

Rural Broadband Access

- Encourage a technology-neutral approach to telecommunications legislation and support uniform urban and rural speed goals for broadband availability.
- Make recommendations for changes to the State USF fund to support broadband deployment.

Tribal Broadband Access

- Increase coordination and collaboration by encouraging tribal representatives to participate in the Council.
- Work with tribal representatives to develop strategies to improve broadband access and availability.

Broadband Providers Serving Utah

Partnering with broadband providers who serve Utah is a priority for the Utah Broadband Project. To all those providers who have willingly participated in and submitted data to the Project, thank you. To learn more about the services they each offer, please visit their individual websites. Below is a list of broadband providers currently working with the Project.

Resources, Tools and Guides

Notes

UTAH REGIONAL BROADBAND PLANNING COUNCILS

Project Resources

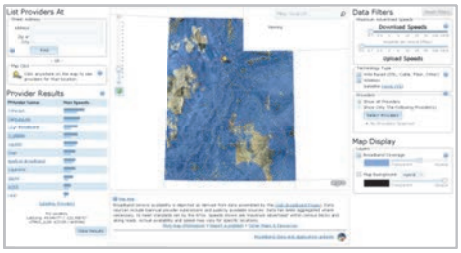
The Utah Broadband Project Website

The Utah Broadband Project website provides residents, broadband service providers, government officials, business leaders and other stakeholders with the latest news and resources about broadband in Utah. The Utah Broadband Map, Project blog, events calendar and social media feeds can all be accessed from the homepage where users can also subscribe to the Project's monthly newsletter, take a speed test, and access information about the Utah Broadband Advisory Council.

Regional Broadband Planning Councils Section

The Utah Broadband Project website contains a Regional Planning section at broadband.utah.gov/resources/regional-planning is dedicated to providing resources for each of Utah's seven Regional Broadband Planning Councils. This section will include this toolkit, meeting information, sample materials and other resources to assist the Planning Councils. The Planning Councils may choose to participate in creating content for this portion of the website and use it as a portal to share information with each other and with the public. Project staff will also continually update and monitor this section throughout the planning process.

Interactive Broadband Map



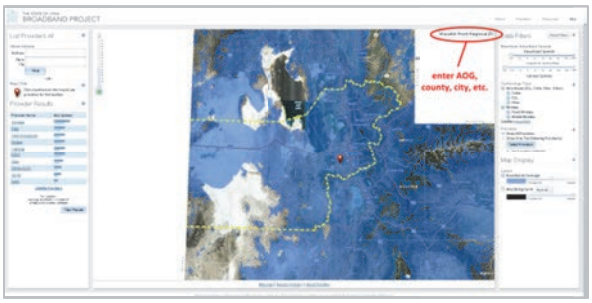
The Utah Broadband Project has established partnerships with broadband providers across the state to map their service areas and help them plan for future needs. The Project Team collects data on the availability, speed, technology and coverage areas for residential and commercial broadband services and works directly with Utah broadband providers to ensure data quality. This data is displayed on the interactive Utah Broadband Map, which can be accessed at broadband.utah.gov/map. The Project updates the mapping data on a 6-month cycle with releases in April and October. The team has a data processing system to validate all of the broadband mapping data, and works to verify the data is accurate, which includes asking the data sources to verify accuracy.

The Project also collects information about the broadband availability at community anchor institutions. Community anchor institutions include schools, libraries, public safety buildings, government buildings, etc.

The purpose of the data collection is to connect with broadband providers, identify areas unserved or underserved by broadband internet, support broadband planning and policy, research broadband trends, and to support stakeholders from various sectors. The mapping data can be used for visual and geographic analysis, and also to create maps to support broadband related initiatives.

The Utah Broadband Map allows users to view residential broadband service availability and filter the map by maximum advertised download and upload speeds, wire-based or wireless technologies, and view data from individual providers. These search functions can be combined to create custom map views and once an online map is created, the URL will retain the information for that specific search, enabling users to send links to customized map views.

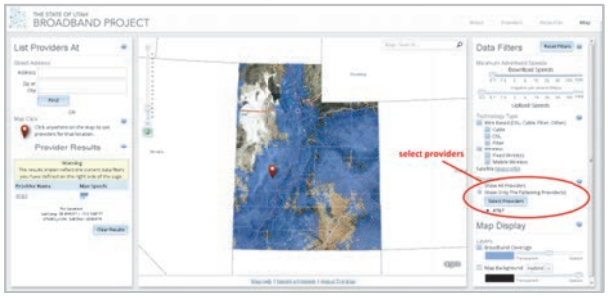
Association of Governments Search – Understanding broadband availability in specific areas of the state will be vital to the Regional Broadband Planning Teams. The map can be searched by AOG as well as other boundaries including counties, cities, and legislative districts.



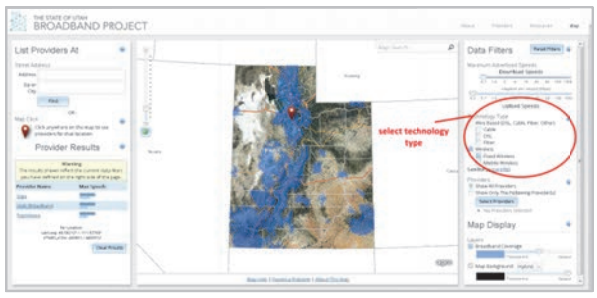
Address Search – To search for broadband availability for a specific address, enter the address in the top left-hand side of the map. The map will locate and mark the address and will mask the area with a blue filter showing available coverage. All available providers, ranked according to maximum advertised speed, will appear on the bottom left-hand section of the map.

Download/Upload Speeds – Using the sliding filters on the top right-hand side of the map, upload and download speeds can be adjusted to the user's preference. The blue filter will adjust to show the covered area and the list of providers on the bottom left-hand side will also be updated.

Providers – The map allows users to view the overall coverage areas of specific providers. By clicking on the '"select providers" button on the right side of the map, a menu of providers will appear and users can select one or multiple providers. The blue filter will adjust to show the overall coverage area of the providers selected.



Technology Type – The online map also gives users the ability to filter coverage areas by a single technology type or by a combination of technology types (cable, DSL, Fiber, mobile wireless, fixed wireless) by checking the appropriate boxes on the right-hand side of the map.



In the fall of 2013, the Project Team plans to launch the second phase of the Utah Broadband Map, which will incorporate speed test data, high capacity broadband availability and community anchor institution speed data. The Project Team also works with stakeholders on an individual basis to create custom maps utilizing data collected from broadband service providers.

Other Mapping Resources

In addition to the Utah Broadband Map, other mapping resources are available to assist Regional Broadband Planning Councils in understanding the broadband landscape in their areas. The Utah Broadband Project website features a Maps and Data section, which can be accessed from the Resources tab on the homepage or at broadband.utah.gov/maps-and-data. This section contains static broadband maps, raw data, and metrics on housing units covered by varying levels of broadband service.

Broadband Speed Test

The broadband speed test is an important feature of the Utah Broadband Project website because gathering actual speeds experienced by residents allows the Project Team to verify the accuracy of broadband data. Broadband providers often advertise both downstream and upstream speeds as "up to" speeds. In other words, a provider will advertise speeds "up to" 4 Mbps in the downstream direction and "up to" 1 Mbps in the upstream direction. However, in reality, the actual speeds offered on the network may be significantly less than the advertised "up to" speeds.

Many broadband networks deployed today utilize a shared bandwidth design where customers share the total available bandwidth on the network. This offers fast speeds to large areas while minimizing the amount of infrastructure needed and thereby reducing the cost of deployment. In many cases this design provides speeds sufficient for most subscribers' needs that are well within the definition of broadband. However, the actual speeds will most often be lower than the advertised speeds because of the shared bandwidth design and in some cases they will fall below the threshold stipulated for broadband.

An example of this is, if a network has a total available bandwidth equating to a download speed of 10 Mbps and one person is accessing the network, they will realize speeds at or near 10 Mbps. However, if 10 people are accessing the same network at the same time, they will divide the available network bandwidth among them. Although the actual results will vary, based on the level of utilization of bandwidth by each of the users, for purposes of this example, the result would be approximately 1 Mbps available to each of the 10 people accessing the network. In this example we assume all 10 users are accessing significant amounts of bandwidth as may be required to download music, video and large files or that may be required to watch live video. In reality, all 10 users will likely be utilizing differing levels of bandwidth at any given time. This

phenomenon makes it difficult to evaluate advertised speeds within a given system, between systems and throughout the State and beyond.

This is why performance of speed tests, such as those being performed on the Utah Broadband Project website, are so important. They allow a clearer picture of the speeds actually available to the residents. Because these tests will be performed at various times of the day, they will provide a good representation of the actual speeds as compared to the "up to" speeds advertised by the providers. In addition, because speed tests are performed all throughout the State, country and the world, these tests will provide a benchmark for comparing the state of broadband throughout Utah against other states and throughout the world.

Broadband Impacts on Regional Sectors Fact Sheets

Many industries in Utah rely not only on broadband infrastructure, but also on the knowledge and tools to leverage that infrastructure. To assist Regional Broadband Planning Councils in identifying and supporting key industries that are heavily reliant on broadband infrastructure, the Project Team has created industry specific fact sheets to use when meeting with industry leaders. The fact sheets include information on the benefits of broadband and are designed to help industry leaders evaluate how to use broadband more effectively. The toolkit contains fact sheets for the following industries:

- Agriculture
- Economic Development
- Energy and the Environment
- Healthcare
- Higher Education
- Libraries
- Residential Internet Service
- Local Government
- Public Safety
- Public Education
- Small Business
- Tourism

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Transforming Agriculture

High-speed Internet connectivity, or broadband, has the potential to transform the agricultural industry in Utah, including:

- Providing an effective, low cost tool for farmers to market their products and reach new customers, selling directly to consumers or niche markets;
- Reducing costs to farms and food processors to help increase their competitiveness;
- Enabling essential fast Internet access as the number of local distributors of seed, fertilizer, equipment and the like decline -- a digital picture of a broken part can save money and time in repairs;
- Providing farmers with access to business tools and other applications from around the world to run their farms more efficiently;
- Enabling access to cloud computing to help better handle aspects from managing inventory to monitoring chemical applications or tracking markets;
- Providing services that are essential to successfully manage a farm, market products and to communicate with suppliers, customers and markets around the world.

Questions to Consider About the Agricultural Industry and Broadband

1. Are the right tools in place for the agricultural industry to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's agricultural industry?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in agri-business?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the agricultural workforce to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for effective agricultural applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

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In the first objective of Governor Gary R. Herbert's Economic Development Plan, he set a statewide goal to "increase business opportunities in Rural Utah by identifying unserved and underserved high-speed Internet service areas and by developing a plan to extend broadband service statewide."

The National Broadband Plan on Agriculture

The FCC's National Broadband Plan includes goals for agriculture and rural communities. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform the agriculture industry across Utah, including:

Giving local farms and their employees the broadband training they need to remain competitive in the global economy

The Small Business Administration and the FCC's Office of Communications Business Opportunities should work together with leading private communications and technology firms to provide tools and training -- applying proven ideas and practices in Utah's agricultural industry.

