

THE STATE OF UTAH
BROADBAND PROJECT
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Introduction

This Regional Broadband Plan is part of a statewide effort called 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 broadband services and a plan to increase broadband deployment and adoption in the State of Utah. Similar programs have been undertaken in all 50 states through the State Broadband Initiative (SBI) program, which is being administered by the National Telecommunications and Information Administration (NTIA) and funded through the American Recovery and Reinvestment Act of 2009.

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

This Regional Broadband Plan was compiled based on feedback and discussions held during meetings with local communities and the Regional Broadband Planning Council. The plan focuses on broadband issues and needs for the Uintah Basin Association of Government’s (UBAOG) region. The region includes Daggett, Duchesne and Uintah Counties.

This Regional Broadband Plan provides guidance for the advancement of broadband services and infrastructure, and will help to enhance broadband usage and demand in the region. The plan also provides a framework to advise the State of Utah, local government officials, broadband providers and other stakeholders about broadband-related topics and issues.

Process

Broadband is high-speed Internet access that is always on and faster than the traditional dial-up access. Broadband access is provided by a variety of technologies, including; fiber optic cables; cable access; sharing infrastructure with cable television services; digital subscriber lines (DSL), sharing infrastructure with land telephone services; satellite transmission, used primarily in remote areas; mobile broadband networks (for example, 3G and 4G), most commonly accessed by smartphones and tablet computers.

These technologies have varied speeds depending on network structure and usage. Any of the above technologies can be connected to a wireless router, providing wireless Internet access (“Wi-Fi”) to devices within range of the router.

Broadband is used not only for e-mailing and accessing web pages, but for an enormous variety of applications, from database management to remote medical diagnosis, controlling building access to operating public transit systems, conducting financial transactions to earning degrees via online classes.

Throughout history, infrastructure networks have served to connect people, places, ideas and products. The great infrastructure of the 21st century is broadband. Communities and regions that develop their broadband infrastructure will have better, faster access to new ideas, innovations and technologies. Being connected means having more high-paying jobs, a stronger educational system, a more efficient government, more effective public safety and health care providers and a better quality of life. Planning now to ensure that future broadband infrastructure needs will be met is essential for sustainable economic development and prosperity within the region.

The UBAOG Regional Broadband Plan is a comprehensive initiative that began with the goal of understanding where broadband is currently available in the region, how it can be made more widely available in the future and how to encourage increased levels of broadband adoption and usage.

Participants (by organization)

A Regional Broadband Committee was formed, with experts in many different fields that use broadband, to determine what needs are currently being met and what needs still need to be met in the region. The committee was made up of the following:

Laurie Brummond	Executive Director, UBAG
Cody Christensen	UBAG Regional Planner
Kevin Yack	Transit Director, UBAG
Mark Raymond	Uintah County Commissioner
Kirk Wood	Duchesne County Commissioner
Brian Raymond	Daggett County Economic Development
Dave Woolstenhulme	Uintah Basin Applied Technology College
Pat Asbill	Daggett County
Jeff Goodrich	STRATA Networks (other STRATA representatives participated)
Sam Passey	Uintah County Library
Dave Brotherson	Duchesne County School District
Matt Cazier	Uintah County Planner
Allen Parker	Vernal City Planner
Chris Hoem	Naples City Planner
Tammie Lucero	Uintah County Economic Development Director
Irene Hansen	Duchesne County Economic Development and Chamber
Paul Hacking	Utah State University-Impact Mitigation District

Outreach Methods/Meetings

The UBAOG Regional Broadband Committee met several times throughout the process. Meetings were held in September, October and November of 2013 and January and February of 2014. The early meetings were strategy sessions to set the regional priorities and to develop a plan on how to proceed. The later meetings were held to discuss what is being done in the area right now and what deployment plans local providers have for the region.

Meeting Date	Location
September	UBAOG Offices
October	UBAOG Offices
November	Strata Networks Headquarters
January	UBAOG Offices
February	Conference Call

Measureable Milestones

The following is a list of milestones set by the committee:

1. Determine the Strengths, Weaknesses, Opportunities and Challenges of each of the areas on the priority worksheet.
2. Make a list of regional priorities.
3. Determine how the strengths became strengths and use that knowledge to build on the weaknesses.
4. Find resources within the state that can help build on our strengths and strengthen our weaknesses.
5. Find what funding sources might be available to help build our area.
6. Decide what would be the best way to spend available funding.
7. Find out how to work with state officials to improve access in the area.
8. Use existing resources and work with providers to build on their existing plans.
9. Work with educational leaders to determine how best to help build on their future plans.
10. Provide detailed mapping of current and future infrastructure.
11. Work toward a 'dig-once' policy with local government agencies.
12. Gain more collaboration with local service providers and local government officials.
13. Educate the public on the importance of broadband to support future growth and future economic opportunities.

Regional Overview

Duchesne County

Duchesne County’s economy is dominated by the mining industry, mainly oil and natural gas extraction. With few exceptions, this industry drives most all other industries in the county as well, including a large transportation and delivery industry. The industry has seen a steady growth since the downturn in 2008.

The average annual level of employment for Duchesne County in 2012 was 9,046, over 1,000 more jobs on average than in 2011. Over half of these job gains (632 to be exact), were a result of job gains in mining (427 jobs, or 24.2 percent higher than 2011) and construction (205 jobs, or 29.6 percent higher than 2011). Other strong job gains in Duchesne County for 2012 include transportation and warehousing (an average of 129 more jobs than in 2011) and wholesale trade (with 82 more jobs in 2012 than in 2011 on average). There were a few industries that slipped in jobs over 2012, but none of these job losses was significant.

Subject	Duchesne County, Utah		
	Estimate	Percent	Percent Margin of Error
OCCUPATION			
Civilian employed population 16 years and over	7,497	100%	(X)
Management, business, science, and arts occupations	2,172	29.0%	+/-2.7
Service occupations	1,001	13.4%	+/-1.9
Sales and office occupations	1,495	19.9%	+/-2.5
Natural resources, construction and maintenance occupations	1,550	20.7%	+/-1.9
Production, transportation and material moving occupations	1,279	17.1%	+/-1.7
INDUSTRY			
Civilian employed population 16 years and over	7,497	100%	(X)
Agriculture, forestry, fishing, hunting and mining	1,596	21.3%	+/-2.9
Construction	493	6.6%	+/-1.4
Manufacturing	129	1.7%	+/-0.9
Wholesale trade	180	2.4%	+/-1.1
Retail trade	802	10.7%	+/-2.3
Transportation, warehousing and utilities	605	8.1%	+/-1.8
Information	216	2.9%	+/-1.4
Finance, insurance, real estate, rental and leasing	184	2.5%	+/-1.1
Professional, scientific, management, administrative and waste management services	354	4.7%	+/-1.4
Educational services, health care and social assistance	1,522	20.3%	+/-2.5
Arts, entertainment, recreation, accommodation and food services	657	8.8%	+/-2.0
Other services, except public administration	289	3.9%	+/-1.2
Public administration	470	6.3%	+/-1.8

INCOME AND BENEFITS (IN 2012 INFLATION-ADJUSTED DOLLARS)			
Total households	6,827	6,827	(X)
Less than \$10,000	253	3.7%	+/-1.1
\$10,000 to \$14,999	461	6.8%	+/-1.8
\$15,000 to \$24,999	633	9.3%	+/-1.6
\$25,000 to \$34,999	472	6.9%	+/-1.6
\$35,000 to \$49,999	1,093	16.0%	+/-2.2
\$50,000 to \$74,999	1,675	24.5%	+/-3.1
\$75,000 to \$99,999	952	13.9%	+/-2.3
\$100,000 to \$149,999	868	12.7%	+/-1.9
\$150,000 to \$199,999	251	3.7%	+/-1.0
\$200,000 or more	169	2.5%	+/-0.8
Median household income (dollars)	55,724	(X)	(X)
Mean household income (dollars)	67,122	(X)	(X)

The following table shows unemployment statistics for Duchesne County.

QuickFacts	
Unemployment Rate	
November 2013	
Duchesne County ^p	3.1%
Utah ^p	4.3%
U.S.	7.0%
<small>p=preliminary</small>	
Nonfarm Employment	
3rd Quarter 2013 Change from Previous Year	
Duchesne County	0.3%
Utah	3.1%
U.S.	1.7%
Total Permitted Construction Values	
January-April 2013 Change from Previous Year	
Duchesne County	-5.5%
Dwelling Units Permitted	
January-April 2013 Change from Previous Year	
Duchesne County	27
Change from Same Period 2011	12.5%
Sales	
3rd Qtr 2013 Change from Previous Year	
Duchesne County	2.0%
Source: Utah Dept of Workforce Services, U.S. Bureau of Labor Statistics, Utah Tax Commission, Utah Bureau of Econ & Business Research.	

Source: Department of Workforce Services

As of February 2014, the unemployment rate in Duchesne County has dropped to 3.1 percent, which is again due largely to the growth seen in the oil and gas industry. This growth has also led to a high demand for construction, as permits have grown over 25 percent over the previous year. The labor force in the county has also surpassed the numbers reached in 2008 and are continuing to rise. The following table gives a history of employment in Duchesne County over the past year and shows a steady job market in the county.