Keeping rural farming communities competitive and innovative in the 21st century economy by putting broadband at the forefront of regional development

Communities without broadband technology will be left behind - on the outside looking in concerning the digital revolution. Broadband technology allows regions and communities to compete globally -- attracting new firms, investments and jobs. Local economic development plans and federal programs must take this into account when assessing the economic prospects of our agricultural community.

"Agricultural enterprises deliver high-quality food to the United States and the world. As our farmers and food processors compete in a global digital economy, broadband will help empower their businesses with applications that include everything from marketing to managing fertilizer applications. Broadband can help these valuable businesses bridge the digital divide and participate fully in local, national and world markets."

The National Broadband Plan

About the Utah Broadband Project

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 services and a plan to increase broadband deployment and adoption in the state. The Project Team helps identify critical unserved and underserved areas and populations to help expand affordable, reliable broadband service to every citizen of the state.

How can local communities become more involved with the Utah Broadband Project?

In partnership with the Utah Associations of Governments (AOGs), the Utah Broadband Project has launched a Regional Broadband Planning Council initiative. Each AOG has organized a Regional Broadband Planning Council to address broadband planning on a local level. Community participation is vital to the success of this effort. Please contact your local AOG for more information.

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Transforming Economic Development

High-speed Internet connectivity, or broadband, will continue to transform businesses in Utah

In his economic development plan, Utah Governor Gary R. Herbert emphasized the importance of increasing business opportunities in rural Utah by identifying unserved and underserved high-speed Internet service areas and by developing a plan to extend broadband service statewide.

Utah has received national recognition for its business-friendly environment and has been the ranked the Best State for Business and Careers for two years in a row by Forbes Magazine. In the past few years, high-tech businesses such as Adobe, Oracle, IM Flash, Overstock and eBay have all announced plans to relocate or expand in Utah, bringing thousands of jobs to the state.

One of the reasons for this success is Utah's extensive broadband infrastructure. Unlike many other states with similar population densities and geography, Utah's remote and rural communities are largely served with at least some broadband services and businesses have access to redundant and reliable services.

Questions to Consider About Business, the Economy and Broadband

1. Are the right tools in place for businesses to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's businesses?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in the business sector?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the workforce to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for effective businesses and e-commerce applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

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The National Broadband Plan on Economic Development

The FCC's National Broadband Plan includes goals for our small and rural businesses. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform the economy across Utah, including:

Giving small businesses and their employees the broadband training they need to remain competitive in the global economy

The Small Business Administration and the FCC's Office of Communications Business Opportunities should work together with leading private communications and technology firms to provide tools and training -- applying proven ideas and practices in the digital economy.

Building a new online national employment assistance platform to efficiently connect struggling workers with resources

As our economy continues to rebound, broadband can be utilized to deliver assistance to help the underemployed and unemployed excel in the modern workplace. Technology-based instruction for vocational training reduces the cost by about a third, while also decreasing the time required and increasing the effectiveness of instruction.

> ***"Communities without broadband technology will be left behind – on the outside looking in at the digital revolution. Broadband technology allows regions and communities to compete globally -- attracting new firms, investments and jobs. Local economic development plans and federal programs must take this into account when assessing the economic prospects of our communities."***
>
> ***The National Broadband Plan***

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Transforming Energy and the Environment

High-speed Internet connectivity, or broadband, has the potential to transform energy and the environment in Utah, including:

- Enabling technologies and services like telemedicine, visual business communication programs and e-commerce that have allowed us to turn things that typically required travel into activities that are virtually carbon neutral;
- Using smart meters, smart buildings, smart grids which provide greater control over our use of energy in our homes and businesses;
- Allowing energy savings to spread to every home through two-way communication including "smart appliances" that are only in use when they are needed;

- Encouraging the IT sector and other businesses to utilize methods to accurately measure the energy and environmental impacts of data centers and other facilities and develop solutions to make them more efficient.

Questions to Consider About Energy, the Environment and Broadband

1. Are the right tools in place for our energy and environmental goals to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's energy and environmental sectors?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in the energy and environmental sectors?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the workforce to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards to facilitate effective energy and environment-related applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

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The National Broadband Plan on Energy and the Environment

The FCC's National Broadband Plan includes goals for energy and the environment. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform energy and the environment across Utah, including:

Modernizing the electric grid with broadband, making it more reliable and efficient

Modernization of the power grid is key to solidifying American energy independence and efficiency. Paired with high-tech tools, like dynamic management software and remote sensors, broadband will be crucial to advancing innovations in renewable power, grid storage, and vehicle electrification.

Unleashing energy innovation in homes by making energy data readily accessible to consumers

Often, when citizens get informational feedback on their energy usage, they make adjustments that cut back their energy use. Access to real-time information through broadband can also allow control of automated thermostats and appliances; automatically saving residents money through smart energy consumption. To unleash innovation in homes, all citizens should be able to manage their real-time energy consumption using broadband technology.

> ***"America's energy demands continue to grow while pressure to focus on preserving our environment and move to a 'green economy' are also increasing. Broadband offers the opportunity to reduce our country's carbon footprint and our dependence on foreign oil, while spurring economic growth through new environmental jobs."***
>
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Transforming Healthcare

High-speed Internet connectivity, or broadband, has the potential to transform healthcare across Utah, including:

- Providing the ability to transmit and interpret large files in real-time, even remotely -- MRI, ultrasound and X-rays;
- Transmitting real-time data exchanged from devices worn by the patient, allowing more comprehensive health monitoring, particularly chronic conditions;
- Enabling Missouri's 'baby boomers' to "age in place" with access to quality care from wherever they live, lowering costs and trauma associated with moving to assisted living or nursing facilities;
- Assisting medical personnel administering care more effectively when seconds count, giving access to crucial information to local providers, potentially lowering the number of patients who require transport to larger hospitals.

Questions to Consider About Healthcare and Broadband

1. Are the right tools in place for healthcare providers to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's healthcare industry?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in the heathcare industry?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the healthcare workforce to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for effective telehealth applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

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The National Broadband Plan on Healthcare

The FCC's National Broadband Plan includes goals for our healthcare system. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform healthcare. The Plan's recommendations include:

Create economic incentives for broader health IT adoption and innovation

There is a need to implement reimbursement and other economic incentives to help providers adopt broadband and help to close the health IT gap. The National Broadband Plan highlights investments that Congress and the U.S. Department of Health and Human Services are making to incentivize the adoption of e-records (electronic health records), and supports a similar approach for implementation of e-care technologies.

Unlock the power of healthcare data and advanced analytics, while protecting privacy

E-records (electronic health records) are a goldmine of useful data, with the potential to transform medicine -- if patient privacy is fully protected. The National Broadband Plan supports further development of cross-platform and data access, offering suggestions for ongoing actions by the government to enable this development.

"Telemedicine and telehealth have the potential to revolutionize healthcare in rural America by allowing rural providers and patients the opportunity of access to specialists, retrieval of health records, improved emergency response, reducing transportation costs, offering new alternatives for home health and e-visits, and connecting health professionals to their patients in real time."

The National Broadband Plan

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Transforming Higher Education

High-speed Internet connectivity, or broadband, has the potential to transform higher education in Utah, including:

- Easing classroom overcrowding when traditional on-site classes fill up, allowing students to access popular core classes without losing time as they are working towards a degree;
- Enabling students who cannot attend class to access digitally captured lectures;
- Enabling students to collaborate on a shared virtual "blackboard" -- integrating social media tools, videos, chat rooms in conjunction with course curriculum and other class resources;
- Enabling videoconferencing that allows colleges to serve several branch campuses and distance education facilities simultaneously.
- Introducing new technologies into the classroom, transforming classrooms into state of the art places for learning.

Questions to Consider About Higher Education and Broadband

1. Are the right tools in place for faculty and students to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's higher education?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in higher education?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the faculty and students to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet the minimum standards needed to facilitate effective higher education applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be imple-

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The National Broadband Plan on Higher Education

The FCC's National Broadband Plan includes goals for our education system. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform higher education in Utah, including:

Modernize broadband infrastructure to support 21st century teaching and learning

While universities and colleges in Utah have access to broadband, going forward we need to ensure that the networks that support higher education are robust and designed to have room to grow.

Higher education is the home of entrepreneurial research centers that can move our state in a positive direction. Responsive broadband networks for data collection and other higher education needs are a necessity.

Expand access to broadband with common sense reforms

Communities are best served when schools and libraries leverage their technology resources. Helping schools and libraries utilize broadband discounts, such as E-Rate funding and giving schools the option of opening up access to their networks for after class instruction, will enable more Utah residents to be served without an additional cost.

> ***"All levels of the education continuum, including primary, secondary, post-secondary, homeschooling, and continuing education programs, stand to gain incredible opportunities. High-speed connectivity offers the promise of remote class instruction, shared course offerings, and faculty and administrators networking with peers."***
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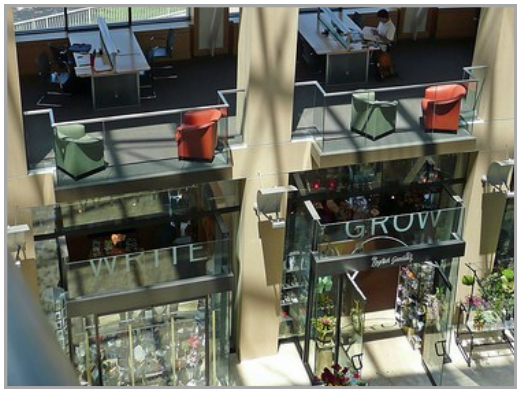
Transforming Libraries

High-speed Internet connectivity, or broadband, has the potential to transform Utah's libraries and the communities they serve, including:

- Ensuring that libraries remain a vital community institution, because they are often the only source for free internet access, providing a critical link for filling out government forms, job applications, starting a business, engaging in day-to-day life;
- Allowing even those who have a connection elsewhere to also use library computers because they need a faster connection, need assistance from a librarian, or have to compete for use of the computer at home-want to use a computer in a safe, quiet environment;
- Facilitating digital literacy training opportunities;



- Enabling students to access educational materials and research material not found elsewhere;
- Facilitating use of videoconferencing to allow participation in meetings and educational opportunities;
- Ensuring that libraries can be a community's online link during a disaster.

Questions to Consider About Libraries and Broadband

1. Are the right tools in place for library staff and patrons to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's libraries?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in libraries?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare library staff and patrons to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards to effectively facilitate library applications and those of patrons utilizing the libraries computers and Internet access?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

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The National Broadband Plan on Libraries

The FCC's National Broadband Plan includes goals for our libraries and the communities they serve. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform libraries, including:

Expand access to broadband with common sense reforms

Communities are best served when libraries and schools leverage their technology resources. Wireless broadband options that can serve library patrons and residents wherever they live and giving schools and libraries the choice to purchase their area's low-cost broadband option are changes to E-rate that the FCC's plan recommends.

Other parts of the plan would:

- Open up E-rate to support internal connections in libraries
- Set minimum broadband connectivity goals for libraries and prioritize funds accordingly
- Adjust E-rate funding for inflation
- Amend the Communications Act to help tribal libraries overcome barriers to E-rate eligibility

"Public libraries serve communities of all sizes as a source for research, a community meeting place, a place for access to education and news from around the world. Libraries with broadband become gateways to information in communities where broadband access is not universal and for community members without the means to own a computer or purchase broadband connectivity for themselves. Libraries help close the 'digital divide' that threatens to leave people behind."
The National Broadband Plan

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Transforming Residential Internet Service

High-speed Internet connectivity, or broadband, has the potential to transform citizen's quality of life in Utah

The goal of the Utah Broadband Project is to ensure that all citizens have access to high-speed Internet. Whether it is at home, at the library, through free public Wi-Fi, or through another method, any person who does not have access is being left behind.

Barriers that could prohibit communities from getting online included lack or cost of service or equipment, or lack of training.

Economic development, career training, and advances in education and health care rely not only on broadband infrastructure, but also on the knowledge and tools to leverage that infrastructure.

The Utah Broadband Project is working with broadband providers, local and state policymakers, consumers, community anchor institutions, and other stakeholders to explore the state of broadband in Utah, improve efficiencies, and expand deployment and usage statewide.

Questions to Consider About Residential Broadband Service

1. Are the right tools in place for citizens to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment is needed? Can you provide examples of how it would improve the lives of citizens?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in residences?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare Utahns to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for residential applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

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The National Broadband Plan on Residential Broadband Service

The FCC's National Broadband Plan includes goals for extending home broadband service to all citizens. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform residential access in Utah, including:

Collect more detailed and accurate data on actual availability, penetration, prices, churn and bundles offered

The FCC should revise Form 477 to collect data relevant to broadband availability, adoption and competition. It should collect broadband availability data at the census block level, by provider, technology and offered speed. It should collect broadband service provider ownership and affiliation data and clarify and refine all reporting standards to ensure data consistency and comparability.

Make more spectrum available to foster wireless-wireline competition

First, additional spectrum for mobile competitors is likely to enhance mobile competition. Second, more spectrum makes possible faster download speeds, which would allow new and existing companies to use wireless technologies to serve as closer substitutes to fixed broadband providers for consumers seeking more than just low-end plans.

"Broadband is the great infrastructure challenge of the early 21st century. Like electricity a century ago, broadband is a foundation for economic growth, job creation, global competitiveness and a better way of life...Competition is crucial for promoting consumer welfare and spurring innovation and investment in broadband access networks. Competition provides consumers the benefits of choice, better service and lower prices."

The National Broadband Plan

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Transforming Local Government

High-speed Internet connectivity, or broadband, has the potential to transform local government in Utah by:

- Enabling online handling of routine requests (i.e. licensing and tax questions) faster, cheaper and with fewer resources;
- Enabling online transmission and viewing of large files necessary for transactions (like building permits), which shortens government response time;
- Enabling real-time traffic conditions and public transit updates to be accessed online;
- Facilitating two-way video streaming that allows constituents to join public government meetings from a distance;
- Facilitating videoconferencing to handle arraignments, depositions and interpreter services which will cut costs in the criminal justice system;
- Enabling e-mail, online petitions and social networks that allow for instant communication between constituents and elected officials.

Questions to Consider About Local Government and Broadband

1. Are the right tools in place for local governments to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's local governments?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in local governments?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the local government workforce to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for effective online government services? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
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The National Broadband Plan on Local Governments

The FCC's National Broadband Plan includes goals for our government. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform local government across Utah, including:

Partner with ISPs to make sure America's communications networks are strong and secure

Building on efforts already begun by Internet Service Providers (ISPs), the FCC should work with ISPs to build cybersecurity protection and defenses into networks offered to governments, business and individuals. To meet this global challenge, the government should also continue to build workforce capability in cybersecurity to ensure our networks – and the information that travels over them – are reliable, safe, and secure.

Embrace cost-saving platforms and infrastructure that also increase productivity

Government can become a model of efficiency and increased performance through strategic deployment of broadband-enabled technologies. Social media tools can be leveraged to improve internal collaboration, communication, and efficiency within the government and between government and its constituencies.

"State, county and city staff deliver a variety of services to the people in their regions. Those services span everything from social services to health and safety ... While nothing will replace the value of face-to-face contact with a public servant, especially for vulnerable populations, broadband has the capacity to deliver many services efficiently and rapidly while opening up new venues for civic engagement."

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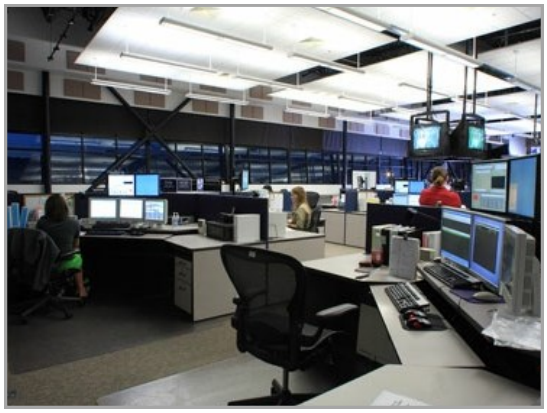
Transforming Public Safety

High-speed Internet connectivity, or broadband, has the potential to transform public safety in Utah, including:



- Enabling first-responders and emergency personnel to arrive on scene with up-to-date maps, building plans and utility information, even across jurisdictions;
- Enabling treatment of the sick and injured to be more effective in the field through sharing of critical medical information between first-responders and the hospital as the patient is en route;
- Enabling law enforcement to have information instantly in their hands -- such as photos and fingerprints of suspects;
- Allowing police and suspects in high-risk situations to be monitored effectively;
- Providing more timely assistance to law enforcement from citizens through text, photos or video sent from mobile devices to enhance Utah's pertinent public safety;
- Facilitating faster, more beneficial searches across multiple large databases often accessed by law enforcement; getting essential information to those who need it.

Questions to Consider About Public Safety and Broadband

1. Are the right tools in place for the public safety sector to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's public safety sector?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in the public safety sector?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare the public safety workforce to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for critical public safety applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
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The National Broadband Plan on Public Safety

The FCC's National Broadband Plan includes goals for our public safety services and networks. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform public safety in Utah, including:

Create a nationwide interoperable public safety wireless broadband communications network

A national public safety wireless broadband network, allowing all first-responders and emergency personnel to communicate with one another at a moments' notice will be a critical component to ensuring the safety of Utah residents and all citizens of the United States.

Leveraging broadband technologies to enhance emergency communications to and from the public

Emergency 911 call systems are essential in making sure that people can reach emergency personnel and get critical emergency information. Roll-out of Next Generation 9-1-1 (NG911) and Next Generation Emergency Alerting technologies in the near future is key to maintaining and enhancing that line of communication. Securing adequate funding to support deployment of NG911 and removing regulatory barriers to its deployment should ensure that NG911 is made available across the United States.

"Firefighters, law enforcement and emergency medical personnel need the ability to quickly communicate with each other, access online resources (via a PC or mobile device), connect to networks, and quickly transfer important video and data files during emergencies. Broadband can help make that happen by enabling informed decisions for first responders and allowing communication between public safety personnel at all times without delay."

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- Easing classroom overcrowding when traditional on-site classes fill up, allowing students to get popular core classes without losing time as they are working towards a diploma;
- Enabling students who cannot come to class to access digitally captured lectures;
- Enabling students to collaborate on a shared virtual "blackboard" -- integrating social media tools, videos and chat rooms in conjunction with course curriculum and other class resources;
- Videoconferencing that allows several school districts to bring classes to areas where they are not available;
- With proper privacy protections, sharing data provides parents with valuable information about their child's scholastic progress and promotes home-school partnerships.

Questions to Consider About Public Education and Broadband

1. Are the right tools in place for teachers and students to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's education?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in education?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare teachers and students to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for effective online instruction? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
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The National Broadband Plan on Public Education

The FCC's National Broadband Plan includes goals for our education system. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform public education in Utah, including:

Modernize broadband infrastructure to support 21st century teaching and learning

Through the FCC's E-rate program, 97% of American schools now have Internet access. But as technology changes, so do schools' needs. Programs like E-rate have to be continuously monitored and updated to help education keep up with student needs, and ensure that E-rate's funding can keep up with inflation.

Expand access to broadband with common sense reforms

Communities are best served when schools and libraries leverage their technology resources. Wireless educational options that can serve students wherever they are and giving schools and libraries the choice to purchase their area's low-cost broadband option are changes to E-rate that the FCC's plan recommends. Giving schools the option of opening up access to their networks after regular school hours will enable more Utah residents to be served without an additional cost.

> ***"All levels of the education continuum, including primary, secondary, post-secondary, homeschooling, and continuing education programs, stand to gain incredible opportunities. High-speed connectivity offers the promise of remote class instruction, shared course offerings, and teachers and administrators networking with peers."***
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In partnership with the Utah Associations of Governments (AOGs), the Utah Broadband Project has launched a Regional Broadband Planning Council initiative. Each AOG has organized a Regional Broadband Planning Council to address broadband planning on a local level. Community participation is vital to the success of this effort. Please contact your local AOG for more information.

Visit our website at broadband.utah.gov to:

Read the Utah Broadband Advisory Council Report	Read the Project Blog for the Latest Industry News	Sign Up for the Project Newsletter	Take a Speed Test	View Upcoming Events
				

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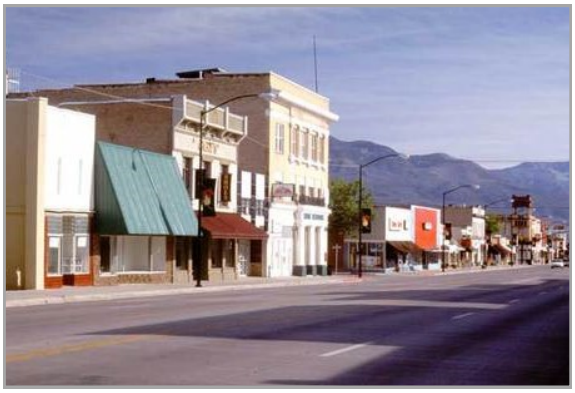
Transforming Small Businesses

High-speed Internet connectivity, or broadband, has the potential to transform small businesses in Utah, including:



Broadband applications are helping businesses improve internal productivity and reach customers. Creating an online presence is now vital to businesses' economic success as more consumers search online for the products and services they need.

Though gains vary drastically depending on the size and type of firm, as well as breadth of implementation, broadband-based applications may allow faster product development cycles, access to new geographic markets, and more efficient business processes and allocation of resources. These productivity gains benefit the entire economy.

Businesses also find it valuable to collect and aggregate information derived from use of broadband applications.

More sophisticated digital profiles of Internet users allow businesses to better understand user buying patterns. This information is also useful for advertising or other purposes.