Labor Force Data - Historical Data (Not Seasonally Adjusted)						
Area Name	Period Year	Month	Labor Force	Employment	Unemployment	Unemployment Rate
Duchesne	2014	February	11180	10,768	412	3.7%
Duchesne	2014	January	11033	10,648	385	3.5%
Duchesne	2013	Annual Average	11064	10,682	382	3.5%
Duchesne	2013	December	11074	10,758	316	2.9%
Duchesne	2013	November	11097	10,789	308	2.8%
Duchesne	2013	October	11098	10,762	336	3.0%
Duchesne	2013	September	11169	10,825	344	3.1%
Duchesne	2013	August	11343	10,938	405	3.6%
Duchesne	2013	July	11286	10,892	394	3.5%
Duchesne	2013	June	11308	10,886	422	3.7%
Duchesne	2013	May	11171	10,785	386	3.5%
Duchesne	2013	April	10864	10,497	367	3.4%
Duchesne	2013	March	10730	10,319	411	3.8%
Duchesne	2013	February	10791	10,348	443	4.1%
Duchesne	2013	January	10836	10,380	456	4.2%

Uintah County

Uintah County, much like Duchesne County, has a dominating economic cluster with the oil, gas and mining industries. There is some agriculture in Uintah County, primarily focusing on raising cattle and sheep, and cultivating alfalfa. A significant portion of west Uintah County is taken up by the Uintah and Ouray Indian Reservation, with the Ute Tribe's headquarters in Fort Duchesne. Much of the rest of the county is land owned by the Ashley National Forest and the Bureau of Land Management. There is relatively little private land in the county. Because there is so little private land in the county, and a large portion of federally owned lands, there are many obstacles that the county faces in developing land in the county for good economic use. In spite of those obstacles, Uintah County continues to find ways to produce jobs and keep unemployment low. The following table shows the low unemployment numbers in the county as well as other indicators that Uintah County continues to thrive.

Subject	Uintah County		
	Estimate	Percent	Margin of Error
OCCUPATION			
Civilian employed population 16 years and over	14,211	100%	(X)
Management, business, science and arts occupations	3,837	27.0%	+/-2.3
Service occupations	2,064	14.5%	+/-1.9
Sales and office occupations	3,392	23.9%	+/-2.2
Natural resources, construction and maintenance occupations	2,831	19.9%	+/-2.3
Production, transportation and material moving occupations	2,087	14.7%	+/-2.0

INDUSTRY			
Civilian employed population 16 years and over	14,211	100%	(X)
Agriculture, forestry, fishing and hunting and mining	3,246	22.8%	+/-2.3
Construction	847	6.0%	+/-1.5
Manufacturing	370	2.6%	+/-1.0
Wholesale trade	300	2.1%	+/-0.7
Retail trade	1,538	10.8%	+/-2.0
Transportation, warehousing, and utilities	907	6.4%	+/-1.5
Information	111	0.8%	+/-0.4
Finance, insurance, real estate, rental and leasing	525	3.7%	+/-1.3
Professional, scientific, management, administrative and waste management services	904	6.4%	+/-1.5
Educational services, health care and social assistance	2,233	15.7%	+/-1.9
Arts, entertainment, recreation, accommodation and food services	1,619	11.4%	+/-1.9
Other services, except public administration	726	5.1%	+/-1.2
Public administration	885	6.2%	+/-1.3
CLASS OF WORKER			
Civilian employed population 16 years and over	14,211	100%	(X)
Private wage and salary workers	10,779	75.8%	+/-2.5
Government workers	2,610	18.4%	+/-2.3
Self-employed, not incorporated business workers	818	5.8%	+/-1.3
Unpaid family workers	4	0.0%	+/-0.1
INCOME AND BENEFITS (IN 2012 INFLATION-ADJUSTED DOLLARS)			
Total households	10,957	10,957	(X)
Less than \$10,000	483	4.4%	+/-1.0
\$10,000 to \$14,999	448	4.1%	+/-1.5
\$15,000 to \$24,999	832	7.6%	+/-1.7
\$25,000 to \$34,999	1,043	9.5%	+/-2.0
\$35,000 to \$49,999	1,139	10.4%	+/-2.1
\$50,000 to \$74,999	2,877	26.3%	+/-2.8
\$75,000 to \$99,999	1,827	16.7%	+/-2.3
\$100,000 to \$149,999	1,459	13.3%	+/-1.9
\$150,000 to \$199,999	466	4.3%	+/-1.0
\$200,000 or more	383	3.5%	+/-1.3
Median household income (dollars)	61,850	(X)	(X)
Mean household income (dollars)	72,479	(X)	(X)

The following table shows unemployment statistics for Uintah County.

QuickFacts	
Unemployment Rate	
November 2013	
Uintah County ^p	3.3%
Utah ^p	4.3%
U.S.	7.0%
<small>p=preliminary</small>	
Nonfarm Employment	
September 2013 Change from Previous Year	
Uintah County	-3.3%
Utah	3.1%
U.S.	1.7%
Total Permitted Construction Values	
January-April 2013 Change from Previous Year	
Uintah County	-43.3%
Dwelling Units Permitted	
January-April 2013 Change from Previous Year	
Uintah County	67
Change from Same Period 2011	-82.6%
Sales	
3rd Qtr 2013 Change from Previous Year	
Uintah County	-11.8%
Source: Utah Dept of Workforce Services, U.S. Bureau of Labor Statistics, Utah Tax Commission, Utah Bureau of Econ & Business Research.	

Source: Department of Workforce Services

Uintah County has seen a declining unemployment rate since 2009. The unemployment rate for Uintah County is 3.6 percent for February of 2014, as compared to the state rate of 3.9 percent, is an indication that the economy is continuing to grow. The following table gives a history of employment in Uintah County over the past year and shows a steady job market in the county.

Labor Force Data - Historical Data (Not Seasonally Adjusted)						
Area Name	Period Year	Month	Labor Force	Employment	Unemployment	Unemployment Rate
Uintah	2014	February	17990	17,344	646	3.6%
Uintah	2014	January	17865	17,246	619	3.5%
Uintah	2013	Annual Average	18043	17,387	656	3.6%
Uintah	2013	December	17928	17,397	531	3.0%
Uintah	2013	November	18029	17,480	549	3.0%
Uintah	2013	October	17865	17,263	602	3.4%
Uintah	2013	September	18171	17,592	579	3.2%
Uintah	2013	August	18344	17,644	700	3.8%
Uintah	2013	July	18129	17,447	682	3.8%
Uintah	2013	June	18658	17,934	724	3.9%
Uintah	2013	May	18328	17,668	660	3.6%
Uintah	2013	April	17892	17,272	620	3.5%
Uintah	2013	March	17757	17,050	707	4.0%
Uintah	2013	February	17702	16,948	754	4.3%
Uintah	2013	January	17714	16,949	765	4.3%

Daggett County

Daggett County's economy is dominated by government services of federal lands and the operation of Flaming Gorge Dam. Growth in tourism has expanded recreation and services-based businesses. These activities now form a major component of the county's economy.

Daggett County's employment count is very seasonal, with the high point being the summer months, while the winter months go begging for activity. Yet whatever foundational base Daggett does have in its economy, it will be there in the winter months.

Labor Force Data - Historical Data (Not Seasonally Adjusted)						
Area Name	Period Year	Month	Labor Force	Employment	Unemployment	Unemployment Rate
Daggett	2014	February	373	347	26	7.0%
Daggett	2014	January	365	341	24	6.6%
Daggett	2013	Annual Average	433	411	22	5.1%
Daggett	2013	December	370	349	21	5.7%
Daggett	2013	November	397	378	19	4.8%
Daggett	2013	October	423	405	18	4.3%
Daggett	2013	September	474	455	19	4.0%
Daggett	2013	August	491	472	19	3.9%
Daggett	2013	July	510	492	18	3.5%
Daggett	2013	June	525	503	22	4.2%
Daggett	2013	May	509	490	19	3.7%
Daggett	2013	April	419	397	22	5.3%
Daggett	2013	March	365	339	26	7.1%
Daggett	2013	February	347	320	27	7.8%
Daggett	2013	January	363	335	28	7.7%

The main focus for the Daggett County Economic Development Office is to educate, inform and promote the advantages and opportunities of life in Daggett County; enhance the infrastructure and environment to enable businesses to develop and succeed; capitalize on the area's uniqueness to develop growth and diversification of business opportunities and facilities; and develop strong, cohesive relationships between governmental entities, local businesses and local and neighboring communities.

The following table shows employment and income information for Daggett County.

Subject	Daggett County, Utah		
	Estimate	Percent	Percent Margin of Error
OCCUPATION			
Management, business, science and arts occupations	68	23.9%	+/-10.4
Service occupations	99	34.9%	+/-13.1
Sales and office occupations	49	17.3%	+/-7.3
Natural resources, construction and maintenance occupations	46	16.2%	+/-7.2
Production, transportation and material moving occupations	22	7.7%	+/-4.7
INDUSTRY			
Agriculture, forestry, fishing, hunting and mining	64	22.5%	+/-13.4
Construction	21	7.4%	+/-6.1
Manufacturing	4	1.4%	+/-1.9
Wholesale trade	0	0.0%	+/-10.0
Retail trade	21	7.4%	+/-3.7
Transportation and warehousing and utilities	23	8.1%	+/-6.9
Information	0	0.0%	+/-10.0
Finance, insurance, real estate, rental and leasing	0	0.0%	+/-10.0
Professional, scientific, management, administrative and waste management services	15	5.3%	+/-4.9
Educational services, health care and social assistance	57	20.1%	+/-9.0
Arts, entertainment, recreation, accommodation and food services	31	10.9%	+/-6.7
Other services, except public administration	3	1.1%	+/-2.0
Public administration	45	15.8%	+/-7.8
INCOME AND BENEFITS (IN 2012 INFLATION-ADJUSTED DOLLARS)			
Total households	343	343	(X)
Less than \$10,000	17	5.0%	+/-3.5
\$10,000 to \$14,999	36	10.5%	+/-5.8
\$15,000 to \$24,999	35	10.2%	+/-6.6
\$25,000 to \$34,999	48	14.0%	+/-6.8
\$35,000 to \$49,999	48	14.0%	+/-7.5
\$50,000 to \$74,999	76	22.2%	+/-8.7
\$75,000 to \$99,999	35	10.2%	+/-5.0
\$100,000 to \$149,999	33	9.6%	+/-4.6
\$150,000 to \$199,999	8	2.3%	+/-3.5
\$200,000 or more	7	2.0%	+/-2.8
Median household income (dollars)	44,792	(X)	(X)
Mean household income (dollars)	56,876	(X)	(X)

*Source: US Census

The following table shows unemployment statistics for Daggett County.

QuickFacts	
Unemployment Rate	
November 2013	
Daggett County ^p	4.9%
Utah ^p	4.3%
U.S.	7.0%
<small>p=preliminary</small>	
Nonfarm Employment	
September 2012 Change from Previous Year	
Daggett County	-0.4%
Utah	3.1%
U.S.	1.7%
Total Permitted Construction Values	
January-April 2013 Change from Previous Year	
Daggett County	0.0%
Dwelling Units Permitted	
January-April 2013 Change from Previous Year	
Daggett County	0
Change from Same Period 2011	0.0%
Sales	
3rd Qtr 2013 Change from Previous Year	
Daggett County	31.7%
Source: Utah Dept of Workforce Services, U.S. Bureau of Labor Statistics, Utah Tax Commission, Utah Bureau of Econ & Business Research.	

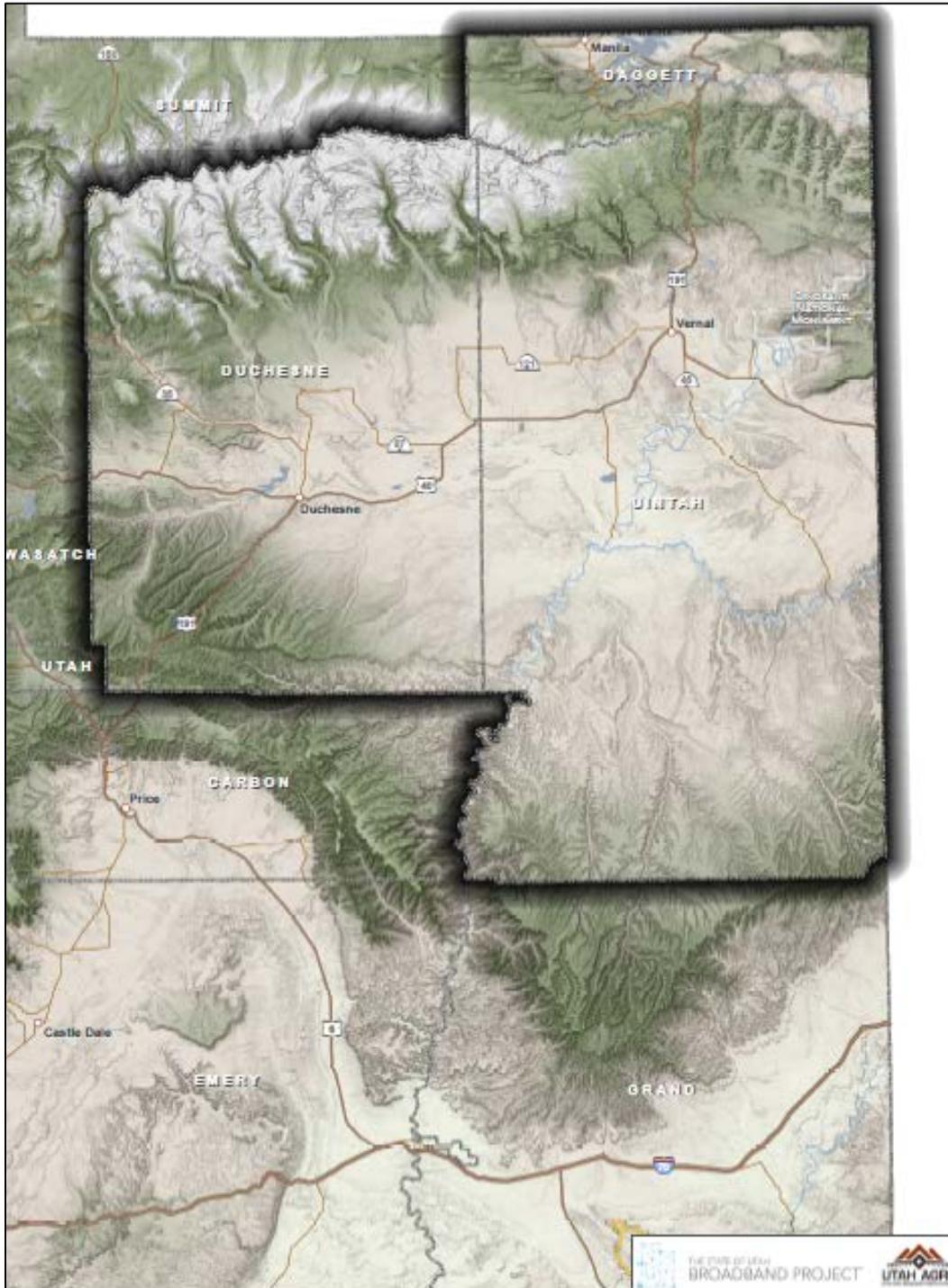
Source: Department of Workforce Services

Broadband in Daggett County is lacking. Because of its remote location, high mountain terrain and its isolation, it has been difficult to get coverage to many parts of Daggett County. As shown in the coverage map later in this document, there are still many areas that are lacking service.

Maps

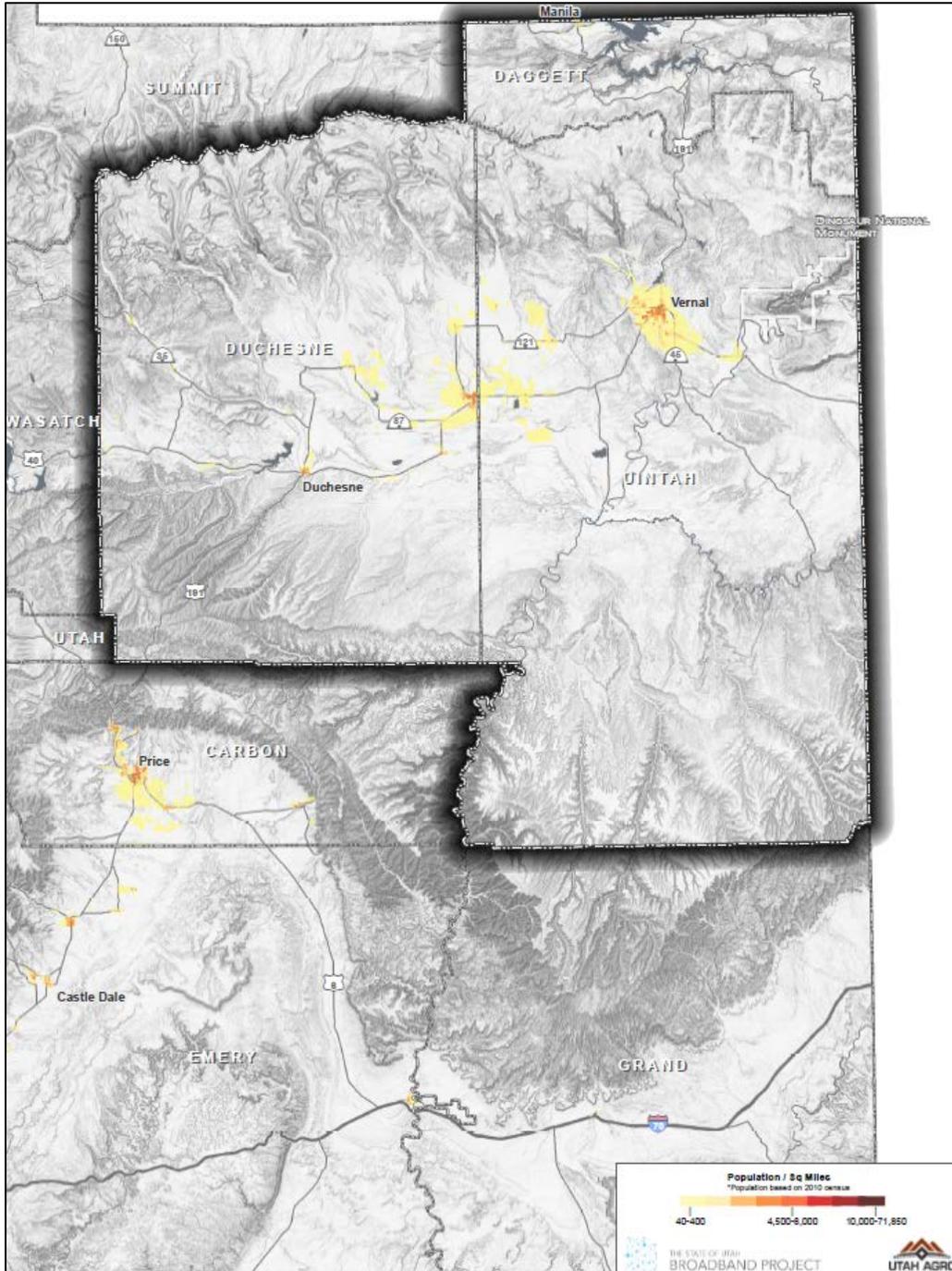
Uintah Basin Terrain

The following map shows the terrain of the Uintah Basin area. As you can see, it ranges from high mountain peaks to desert climates.