Questions to Consider About Small Businesses and Broadband

1. Are the right tools in place for small businesses to leverage broadband? If yes, what tools are in place? If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's agricultural industry?
2. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in small businesses?
3. Is everyone properly trained to use broadband technology effectively? How can we better prepare small businesses to utilize broadband to its maximum benefit?
4. Does broadband access and availability meet minimum standards for effective small business applications? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?
5. Is broadband technology cost prohibitive? If so, what are some cost-saving measures that could be implemented to increase use?

Utah Governor's Office of Economic Development
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Contact the Utah Broadband Project
Email: broadband@utah.gov

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In the first objective of Governor Gary R. Herbert's Economic Development Plan, he set a statewide goal to "increase business opportunities in Rural Utah by identifying unserved and underserved high-speed Internet service areas and by developing a plan to extend broadband service statewide."

The National Broadband Plan on Small Businesses

The FCC's National Broadband Plan includes goals for small businesses. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform small businesses across Utah, including:

Encourage competition in wholesale broadband markets

Ensuring robust competition not only for American households but also for American businesses requires particular attention to the role of wholesale markets, through which providers of broadband services secure critical inputs from one another.

Because of the economies of scale, scope and density that characterize telecommunications networks, well functioning wholesale markets can help foster retail competition, as it is not economically or practically feasible for competitors to build facilities in all geographic areas.

Improve transparency about broadband connectivity for multi-unit buildings and small businesses

The FCC should also investigate better ways to improve transparency about the quality of broadband connectivity in residential multi-dwelling buildings and in commercial and industrial buildings.

"Broadband is becoming a prerequisite to economic opportunity for individuals, small businesses and communities. Those without broadband and the skills to use broadband-enabled technologies are becoming more isolated from the modern American economy."

The National Broadband Plan

About the Utah Broadband Project

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 services and a plan to increase broadband deployment and adoption in the state. The Project Team helps identify critical unserved and underserved areas and populations to help expand affordable, reliable broadband service to every citizen of the state.

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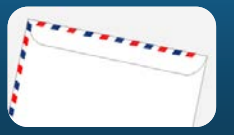

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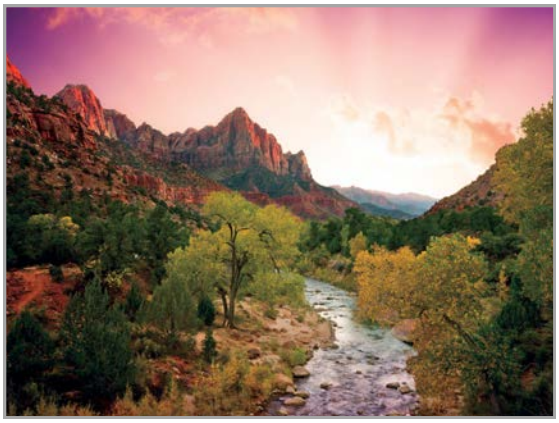
Transforming Tourism

High-speed Internet connectivity, or broadband, has the potential to transform the tourism industry in Utah, including:



- Allowing travelers the luxury of seeking out Utah's mountains, parks, and other recreational venues, while still being able to remain connected to the rest of the world;
- Ensuring that tourism and hospitality industry has sufficient infrastructure and technology to handle the changing needs of today's traveler;
- Encouraging tourism-based businesses to attract more visitors by increasing their online presence and digital marketing capabilities.
- Encouraging businesses to provide online services, such as trip planning and hotel booking to make travel convenient and affordable and increase the numbers of repeat visitors.
- Working with mobile broadband service providers to cover remote areas of Utah so that travelers and public safety officials can communicate in the event of an emergency.

Questions to Consider About Tourism and Broadband

1. Are the right tools in place for the tourism and hospitality industry to leverage broadband? If yes, what tools are in place?
2. If not, what hardware, software and other equipment do you need? Can you provide examples of how it would improve today's tourism and hospitality industry?
3. Do current processes and procedures encourage the use of broadband? What could you do differently with broadband that would promote its use in the tourism and hospitality industry?
4. Is everyone properly trained to use broadband technology effectively? How can we better prepare the tourism and hospitality workforce to utilize broadband to its maximum benefit?
5. Does broadband access and availability meet minimum standards for effective use by both destination locations and tourists? If yes, how? If not, what are the locations that need broadband enhancements and the challenges in getting it there?

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The National Broadband Plan on Tourism

The FCC's National Broadband Plan includes goals for economic development, including the tourism and hospitality industry. These goals serve as a starting point for regional discussions about the best way to deliver and use broadband technology to transform tourism across Utah, including:

Give tourism businesses and their employees the broadband training they need to remain competitive

The Small Business Administration and the FCC's Office of Communications Business Opportunities should work together with leading private communications and technology firms to provide tools and training -- applying proven ideas and practices in the digital economy.

Keep communities dependent on tourism competitive and innovative in the 21st century economy by putting broadband at the forefront of regional development

Tourism-based communities without broadband technology will be left behind -- on the outside looking in at the digital revolution. Broadband technology allows regions and communities to compete globally -- attracting new firms, investments and jobs. Local economic development plans and federal programs must take this into account when assessing the economic prospects of these communities.

"Tourism businesses create jobs for thousands of Utah residents and revitalize communities. The tourism and hospitality industry pumps millions into the economies of local communities and the State of Utah. Businesses can leverage broadband to attract new visitors, train employees and market their products or services in a way that makes size and location less relevant than ever before."

The National Broadband Plan

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How-To Materials and Sample Surveys

Broadband Strategic Planning Purpose and Process

It is important to note at the start the purpose of broadband strategic planning in order to better understand the related process. The regional broadband planning process is meant to identify strategies, and related directions, initiatives, goals and objectives, that can be employed by interested parties within each AOG region in the coming months and years to leverage and build upon existing broadband-related strengths to overcome current weaknesses, effectively address current and future challenges and take full advantage of current and future broadband opportunities.

As such, broadband planning is aimed to be a large scale, high-level planning exercise that provides specific guideposts and pathways to better help the region build long term broadband sustainability concerning both availability (supply) and adoption (demand) for all the constituencies within the region. Consequently, while a Regional Broadband Plan may have specific recommendations for developing initiatives to implement the plan, it, like any strategic plan, is not meant to be an operational plan. For example, while large scale cost figures will be developed, the plan is not intended to detail, specific cost/benefit analyses for particular technical broadband system components or enhancements.

The planning process to accomplish the purpose discussed above could be split into four (4) phases:

- **Phase 1:** Needs Assessment and Existing Information Review
- **Phase 2:** Second Meeting and Planning Activities with the Planning Council members
- **Phase 3:** Findings and Initial Regional Broadband Plan Element Development
- **Phase 4:** Drafting and Finalization of the Regional Broadband Plan

Phase 1: Needs Assessment and Existing Information Review – In the first phase it will be important to understand the current broadband climate in the region. This will both help develop an understanding of the broadband-related strengths and weaknesses in the region and provide a baseline for future evaluation of progress.

The Regional Broadband Planning Councils must also understand and evaluate the existing broadband availability maps for the providers and services offered in their areas. This will further provide the Planning Councils with knowledge of areas that either do not have any broadband or where broadband coverage is insufficient.

Phase 2: Second Meeting and Planning Activities with the Regional Broadband Planning Council members – In the subsequent full Planning Council meeting, there will need to be significant discussion about moving from the current broadband environment to the one needed within the region. Based on these discussions and available baseline data, a Strengths, Weaknesses, Opportunities and Challenges (SWOC) analysis will need to be performed. This analysis will cover a wide range of issues including those centered on: residential, business and institutional broadband availability and adoption, whether available bandwidth(s) are sufficient for current as well as near and long term needs and applications, potential upgrade and expansion possibilities, reliability of existing networks, and related matters.

Providers will be asked to present their ideas on possibilities for advancing the broadband environment. Best practices will also be discussed from both an availability and demand purring perspective, with examples given from within the region, around the State and across the country.

Phase 3: Findings and Initial Regional Broadband Plan Element Development – During this phase, the Regional Broadband Planning Council will review the initial findings, priorities, potential strategic directions and actions, timelines and resources needed related to those potential directions. In this phase, a number of potential strategic directions and initiatives will be identified, reviewed, discussed, and then incorporated into the initial draft of the Regional Broadband Plan.

Phase 4: Drafting and Finalization of the Regional Broadband Plan – At this stage, the initial draft of the Regional Broadband Plan will be crafted and reviewed by the Regional Broadband Planning Council. This Toolkit contains a Sample Regional Broadband Plan Outline which provides a summary of possible research, sections, and topics that may be included in the final Regional Broadband Plans.

Sample Meeting Planning Template

General information

This meeting plan is for the [PLANNING COUNCIL NAME] scheduled for [DATE] at [TIME]. [NAME] will be responsible for notification, facilitation, logistical coordination, and material transport. [NAME] will be responsible for securing the location and Internet access for the meetings.

Meeting manager

[NAME]

[CONTACT INFORMATION]

Purpose

The Utah Broadband Project, in partnership with Utah's Associations of Governments (AOGs), has formed a Regional Broadband Planning Council in your area to address broadband needs and planning at a local level.

Audience

To obtain comprehensive feedback we will engage a diverse group of individuals to participate in the forum. We will utilize the expertise of broadband providers and other stakeholders with diverse backgrounds to evaluate and address broadband access and adoption.

Meeting Venue Information			
Meeting Name	**Date and Time**	**Venue Name & Address**	**Venue Contact & Phone**

Staffing			
Organization	**Name**	**Cell Phone**	**Primary Role**

Room Layout Diagram

Meeting Supplies		
Meeting Materials	**Quantity**	**Responsibility**
Electronic Equipment	**Quantity**	**Responsibility**
Supplies	**Quantity**	**Responsibility**

Stakeholder Forum Deliverables and Deadlines				
	Task	**Name**	**Due Date**	**Completed**
Pre-Meeting Task				
Meeting Day Task				
Post-Meeting Task				

Facilitation Plan				
Time	**Topic**	**Questions/Ideas to Convey**	**Who**	**Tools**

Strengths, Weaknesses, Opportunities and Challenges (SWOC) Analysis

Regional broadband planning should include a significant review and evaluation of the existing and potential broadband environment, including needs and contributing factors. A critical part of an effective evaluation is a Strengths, Weaknesses, Opportunity and Challenges (SWOC) analysis. A SWOC analysis is a strategic planning exercise that is, in this case, designed to help identify broadband availability and adoption issues that will be considered high priority for the development of strategic directions and initiatives. Once identified, the goal is to develop strategic directions and initiatives that:

- Take full advantage of and leverage the identified strengths
- Improve on weaknesses that are determined
- Seize the opportunities that are identified
- Address the challenges that have been delineated

This Toolkit provides worksheets that can help you conduct a SWOC Analysis, which will help to identify and address key priority areas and recommended activities that may be incorporated into the Regional Broadband Plans.

Step 1: Identify Potential Priority Areas

This worksheet provides a list of common sectors that may be impacted by broadband availability and adoption. The list provides a starting point to help Regional Broadband Planning Teams identify the strengths, weaknesses, opportunities and challenges in each sector within their communities. The list is not comprehensive and Councils are encouraged to add additional sectors that may be important in their regions.