Population Density

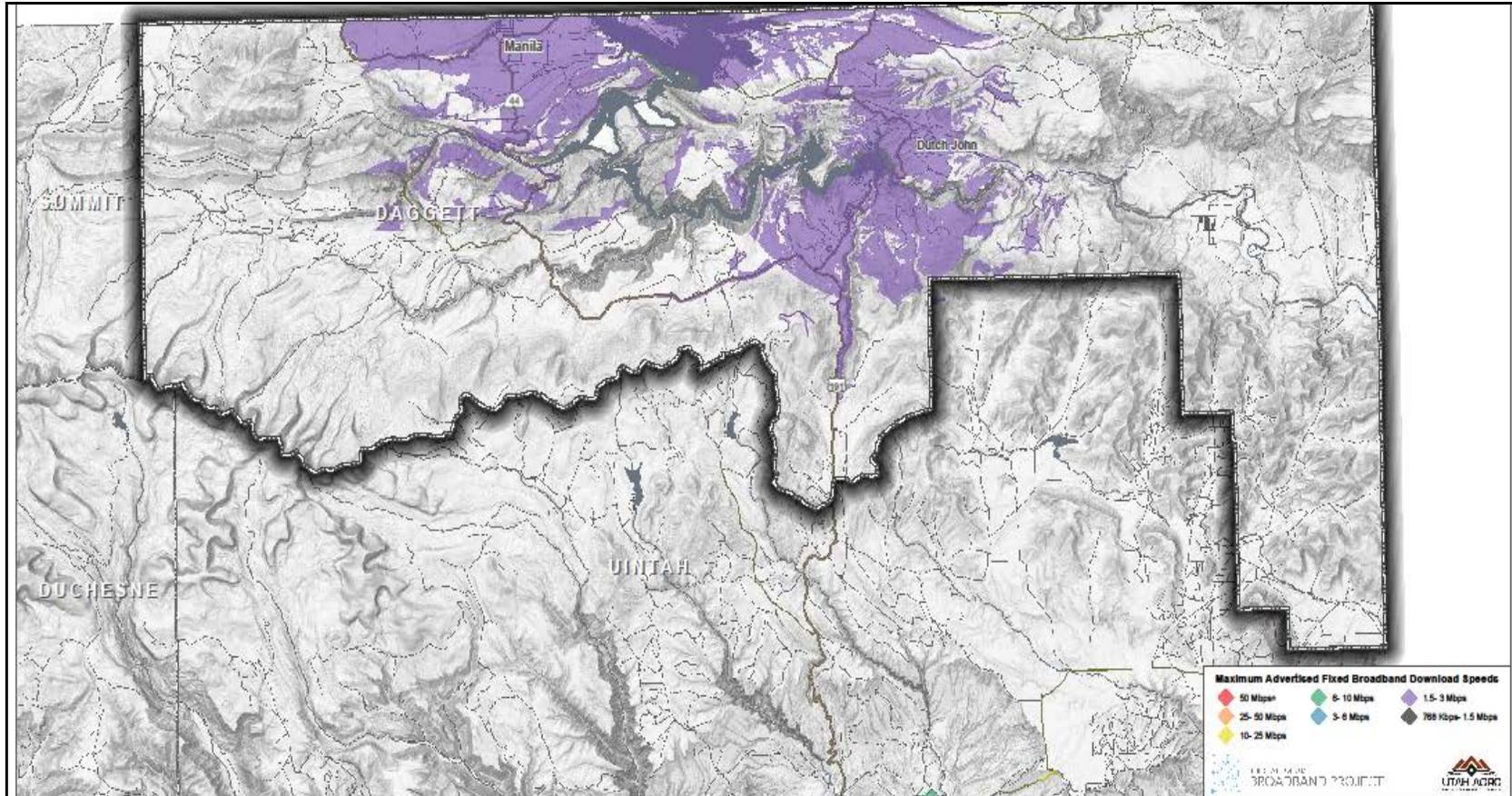
Most of the population of the Uintah Basin falls within the Highway 40 corridor, but there are also pockets of population in outlying areas.



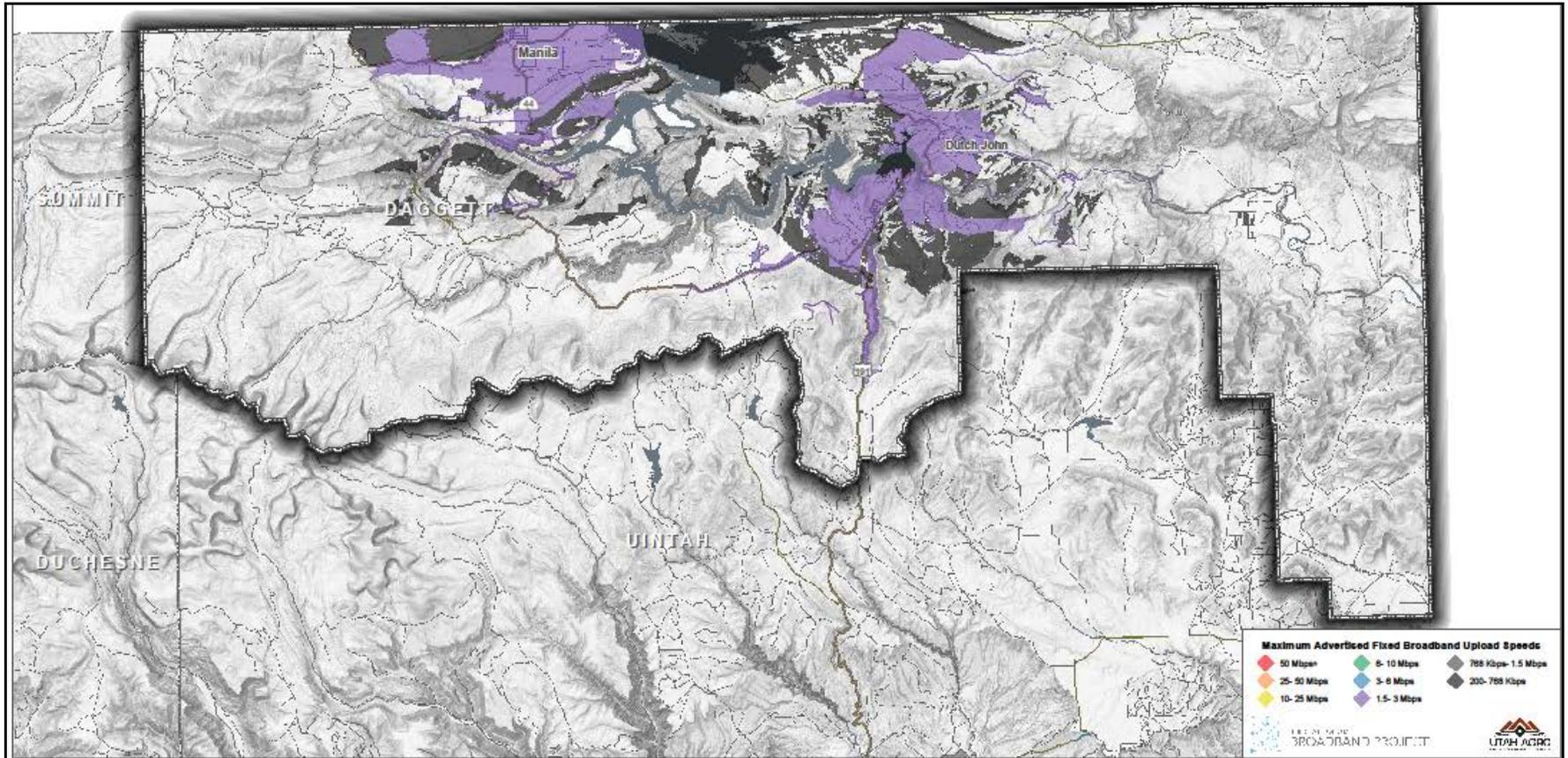
Speed Maps

The following maps show different coverage speeds in the three counties.