Step 2: Identify Key Priorities

During this step, refer to the first worksheet and identify which of the priority areas you would like to focus on. For each priority area listed, write a brief vision statement that outlines what you would like your community/region to become in three to five years as a result of the regional plan. The worksheet contains space for five priority areas, but you may choose additional priority areas if needed.

Step 3: Priority Area and Action Plan Development

During this step, take each key priority area identified in Step 2 and list the strengths, weaknesses, opportunities and challenges listed in Step 1. Then create a list of recommended activities that will utilize the strengths and opportunities listed, as well as address any weaknesses and challenges that were identified.

Before undertaking the SWOC analysis, it is important to understand the elements that create the analysis. The definitions of the four (4) SWOC elements are as follows:

- **Strengths** – Broadband-related systems, practices, processes, and resources that are highly valued by broadband-related stakeholders within the region. For example, the Regional Broadband Planning Councils may identify areas of strength related to broadband such as the level of coverage throughout the region, high levels of bandwidth or speed, high numbers of providers competing in the region and cost parameters that are highly valued by residential, business and institutional users of broadband.

- **Weaknesses** – Areas that need improvement, reasons why stakeholders are not able to wholeheartedly embrace broadband and areas that tend to compromise the achievement of high levels of availability and adoption.

- **Opportunities** – Favorable situations/circumstances not yet taken advantage of that may positively impact the development and acceptance of broadband. These may include proximity of broadband providers' infrastructure to areas where broadband does not exist today. Technologies or best practices not currently in place may also provide an opportunity for broadband expansion in the region.

- **Challenges** – Present and future situations/circumstances that may negatively impact broadband development and acceptance as perceived by regional stakeholders. This may include density, cost, geographic, socio-economic and computer/Internet literacy issues facing broadband providers and existing and potential users.

The Regional Broadband Planning Council members may choose to pursue the SWOC analysis at their second large group meeting. The SWOC analysis will help provide a solid basis for improving the broadband landscape going forward. For instance, areas of strength may be built upon and opportunities may be pursued to address areas of weakness and the challenges noted. In addition, this process will help focus the Regional Broadband Planning Councils efforts by providing the basis for prioritization of tasks going forward.

Step 1: Identifying Potential Priority Areas Worksheet

This worksheet is designed to provide a list of common sectors that may be impacted by broadband availability and adoption. For each sector, identify the strengths, weaknesses, opportunities and challenges that exist within your community.

Priority Area	Strengths	Weaknesses	Challenges	Opportunities
Telecommunications Infrastructure				
Broadband Adoption/Digital Literacy Training				
Local Governments				
Public Computing Centers/Wi-Fi Access				
Education				
Libraries				

Priority Area	Strengths	Weaknesses	Challenges	Opportunities
Economic Development/Business Needs				
Public Safety				
Healthcare				
Transportation				
Rural Broadband Access				
Tribal Broadband Access				
Other				

Step 2: Identifying Key Priorities Worksheet

Based on the analysis conducted in Step 1, identify several key priority areas your Regional Broadband Planning Council would like to focus on. Describe a clear vision of what you would like your community/region to become in three to five years as a result of the regional plan. Although the worksheet contains space for five priority areas, but you may choose additional priority areas if needed.

Example Priority Area : Local Governments
Vision: Work with local governments in the Six County Association of Governments to ensure that all cities and counties in the region have municipal websites within the next two years

Priority Area 1:
Vision:

Priority Area 2:
Vision:

Priority Area 3:
Vision:

Priority Area 4:
Vision:

Priority Area 5:
Vision:

Step 3: Priority Area and Action Plan Development Worksheet

This worksheet is designed to help Regional Broadband Planning Councils to focus on each priority area that has been identified. For each priority area, Council Members will utilize the Strengths, Weaknesses, Opportunities, and Challenges that were identified previously and list recommended activities that will help develop an action plan to address these priorities.

Priority Area:

Strengths	Weaknesses	Opportunities	Challenges

Recommended Activities:

1.

2.

3.

4.

5.

Sector Specific Information Gathering Ideas

Focused Discussion Guide

After the initial Council planning meetings, each member of the Utah Regional Broadband Planning Councils may be asked to gather information from the sector they represent and bring that information back to the team. The Council Members may use the Focused Discussion Sample Script and Questions as a guide to determine the key issues surrounding broadband for that sector. We recommend that each member conduct focus discussions about broadband with representatives from the sectors. Focus groups or discussions are a powerful means to gather feedback and test new ideas. Basically, focus groups are interviews, but with 6-10 people at the same time in the same group.

Preparing for the Session

1. Select a location that allows for a full and vibrant conversation. Plan on the discussion running 60-90 minutes.
2. Call and/or e-mail potential members from your sector to invite them to the meeting. Send them a follow-up invitation with a session time and a copy of the sector sheets provided to you. Plan to provide a summary of the comments gathered during the session and let them know you will do this.
3. About three days before the session, call and/or e-mail each member to remind them to attend.
4. Plan to record the session with either an audio or audio-video recorder. Don't count on your memory. If this isn't practical, involve a co-facilitator who is there to take notes.

Asking Questions

1. Using the questions provided, remind participants that there are no “right or wrong” answers. We want them to provide their thinking and perspective on the topic.
2. Try to summarize what you hear them saying, back to them. This is called “mirroring” and ensures that you have captured their thoughts correctly.
3. Ensure even participation. If one or two people are dominating the meeting, call on others. Consider using a roundtable approach, including going in one direction around the table, giving each person a minute to answer the question.
4. When you hear the same theme being repeated, you’ve reached “redundancy” and can move to the next question. Having someone else in the group keep you on time is also helpful in ensuring that you are able to ask each of the questions you have planned.
5. At the close of the session, be sure to ask if there is “anything else” someone would like to add to the discussion. This is an insurance question that ensures ideas have not been left off the table.

Sharing the Results

1. After the session, verify your recording worked.
2. Review the tapes and your notes and create a series of bullet points under each question posed that captures the redundant ideas you heard in the sessions. Be sure to highlight any "good" ideas even if they were only said by one or two participants that you would like members of the Regional Broadband Planning Council to consider.
3. E-mail these notes in advance of the next workshop to your Regional Broadband Planning Council contact.

Tips for Engaging Your Sector in a Broadband Discussion

The following is a list of strategies you might want to consider when reaching out to various sectors to facilitate a broadband discussion:

1. Use an existing meeting and request "broadband needs" be part of the discussion. If you have a standing meeting with members that represent the sector in your region, ask if a broadband discussion can be added to the agenda. Record the themes that people express. Share these notes with the Regional Broadband Planning Council.
2. Send an email to an active listserv you participate in with the key broadband questions. Once responses are returned, create a master document for the Regional Broadband Planning Council group to use in planning.
3. Host a forum on broadband. Several Planning Council members can host a meeting on broadband with members from the sector to have a focused discussion about broadband and community needs.
4. Arrange a conference call. Members of the Planning Councils may want to arrange a conference call and circulate broadband questions in advance so participants can consider their responses ahead of time.

Brainstorm:

What other ways might you engage your sector to provide feedback in a timely and efficient way?

Focused Discussion Sample Script and Questions

Information in italics is meant to guide the moderator and not meant to be asked out loud. During the conversation it might be best to assign someone to keep notes and keep you on time. The timing for each question indicated below is an estimate for a 60 minute conversation. If you are having a vibrant conversation, you should continue until you feel the group has shared all they need to on the topic. The note taker should capture the larger themes that are mentioned by several participants and provide specific examples to illustrate the point whenever possible.

Two additional resources are suggested that you may want to use with the group. First, a sheet listing only the questions is available in this toolkit. You may want to send the questions to your group ahead of time to allow them time to think about their responses before the meeting. Second, use the Broadband 101 information to familiarize them with some of the terms they may hear at the meeting.

Estimated length: 60 minutes with 7-10 participants, 90 minutes with 11-20 participants.

Introduction (5 minutes)

The purpose of this discussion is to learn about our the [SECTOR NAME] community's needs and interests related to broadband, or high-speed Internet access. There is no right or wrong answer to the questions being posed. Our regional conversation today is part of a statewide effort that coincides with a national effort to increase access to high-speed Internet services in Utah and throughout the United States.

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 services and a plan to increase broadband deployment and adoption in the State.

In order to do that, we are engaging in an effort to identify broadband needs at the local level. Today, we simply want to find out the attitudes, opinions, needs and interests of stakeholders in the [SECTOR NAME] community related to broadband availability and adoption. The thoughts of this group will be shared with the [REGION NAME] Regional Broadband Planning Council tasked with crafting a Regional Broadband Plan to create broadband opportunities and address the needs of our region.

Are there any questions about the goals of this conversation today?

Introductory Question (5 minutes)

First, I'd like to go around the room, have you introduce yourself, your organization and then tell us how you use the Internet or other network services at your organization.

Capture specific applications being used and who the key broadband providers to your sector are.

Key Question (10 minutes)

Let's think about the work that you have done over the last year. Were there instances when your Internet or broadband service or Internet service provider made all the difference in whether those projects were successful or not?

Identify key traits of the broadband service that provide "successful" experiences.

Key Question (15 minutes)

I want to switch gears now and talk about the times when you haven't had enough broadband availability, or there have been other issues surrounding broadband, that have caused problems in completing a project or making a connection that was needed. Have you attempted and then failed at recent initiatives, or simply weren't able to participate or launch a program or service, because you didn't have enough broadband service, capacity or other related features to launch the program or service with confidence?

Probe for specifics and attempt to place these findings in relation to pragmatics of launching or enhancing broadband service in the area, such as where broadband access might be needed and who needs to adopt broadband for the participant's program or service to be successful. If cost was the issue, what is the "right" price? Other issues that might arise are a trained workforce, equipment needs (like computers) or concerns about security of the Internet. Try to engage the participant to be specific.

If you have not heard specific applications as a result of the previous two questions, pose the follow-up question. If you have heard specific applications, move to the next key question.

Follow-up Question (5 minutes)

What are the key applications or business uses on a day-to-day basis where your organization needs efficient and reliable broadband services in the [REGION NAME] region?

Create a list of [SECTOR] related high-speed Internet or broadband network applications that will be critical to support. These may be as simple as email or more complex applications such as secure, shared databases.

Key Question (10 minutes)

How do you see potential broadband needs in the future related to your organization?

Explore. Create a list of future needs, probe for clarification when needed.

Key Question (5 minutes)

I want to leave here today with an understanding of how important this issue is to your [SECTOR] in the [REGION NAME] region? If you were creating a list of priorities for the [REGION NAME] region, where would you rank addressing the problem of broadband capacity?

First, fifth, tenth—not on the list?

As they assign a number, ask the participant what issues are above it and what are below it? Probe to better understand where broadband is on the list of priorities.

Insurance Question (5 minutes)

Before we close, is there anything else that you would like to say about broadband, or high-speed Internet service in the [REGION NAME] region?

Go around the room to ensure that everyone has had a chance to speak on the topic.

Thank you for the discussion today. These results will be shared with the [REGION NAME] Regional Broadband Planning Council and is part of a broad effort to understand broadband needs in our area. Once we have gathered information from all of the key stakeholders on this issue in the region, we will draft a Regional Broadband Plan to address our local needs. We are anticipating this process to be completed in the next 12 months and together these plans will help the State of Utah meet its overall mission to bring robust broadband access to all areas of our State.

Questions for Focused Discussion

1. How do you use the Internet or other network services at your organization?

2. Thinking about the work that you have done over the last year, were there instances when your Internet or broadband service or Internet service provider made all the difference in whether those projects were successful or not?

3. Think about the times when you haven't had enough broadband availability, or there have been other issues surrounding broadband, that have caused problems in completing a project or making a connection that was needed. Have you attempted and then failed at recent initiatives, or simply weren't able to participate or launch a program or service, because you didn't have enough broadband service, capacity or other related features to launch the program or service with confidence?

4. What are the key applications or business uses on a day-to-day basis where your organization needs efficient and reliable broadband services in the [REGION NAME] region? How do you see potential broadband needs in the future related to your organization?

5. How important is this issue to your [SECTOR] in the [REGION NAME] region? If you were creating a list of priorities for the [REGION NAME] region, where would you rank addressing the problem of broadband capacity? First, fifth, tenth—not on the list?

6. Is there anything else that you would like to say about broadband, or high-speed Internet service in the [REGION NAME] region?

Sample Residential Survey

This survey was used in 2011 by the Center for Public Lands and Rural Economics at Utah State University and Southern Utah University and provides questions that Utah's Regional Broadband Planning Councils may want to ask to evaluate broadband availability and adoption in their regions.

Hello, my name is [NAME]. We are contacting Utahns to get your opinions about current issues. You are being asked to participate in a telephone research survey project entitled "Determinants of Broadband Usage," which is being conducted by Utah State University. This survey is anonymous. No one, including the researcher, will be able to associate your responses with your identity. Your participation is voluntary. You may choose not to take the survey, to stop responding at any time, or to skip any questions that you do not want to answer. There is minimal risk in participating in this study. Researchers hope to analyze market data concerning use and demand for high speed Internet service. You must be at least 18 years of age to participate in this study. Your completion of the survey serves as your voluntary agreement to participate in this research project and your certification that you are 18 or older.

1. What county do you live in?

2. What is your gender?

a) Male
b) Female

3. At home, do you or any member of your household own or use any of the following computers?

a) A desktop computer
b) A laptop or netbook computer
c) A handheld computer or smart phone
d) Do not own a computer (DNR)

4. If you did not indicate that you have a computer, please check all the reasons that apply for not purchasing a computer.

□ I don't have one now, but plan to purchase one within the year
□ Cost/too expensive
□ Don't know how to use a computer
□ Sufficient access to computers
□ My cell phone is all I need
□ Don't want one
□ Don't know how to choose one
□ Don't have time to use one at home
□ Don't need one
□ Don't have time to learn how to use one
□ Don't know how to set it up
□ Don't want kids to use it
` □ Worried about computer safety (viruses, worms)
□ Privacy/security/personal information concerns
□ Other (specify) _____
□ Don't Know

5. Does anyone in your household use the Internet from home or send and receive email from home?

a) Yes
b) No

6. What is the main reason you do not have Internet access in your home?

a) Don't need it, not interested
b) Too expensive
c) Can use it somewhere else
d) Not available in my area
e) No computer or inadequate computer
f) Other reason (specify other reason)

7. Do you or any member of your household access the Internet at any of the following locations outside the home?

a) Work
b) School
c) Public library
d) Community center
e) Internet café/coffee shop
f) Someone else's home
g) Another place outside the home (specify other place)
h) Do not access the Internet outside the home (DNR)

8. About how often do you access the Internet?

a) Several times a day
b) About once a day
c) 3-5 days a week
d) 1-2 days a week
e) Every few weeks
f) Less than once a month
g) Do not access the Internet (DNR)

9. At home do you access the Internet using?

IF MORE THAN ONE RESPONSE GIVEN, ASK: Which do you use most often?

a) Dial-up service
b) DSL service
c) Cable modem service
d) Fiber optic service
e) Cell phone service
f) Satellite service
g) Commercial wireless Internet service
h) Some other service (specify)

10. How often do you access the Internet from your cell phone?

a) Several times a day
b) About once a day
c) 3-5 days a week
d) 1-2 days a week
e) Every few weeks
f) Less than once a month
g) Don’t know/refused

11. Do you pay an extra monthly fee for Internet access when you are on the go, such as a monthly fee for wireless Internet through an aircard, or a monthly data charge on your cell phone?

a) Yes
b) No

12. What is the main reason you do not have high speed (faster than dial-up) Internet access at home?

a) Don't need it, not interested
b) Too expensive
c) Can use it somewhere else
d) Not available in my area
e) Computer is inadequate
f) Other (specify)

13. What costs are you most concerned about?

a) Cost of the computer or other hardware (modem)
b) Cost of installing Internet service
c) Cost of monthly Internet service
d) Some other cost (specify)

14. Would you like to have a faster high speed connection?

a) Yes
b) No

15. How Fast?

16. Do you think you would like a faster connection sometime in the future?

a) Yes
b) No

17. About how many years have you had high speed Internet service at home?

If less than a year, ask: About how many months is that?

18. Since you first got high speed Internet at home would you say the quality of your high speed connection has...

a) Improved
b) Stayed about the same
c) Gotten worse

19. Is your Internet access combined with television or other services?

a) Just television
b) Just phone service
c) Television and phone service
d) Some other service (specify)
e) Not combined with any other service
f) Some other service (specify)

20. Thinking about your high-speed Internet service at home, do you subscribe to a basic broadband service, or do you pay extra for a premium service that promises faster speed?

a) Basic service
b) Premium service
c) Don’t know/refused

21. Many people value high-speed Internet at home because of the convenience of faster connection speeds. Others value it because the Internet connection is 'always on.' Which would you say matters more to you with respect to your home broadband connection?

a) Connection speed
b) Always on
c) Both are equally important (DO NOT READ)

22. To the nearest dollar, how much per month do you pay for Internet service?

23. What do you think a reasonable price for Internet service would be?

24. What do you think a reasonable price for high-speed Internet would be?

25. Thinking about your Internet service at home, which company provides that service?

26. Do you know how many providers of high-speed Internet service are in your area?

27. How many providers are available?

28. Do you happen to know whether high-speed Internet service is available in your neighborhood from...

a) A telephone company
b) A cable company
c) An independent Internet provider
d) Some other company (specify)
e) Don't know (DO NOT READ)

29. Thinking about your personal finances, have you done any of the following in the past 12 months? Have you cancelled a landline phone at home to save money in the past 12 months, or not?

a) Yes
b) No

30. Have you ever cancelled a landline phone at home to save money?

a) Yes
b) No

31. Thinking about your personal finances, have you done any of the following in the past 12 months? Have you cancelled your cell phone service or cut back to a cheaper plan in the past 12 months, or not?

a) Yes
b) No

32. Have you ever cancelled your cell phone service or cut back to a cheaper plan?

33. Thinking about your personal finances, have you done any of the following in the past 12 months? Have you cancelled or cut back on your Internet service in the past 12 months, or not?

a) Yes
b) No

34. Have you ever cancelled or cut back on your Internet service?

a) Yes
b) No

35. Thinking about your personal finances, have you done any of the following in the past 12 months? Have you cancelled or cut back on cable television services in the past 12 months, or not?

a) Yes
b) No

36. Have you ever cancelled or cut back on cable television services?

a) Yes
b) No

37. If you were to consider moving to a new community, what would be the most important factor in your decision?

38. What do you consider the most attractive feature of the community where you currently live?

39. What year were you born?

40. What is your race? You can choose more than one.

a) Native American
b) Asian
c) African American
d) Pacific Islander
e) White
f) Other
g) Refused

41. What is the highest level of formal education you have completed?

a) Some high school
b) High school or GED
c) Some college
d) 2 year degree or career, technical, or trade school
e) 4 year degree
f) Post graduate study (master's or other graduate degree)
g) Don't know/refused

42. What is your zip code?

43. How would you describe your current employment status?

a) Employed full time
b) Employed part time
c) Temporarily unemployed
d) Retired
e) Student
f) Refused

44. How many individuals are currently living or staying in your household?

45. What is your estimated annual household income?

46. How many members of your household are...

a) Under 14 years old
b) 14-18
c) 18-30
d) 30-45
e) 45-60
f) Over 60

47. What is your current marital status?

a) Married
b) Never married
c) Domestic partnership
d) Divorced
e) Widowed
f) Refused

Business Survey (Web-Based)

This survey provides questions that Utah's Regional Broadband Planning Councils may want to ask to evaluate business broadband availability and adoption in their regions.

The Utah Broadband Project is conducting this survey to determine the broadband usage, needs and interests of local businesses. Broadband is typically defined as a service that enables high-speed Internet access and high-capacity data communications as opposed to low speed services such as dial-up connections. The results of the survey will be used to help us gain a better of understanding of broadband availability and adoption and how these lend themselves to economic opportunity. Please take a few minutes to let us know if and how you currently utilize broadband services and what impact broadband has on your business.

1. Name of your business

_____

2. Which department do you work in

_____

3. Number of employees at your location

a) 1 to 4
b) 5 to 25
c) 26 to 100
d) 101 to 500
e) 501 to 750
f) 751 or more

4. Please tell us where your business is located

Address _____

City, State, Zip_____

5. What county is your business located in? _____

6. E-mail address _____

7. Name of person responding to this survey _____

8. Title of person responding to survey _____

9. Your business website address _____

10. Briefly describe what your business does

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

11. Indicate what national business classification best describes your business

a) Accommodation and food services
b) Administrative and support services
c) Agriculture, forestry, fishing and hunting
d) Arts, entertainment and recreation
e) Construction
f) Educational services
g) Finance and insurance
h) Health care and social assistance
i) Information Technology
j) Management of companies and enterprises
k) Manufacturing
l) Mining, quarrying, and oil and gas extraction
m) Professional, scientific and technical services
n) Public administration
o) Real estate and rental and leasing
p) Retail trade
q) Transportation and warehousing
r) Utilities
s) Waste management and remediation services
t) Wholesale trade
u) Other (please specify): _____

12. Is your business a satellite office?

a) Yes
b) No

13. If YES, where is your central office? _____

14. Does your business have satellite offices?

a) Yes
b) No

15. If YES, what are the locations of your satellite offices? _____

16. Do you have Internet service at your business?

a) Yes
b) No

17. Please check all the reasons for not having Internet service at your business

□ Internet service isn't available
□ I'm not comfortable using the Internet
□ My business doesn't need Internet service
□ I don't know how to use the Internet
□ Another company supports my Internet service needs
□ Internet service is too expensive
□ I don't have a computer at my business
□ Other (please specify):_____

18. Do you plan to establish Internet service?

a) Yes
b) No

19. If YES, when? _____

20. Who currently provides your business's local data communications, Internet service and connection

_____

21. What type(s) of Internet connection do you have?

a) Dial-up
b) Satellite broadband
c) Fiber to the premises
d) DSL
e) Fixed wireless
f) Cable modem
g) Mobile wireless (cellular aircard)
h) Frame relay/fractional T-1 (i.e., CIR)
i) T-1
j) Other (please specify): _____

22. For all the types of connections you have, indicate the speed of your connection(s). If you know you have the connection, but aren't sure of the speed, just indicate "don't know speed."