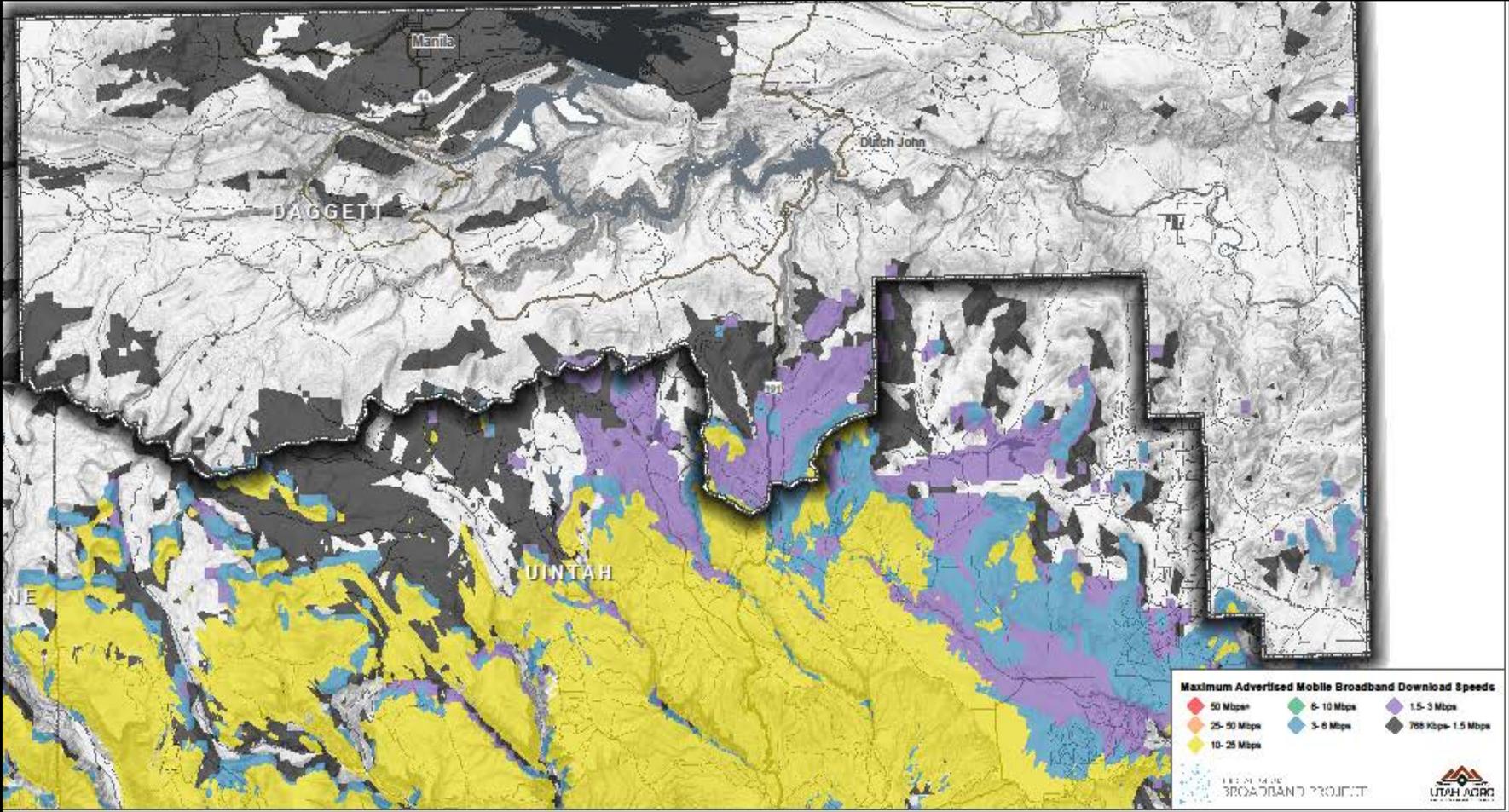
Daggett County - Download Speeds



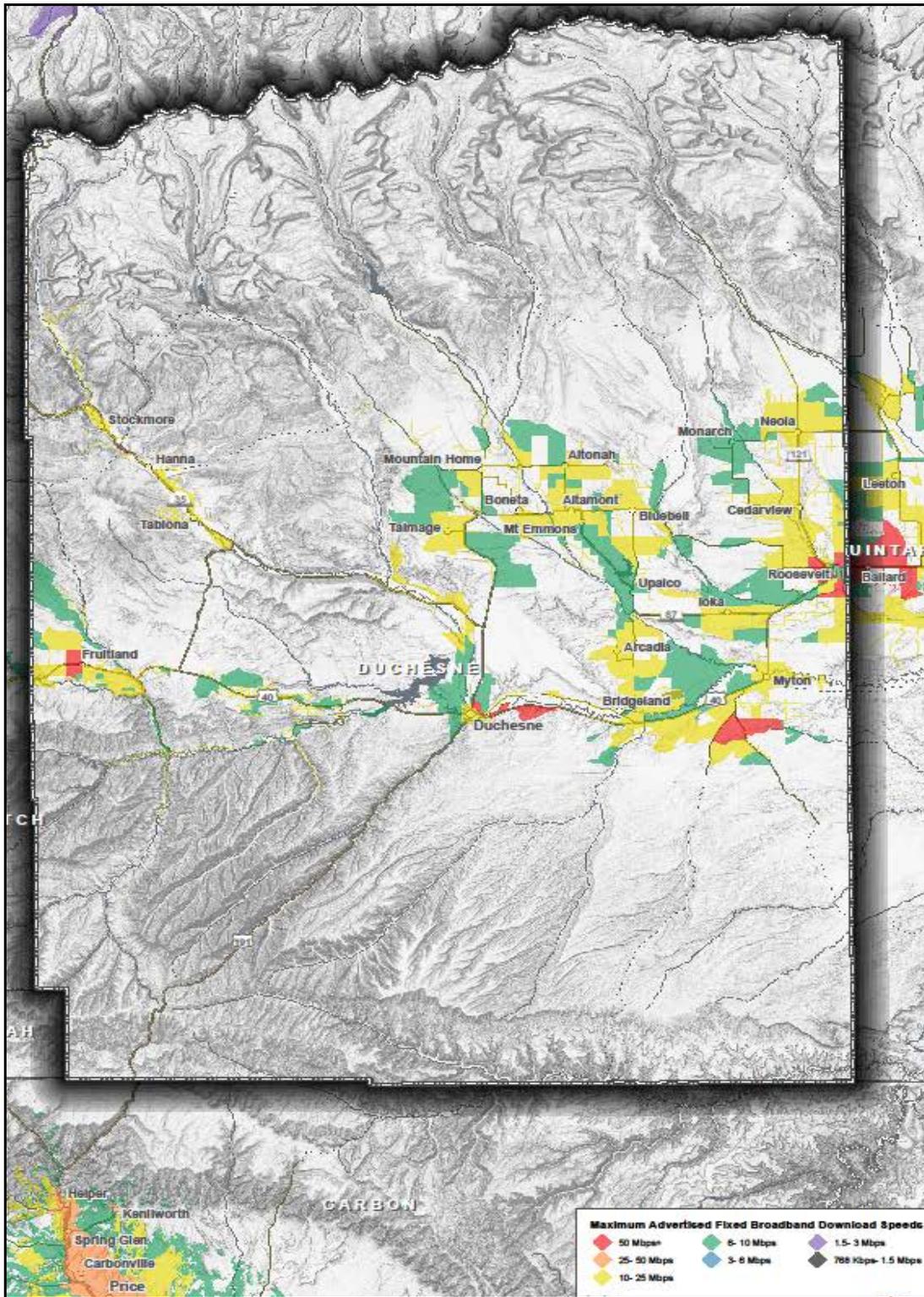
Daggett County - Upload Speeds



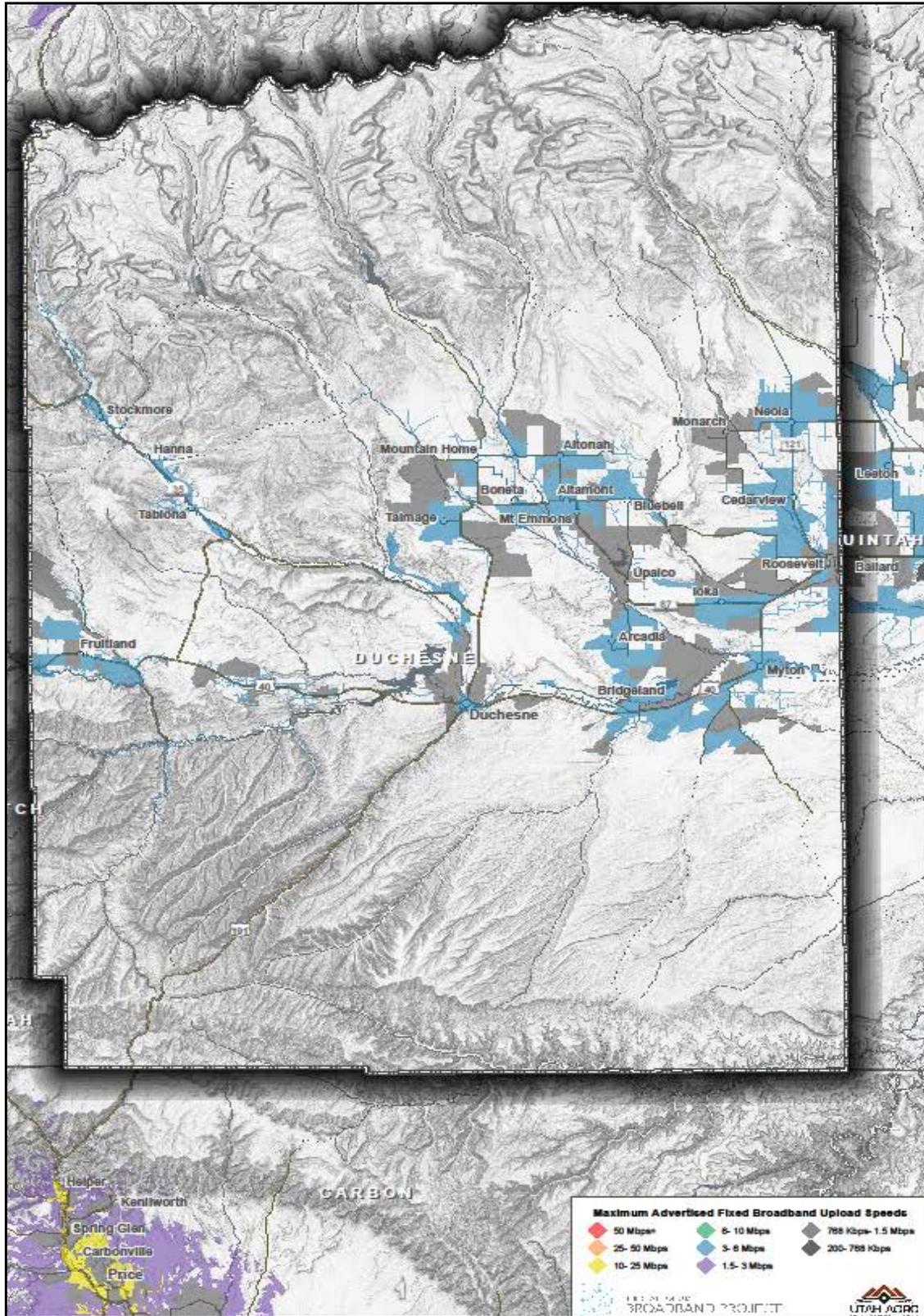
Daggett County - Wireless Download Speeds



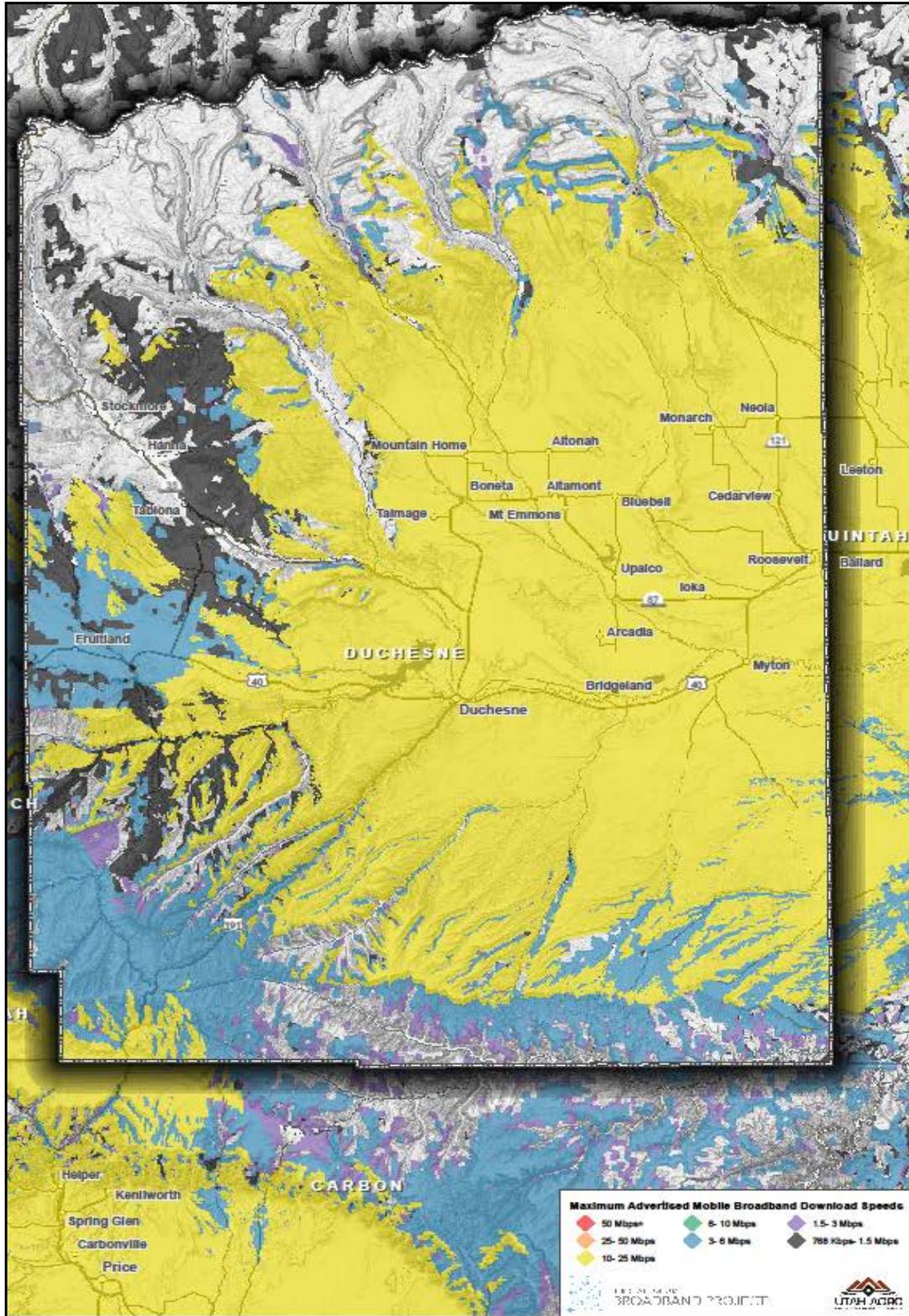
Duchesne County - Download Speeds



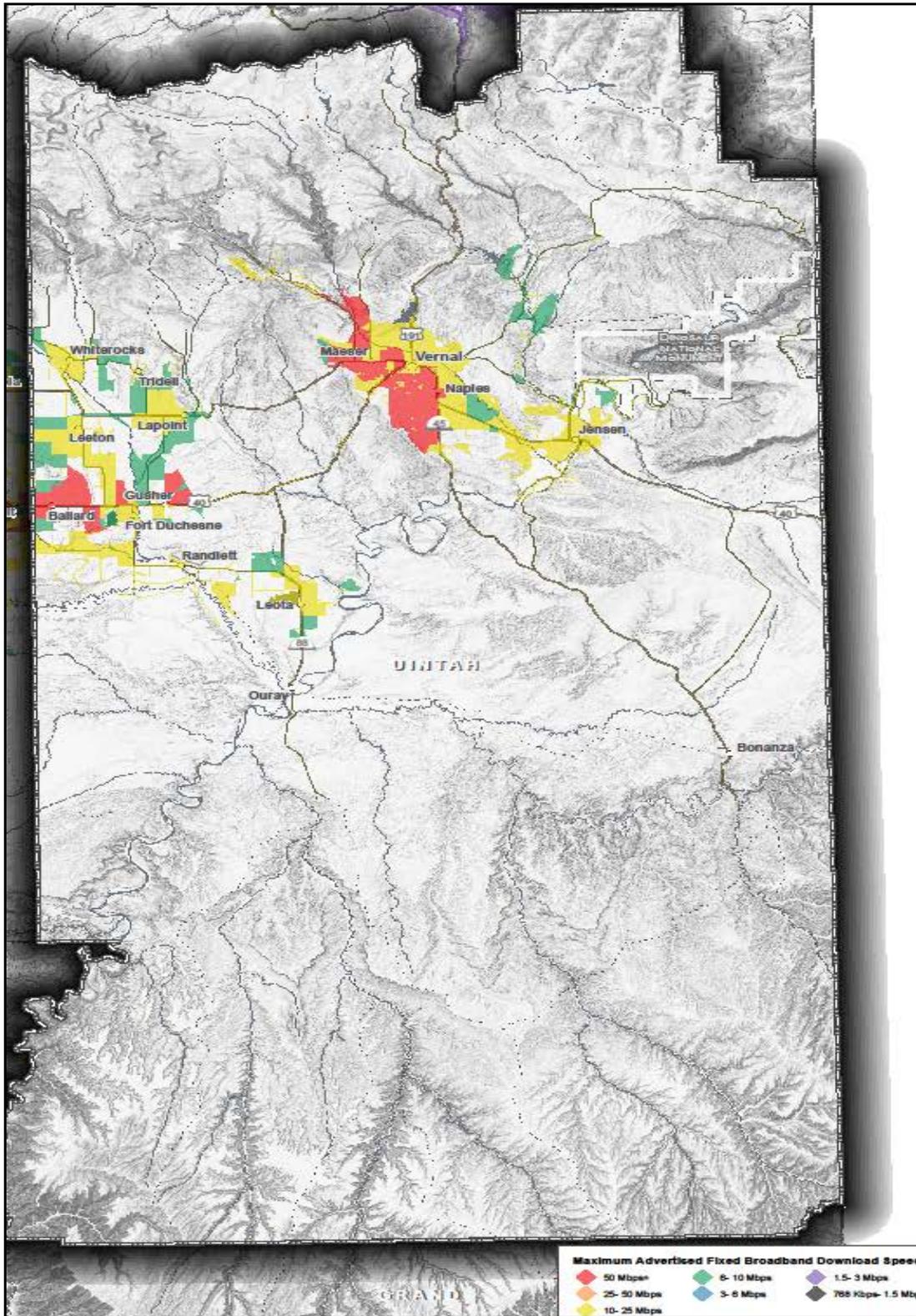
Duchesne County - Upload Speeds



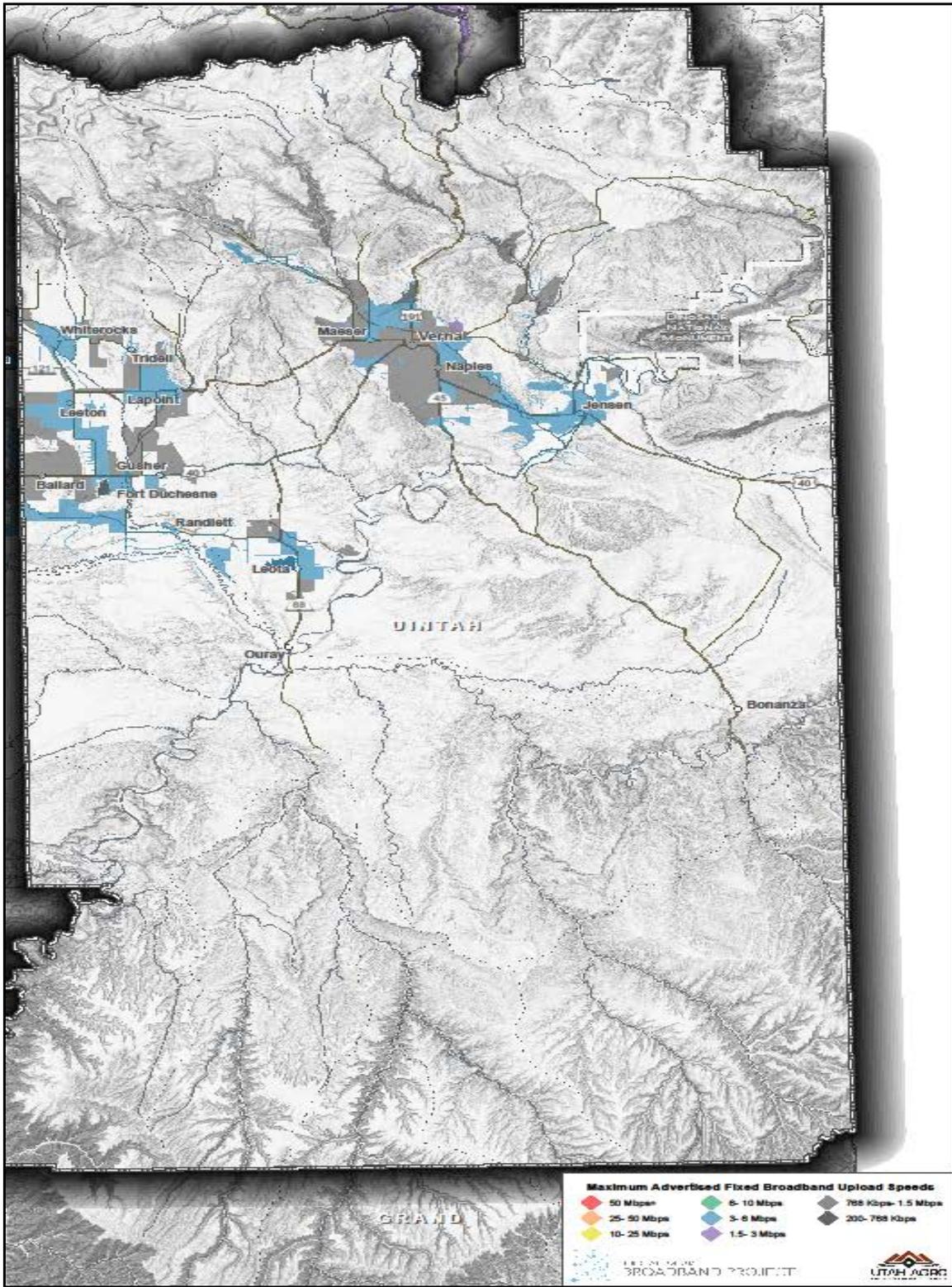
Duchesne County - Wireless Download Speeds