Type of Connection	**Speed**
Satellite broadband	
Fiber to the premises	
DSL	
Fixed wireless	
Cable modem	
Mobile wireless (cellular aircard)	
Frame relay/fractional T-1 (i.e., CIR)	
T-1	
Other (indicate type and speed)	

23. What year did you first establish broadband, or high-speed Internet service, at your business?

_____

24. Why haven't you adopted broadband, or high-speed Internet service? (Check all that apply)

- □ Not available
- □ Don't need high-speed Internet
- □ Too expensive
- □ Don't know why we haven't adopted broadband

25. Do you plan to adopt broadband (high-speed Internet) service?

a) Yes
b) No

26. If YES, when

_____

27. Please rate the following aspects of your services by checking the appropriate column.

	Very Satisfied	Satisfied	Dissatis-fied	Very Dis-satisfied	Don't Know/ Not Applicable
Cost of Internet/network service					
Connection speed					
Billing practices of your provider					
Training and technical support					
Customer service representative's knowledge when you call for help					
Installation technician's ability and courteous-ness					

28. In the last 30 days, indicate which applications your data communications/Internet access connection has supported (check all that apply):

- □ E-mail
- □ Videoconferencing
- □ File sharing
- □ E-business
- □ Website applications
- □ Business to business functions
- □ Online education
- □ Banking
- □ Monitoring functions
- □ Research
- □ Online appointments
- □ Online customer support
- □ Other: _____

29. How important is a robust broadband (high-speed Internet access) connection to the day to day operations of your business (check one)?

a) Very important
b) Important
c) Somewhat important
d) Not at all important

30. Why is a broadband connection important to you at your location?

_____
_____
_____

31. Would it be beneficial to you if the broadband environment in your area was enhanced?

a) Yes
b) No

32. If YES, when?_____

33. Do you have any thoughts about how to go about enhancing broadband availability in your region?

_____
_____
_____
_____

34. When you sought broadband services for your business at your location, how would you describe the availability of multiple, competing broadband options

a) Competitive, several options
b) Somewhat competitive, two providers
c) Not competitive at all, only one provider option
d) There is not a broadband option available that is suitable for my business

35. What do you currently pay each month for this service? (If you have indicated several services above, indicate your total expense for these services)

a) Less than $50
b) Between $50 and $99
c) Between $100 and $199
d) Between $200 and $299
e) More than $300 per month
f) Don't know how much we pay.
g) Other (please specify): _____

36. What is the term of your service contract(s)?

_____

37. Do you have any other comments about broadband service availability in your region?

_____
_____
_____
_____
_____
_____
_____

Sample Regional Broadband Plan Outline

Throughout the process, Utah's Regional Broadband Planning Teams are encouraged to cater their planning process, research, and conclusions to needs of their region. The following outline provides a summary of what a typical Regional Broadband Plan may include:

1. Introduction, Purpose of Planning Exercise and Regional Overview

2. Key Assessment Findings
   - Residential Survey
   - Business Survey
   - Focused Discussions by Sector

3. Detailed Strengths, Weaknesses, Opportunities and Challenges (SWOC) findings and analysis (using assessment as a guide)
   - Strengths of the region and how they relate to Utah Broadband Project goals.
   - Weaknesses of the region and how they challenge Utah Broadband Project goals.
   - Opportunities identified by the Regional Broadband Planning Council, how they support Utah Broadband Project goals and how to take advantage of these opportunities.
   - Challenges identified by the Regional Broadband Planning Council and mechanisms needed to addresses these challenges.

4. Strategic Direction(s)
   - Short, medium and long term goals and objectives to boost broadband adoption and availability.
     - Regional policies that potentially roll up into State policies for residential, business and anchor institutions encouraging:
       - Availability
       - Adoption
       - Literacy and usage
   - Action Items and Implementation Plan
     - Short and long term

5. Timelines and benchmarks for measuring progress:
   - Availability goals
   - Adoption goals
   - Deployment goals

Once the AOG drafts the plan, the Regional Broadband Planning Council members should review and provide comments, then the plan should be revised. From there, it should go back to the Planning Councils and AOG Coordinator for a final review before being issued publically. The initial regional broadband planning process is then completed. However, the plan is designed to be a dynamic document and may be updated as progress is made.

Sample Media and Community Relations Materials

Notes

UTAH REGIONAL BROADBAND PLANNING COUNCILS

Outreach Activity Options and Ideas

The following are additional ideas for your Regional Broadband Planning Council's outreach efforts. Select those that fit your situation and goals, and tailor them to your community.

Type	Description	Ideas
Information Materials	Print and electronic materials that deliver project information, updates, and news to stakeholders.	**Frequently Asked Questions (FAQs)—**Prepare questions and answers about your project for use as handouts or with the media. **Fact Sheet**—Use fact sheets summarizing details about your project for meetings, interviews, and events. **Newsletter**—Distribute a print or e-mail newsletter to tell key stakeholders about project updates, status, and news
Events	Opportunities to mark milestones with special activities, sponsored by recipients and/or partners.	**Association Meetings**—Attend trade, business, and other community association meetings to network with potential partners and participants. **Exhibits**—Exhibit at community events **Open Houses**—Invite residents, local officials, students, healthcare professionals, and others to visit your site and view demonstrations. **Ground Breaking/Grand Opening Ceremonies**—Invite stakeholders, including government officials, to celebrate major project milestones. **Job Fairs/Health Fairs**—Expand variety of stakeholders and reinforce your connection to the community.
Online	Internet-based tools that serve as a destination for stakeholders, e.g., websites, and/or deliver outbound communications vehicles, e.g., visitors electing to receive e-newsletters and updates.	**Website**—Build a separate site or a special section on your current site where you can focus on project accomplishments, and invite public comments. **Online Media/Newsroom**—Set aside a section of your website and link to news releases, media advisories, progress reports, etc. **Social Networking**—Establish a presence on a social networking site, such as Facebook, Twitter, YouTube, or Flickr, and update your profile regularly with pictures or news about your project.  ***Follow the Utah Broadband Project on Twitter at UtahBroadband or use a hashtag like #UtahBroadband to start a discussion thread***
Print, Broadcast, and Online Media Outreach	Working with print, broadcast, and online media to deliver information to stakeholders.	**News Releases**—Issue a news release or media advisory to announce events and project milestones, and report on results. See examples for a news release template. **Feature Articles**—Write a feature article about a specific broadband-related sector or highlighting a broadband success story. Submit it to your local newspaper or newsletter. **Letters to the Editor**—Write a letter to the editor discussing how regional broadband planning is affecting your local community. **Paid Advertising**—Place an advertisement in a local paper to invite stakeholders to test your service offering. **Public Service Announcements**—Provide a short video to a news station regarding your project's impact on the community.
Presentations	Speeches and briefings delivered at events sponsored by partners or civic or other organizations, and attended by your stakeholders.	**Speeches**—Prepare speeches for local community organizations to explain your Project's benefit and availability to their members. **Town Halls**—Host a town hall meeting to engage in a discussion with a local community about how to deliver the best services given their needs. **Slide Presentations**—Create a standard slide presentation that gives a high-level overview of your project to deliver at events.

*Chart derived from information published by NTIA in the Broadband Technology Opportunities Program Recipient Toolkit.

Press Release Tips

Your Regional Broadband Planning Council may choose to issue press releases during key phases of the planning process. Press releases are typically used to announce events and information to print, broadcast, and online media. This toolkit provides several sample press releases. They are designed to help you draft a release that tells your story in a format reporters will understand.

Drafting a Press Release

The samples provided are meant to show the format and typical information that may be included. You may also want to consider the following:

- Help the reader understand who, what, why…and if the release announces an event, include information on when and where the event will be held
- Include information you would need to know about the topic if you were reading it for the first time
- Add in additional background details and news related to your Regional Broadband Planning Council
- If appropriate, emphasize how your Planning Council is working to enhance broadband deployment and use for the benefit of key sectors such as economic development, education, health care, energy, transportation, and employment opportunities
- Include a story about how broadband has benefitted a resident or business
- Include quotes from Council participants or community leaders
- Define unfamiliar terms for your audience-define in the context of the paragraph
- Spell out acronyms on the first use and then use the abbreviation
- Try to be a direct and brief as possible

Press Release Distribution

You may want to consider the following tips as you issue a press release:

- Develop a list of media outlets that may be interested in your story which may include newspapers, blogs, newsletters, etc.
- Try to identify reporters that have covered similar issues in the past
- Consider issuing releases by email, as well as by hard copy during interviews or events
- Contact reporters before issuing the release to develop a relationship and increase the likelihood of publication

Issuing a Joint Press Release

If appropriate, you may want to work with the Utah Broadband Project and the Utah Governor's Office of Economic Development to issue a joint press release. For more information, please contact Kelleigh Cole at kcole@utah.gov.

Regional Broadband Planning Council Sample Press Release

FOR IMMEDIATE RELEASE:

[NAME OF AUTHORIZED SPOKESPERSON OR PRESS OFFICER]
[TITLE, ORGANIZATION]
[PHONE NUMBER]
[EMAIL]

Salt Lake City, Utah – The Utah Broadband Project is asking local communities to come together and work to improve broadband around the State.

The Project, based in the Governor's Office of Economic Development (GOED), has partnered with each of Utah's seven Associations of Governments (AOGs) to form Regional Broadband Planning Councils. Each of the seven Councils will gather community feedback and create a Regional Broadband Plan, designed to address local and regional broadband needs. The Planning Councils will work over the next year to develop plans, implement solutions and craft benchmarks for success in the region.

[QUOTE FROM CHAIR OF REGIONAL BROADBAND PLANNING COUNCIL]

Members of the Planning Council represent key interests in the region from areas such as education, libraries, business, economic development, healthcare, public safety, local government and tribal leadership.

[INSERT MEMBERSHIP OF THE REGIONAL BROADBAND PLANNING COUNCILS IF GROUP DESIRES OR LIST OF SECTORS REPRESENTED]

These Planning Councils will evaluate broadband availability and adoption throughout Utah. The councils will also encourage residents to contribute to these efforts by visiting broadband.utah.gov and testing their Internet connection with the online speed test.

A comprehensive assessment of high-speed Internet needs and interests, will be conducted over the next several months. Council Members have already begun gathering information on broadband use, and will be evaluating broadband access available to regional businesses and residents.

The Utah Broadband Project is funded by the federal American Recovery and Reinvestment Act (ARRA), which helps communities close the gap on high-speed Internet access by putting valuable tools and information in their hands as they work with public and private stakeholders to design solutions.

"Addressing broadband issues at the local level is absolutely critical as we plan for growth in our local economies and local infrastructure," said Tara Thue, Manager of the Utah Broadband Project. "A collaborative approach is imperative to ensure that private and public investments meet the future needs of our citizens, businesses and governments."