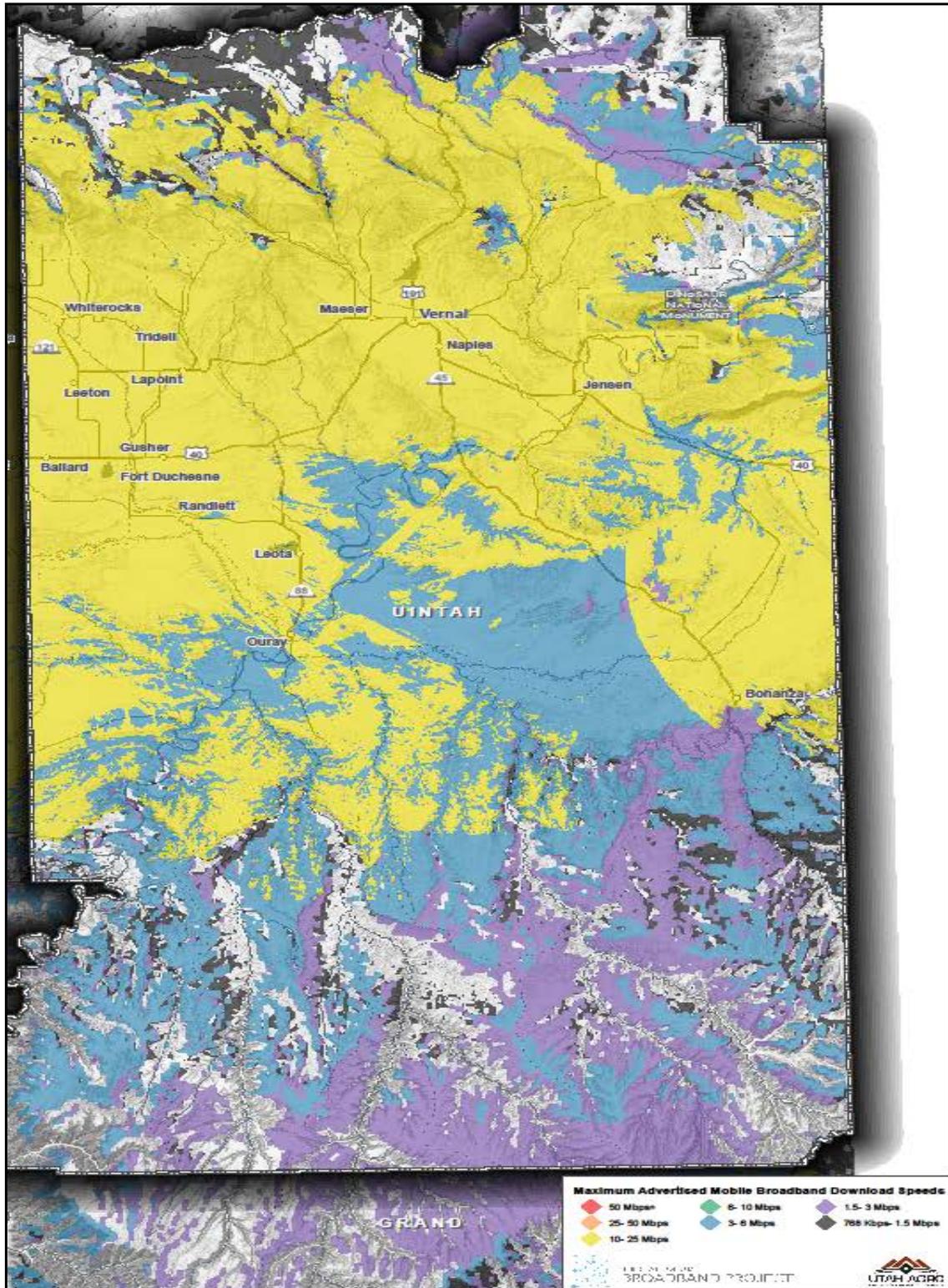
Uintah County - Download Speeds



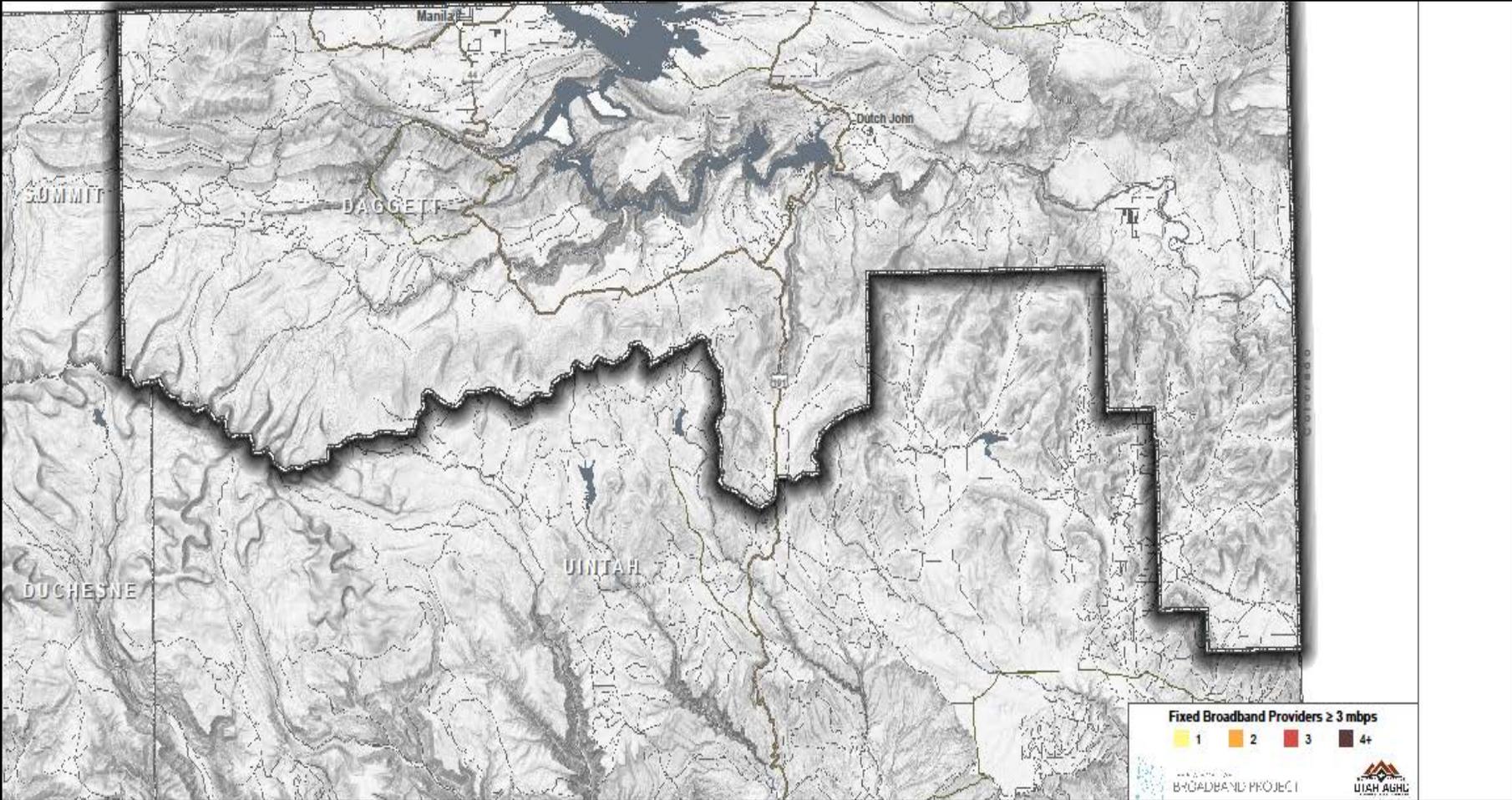
Uintah County - Upload Speeds



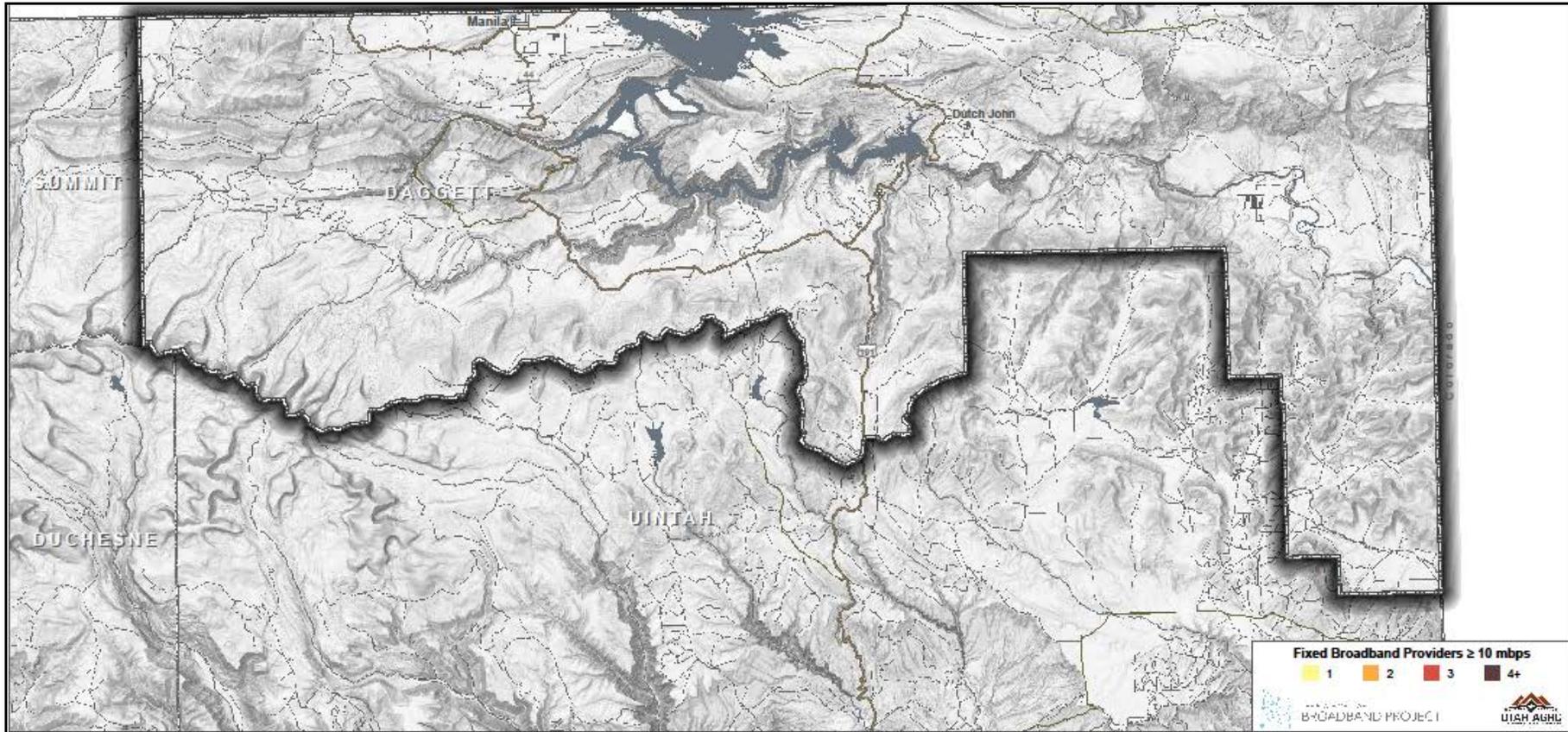
Uintah County - Wireless Download Speeds