# # #

Editor's note
The following links may be appropriate as sidebar material.
To find out more information about the Utah Broadband Advisory Council and the Utah Broadband Project please visit:
Website: http://broadband.utah.gov
Blog: http://broadband.utah.gov/about/blog/
Interactive Map: http://broadband.utah.gov/map/
Advisory Council Webpage: http://broadband.utah.gov/about/broadband-advisory-council/
Twitter: http://twitter.com/utahbroadband

About the Utah Broadband Project
Web: www.broadband.utah.gov
The Utah Broadband Project is a joint effort between the Governor's Office of Economic Development, 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 adoption and deployment in Utah. The Project maintains Utah's interactive broadband availability map, and works with broadband providers to gather and verify data twice each year. The Utah Broadband Project has won several awards, including a 2011 GovMark Council Award and the 2011 January Achievement Award from the Utah Product Management Council.

About Utah's Associations of Governments
The State of Utah established seven Associations of Governments in 1970 to assist state and local governments with multi-county planning, program integration, and optimization of economies of scale. There are seven AOG regions in Utah including the Bear River Association of Governments, the Wasatch Front Regional Council, the Mountainland Association of Governments, the Uintah Basin Association of Governments, the Southeastern Utah Association of Local Governments, the Six County Association of Governments, and the Five County Association of Governments.

Survey Sample Press Release

FOR IMMEDIATE RELEASE:

[NAME OF AUTHORIZED SPOKESPERSON OR PRESS OFFICER]
[TITLE, ORGANIZATION]
[PHONE NUMBER]
[EMAIL]

Salt Lake City, Utah -- The Utah Broadband Project and the [AOG NAME], has partnered with [PLANNING COUNCIL NAME] to assess the broadband needs and gaps in Utah. The goal is to provide data to providers and policy leaders at the local and state level for future broadband planning.

The Planning Council, a team of community leaders, has been working with the Utah Broadband Project to improve broadband throughout the state. Your responses will help them identify where there is a need for improved service, or learn best practices in areas where service is adequate. Results will be used in two ways: 1) locations will be mapped to show adequate service, inadequate service or unmet demand for high speed Internet; 2) submissions will be used to communicate needs to the provider community.

Both residential and business surveys are available. Each survey will take a few minutes to complete and will measure current and future broadband usage and needs.

If you have Internet access, please complete the survey online at:

[LINK]

You may also mail a printed copy of the survey to the following address:

[ADDRESS]

If you would like to fill out the survey for your business, please complete the survey online at:

[LINK]

If you do not have Internet access, you can use a public computer at a library/school or work computer (if permitted) to complete the same online survey. Just click “no” to the question, “Does the address listed above (which is your home address) currently have an Internet connection?” By answering “no”, you will then have the opportunity to answer questions about your desired Internet service.

Please complete only one survey per household. The survey deadline is [DATE].

Thank you for your time and assistance with this project.

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Survey Findings Sample Press Release

FOR IMMEDIATE RELEASE:

[NAME OF AUTHORIZED SPOKESPERSON OR PRESS OFFICER]
[TITLE, ORGANIZATION]
[PHONE NUMBER]
[EMAIL]

Salt Lake City, Utah – According to a recent survey conducted by [AOG OR COUNTY NAMES],[XX percent] of residents in [AOG OR COUNTY NAMES] report that they subscribe to residential broadband service. This finding is part of a residential study completed by the [PLANNING COUNCIL NAME] Regional Broadband Planning Council in an effort to better understand broadband in our community. The findings of the study, released today, are being used to help the Planning Council identify broadband challenges and work to develop a plan over the next year to meet those challenges.

Those without broadband in our region indicated the key reasons for not subscribing are [XX, XX and XX.]

[QUOTE FROM CHAIR OF REGIONAL BROADBAND PLANNING COUNCIL]

Other key findings are:

[XX percent] do subscribe to broadband and most get that service from [TYPE OF SERVICE].

The top three online activities engaged in by local residents are [XX, XX and XX.]

[XX percent] also reported owning a laptop or computer and [XX percent] indicated they had a cell phone that allowed them to browse the Internet and read their email.

The Planning Council also surveyed businesses in [AOG OR COUNTY NAMES] and determined that [XX percent] of the businesses surveyed subscribe to broadband service.

This study was part of a statewide initiative to improve broadband around the State.

The [PLANNING COUNCIL NAME] was organized by the Utah Broadband Project to gather community feedback and to create a Regional Broadband Plan designed to meet local and regional broadband needs. This [XX] member Planning Council will continue working over the next [XX] months to develop a plan to implement their solutions and to craft benchmarks for success.

The Utah Broadband Project is funded by the federal American Recovery and Reinvestment Act (ARRA) and helps communities close the gap on high-speed Internet accessibility by putting valuable tools and information in their hands as they work with public and private stakeholders to design solutions.

A full copy of the residential study can be found at [LINK].

# # #

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The State of Utah established seven Associations of Governments in 1970 to assist state and local governments with multi-county planning, program integration, and optimization of economies of scale. There are seven AOG regions in Utah including the Bear River Association of Governments, the Wasatch Front Regional Council, the Mountainland Association of Governments, the Uintah Basin Association of Governments, the Southeastern Utah Association of Local Governments, the Six County Association of Governments, and the Five County Association of Governments.

Completion of the Regional Broadband Plan Sample Press Release

FOR IMMEDIATE RELEASE:

[NAME OF AUTHORIZED SPOKESPERSON OR PRESS OFFICER]
[TITLE, ORGANIZATION]
[PHONE NUMBER]
[EMAIL]

Salt Lake City, Utah – The [PLANNING COUNCIL NAME], organized by the Utah Broadband Project and the [AOG NAME] has completed their work of gathering community feedback and creating a Regional Broadband Plan. The plan is designed to give an overview of broadband access and availability in the region and provide recommendations for communities to better plan for and utilize broadband technology.

The new plan calls for several broadband goals to be met. These include:

[RECOMMENDATIONS]

[QUOTE FROM CHAIR OF REGIONAL BROADBAND PLANNING COUNCIL]

Members of the Planning Council included:

[INSERT MEMBERSHIP OF THE REGIONAL BROADBAND PLANNING COUNCIL]

The Utah Broadband Project is funded by the federal American Recovery and Reinvestment Act (ARRA) and helps communities close the gap on high-speed Internet accessibility and adoption by putting valuable tools and information in their hands as they work with public and private stakeholders to design solutions.

"[QUOTE]," said Tara Thue, Manager of the Utah Broadband Project. "[QUOTE]"

Seven Regional Broadband Planning Councils are working to create grassroots plans to resolve high-speed Internet accessibility and adoption issues and transform Utah.

# # #

Editor's note
The following links may be appropriate as sidebar material.
To find out more information about the Utah Broadband Advisory Council and the Utah Broadband Project please visit:
Website: http://broadband.utah.gov
Blog: http://broadband.utah.gov/about/blog/
Interactive Map: http://broadband.utah.gov/map/
Advisory Council Webpage: http://broadband.utah.gov/about/broadband-advisory-council/
Twitter: http://twitter.com/utahbroadband

About the Utah Broadband Project
Web: www.broadband.utah.gov
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statewide map of available broadband services and a plan to increase broadband adoption and deployment in Utah. The Project maintains Utah's interactive broadband availability map, and works with broadband providers to gather and verify data twice each year. The Utah Broadband Project has won several awards, including a 2011 GovMark Council Award and the 2011 January Achievement Award from the Utah Product Management Council.

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Resource Materials and Links

Notes

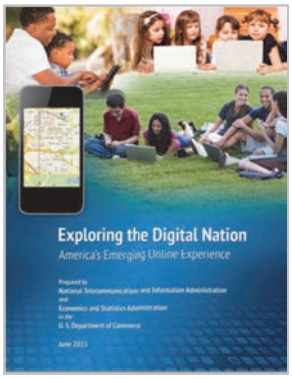
UTAH REGIONAL BROADBAND PLANNING COUNCILS

Several online resources exist that may be beneficial for Utah's Regional Broadband Planning Councils to review. These resources include materials to assist with broadband access and adoption programs, research highlighting national broadband trends, broadband policy information, and links to agencies that offer broadband funding opportunities.

NTIA Broadband Adoption Toolkit

The U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) recently released its Broadband Adoption Toolkit, a document aimed at sharing best practices developed from broadband adoption and digital literacy projects funded by the Broadband Technology Opportunities Program (BTOP). The toolkit provides specific examples from BTOP recipients describing the strategies and practices that worked best for their broadband adoption programs. The toolkit can be accessed online at http://www2.ntia.doc.gov/files/toolkit_042913.pdf.

NTIA Digital Nation Reports



NTIA also analyzes broadband usage in the United States based on data gained through an annual nationwide survey commissioned from the U.S. Census Bureau. In a series of "Digital Nation" reports, NTIA publishes findings on broadband adoption in America, including why people do not subscribe and which populations are lagging in usage. This research can inform efforts to close the digital divide, helping more Americans compete in the 21st century economy and improving overall quality of life. Copies of these reports can be found at http://www.ntia.doc.gov/category/digital-nation-reports.

FCC Resources

The Federal Communications Commission (FCC) regulates interstate and international communications by radio, television, wire, satellite and cable providers. The FCC website has a section dedicated to broadband resources that can be accessed at http://www.fcc.gov/broadband. The section contains resources for consumers, information on increasing broadband access, industry rules and laws, and information on various broadband technologies.

The National Broadband Plan

In 2009, the FCC drafted the National Broadband Plan, which includes a detailed strategy for achieving affordability and maximizing use of broadband to advance consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic

growth, and other national purposes. A copy of the National Broadband Plan can be accessed at http://www.broadband.gov/plan.

USDA Resources

The United States Department of Agriculture (USDA) Rural Development has set a priority to increase economic opportunity in rural America and finance new construction and upgrades to telecommunications infrastructure. The USDA website features a section dedicated to providing information on telecommunications loans and grants. This information can be accessed at http://www.rurdev.usda.gov/UTP_Programs.html.

State Broadband Initiative Websites

The Utah Broadband Project is State Broadband Initiative (SBI) planning entity that implements the joint purposes of the Recovery Act and the Broadband Data Improvement Act, which envisioned a comprehensive program, led by state entities or non-profit organizations working at their direction, to facilitate the integration of broadband and information technology into state and local economies. Each state is implementing an SBI program and has a website dedicated to broadband planning which may provide ideas for Regional Broadband Planning Councils. A list of these programs can be accessed at http://www2.ntia.doc.gov/SBDD.

American Planning Association Resources

The American Planning Association (APA) was formed to bring together planners, citizens and elected officials to build communities that enrich citizen's lives. The APA website, located at www.planning.org contains general planning resources that may be helpful to the Regional Broadband Planning Teams.

Other Online Resources

The Utah Broadband Project website also lists additional online resources which may be helpful to the Regional Broadband Planning Councils. The resources section includes links to federal broadband programs, federal and state congressional committees that oversee telecommunications legislation, and academic research. These resources can be accessed by clicking on the resources tab on the website or at http://broadband.utah.gov/resources.