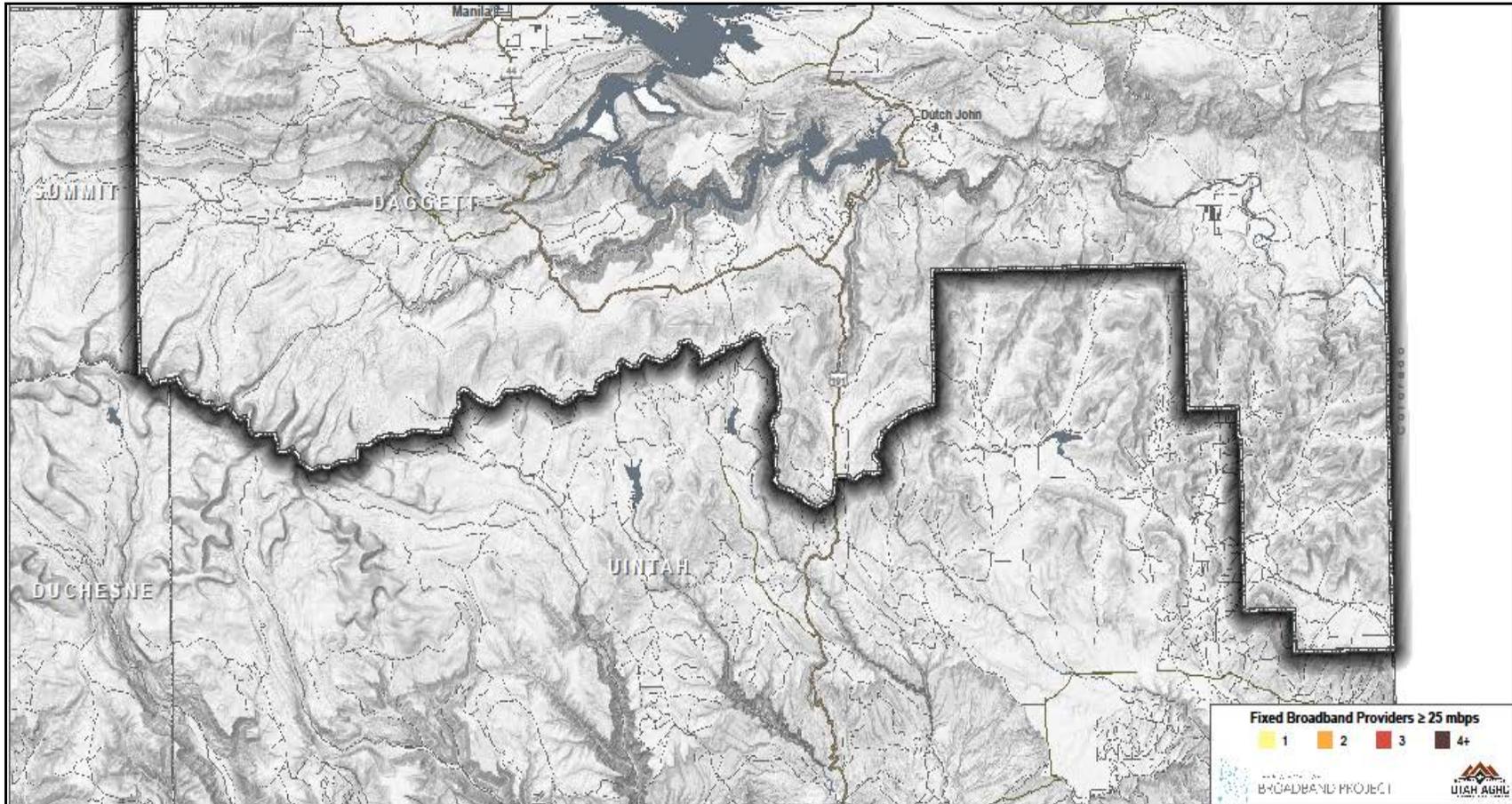
Daggett County - Number of Providers with Speeds at or Above 3 Mbps



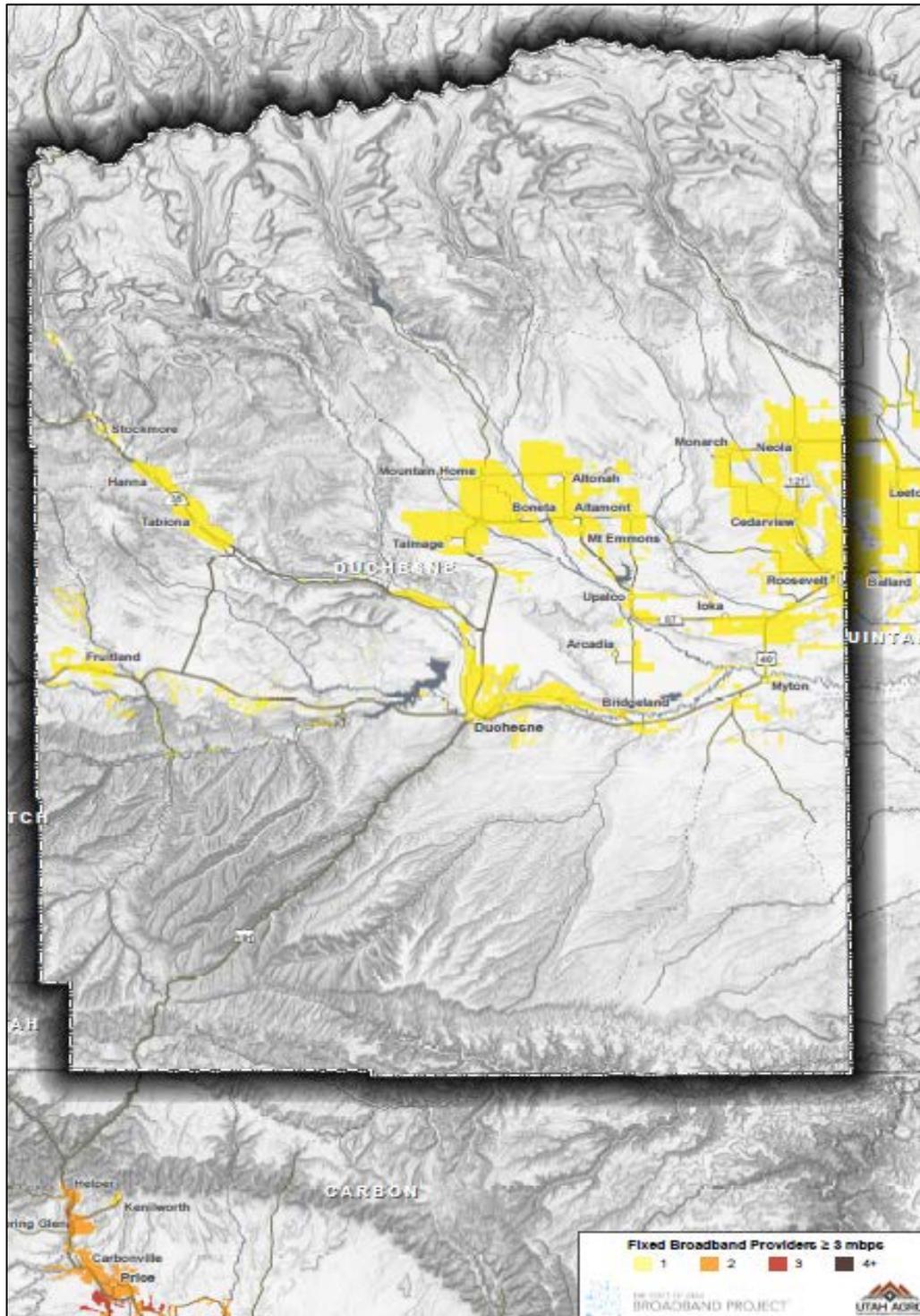
Daggett County - Number of Providers with Speeds at or Above 10 Mbps



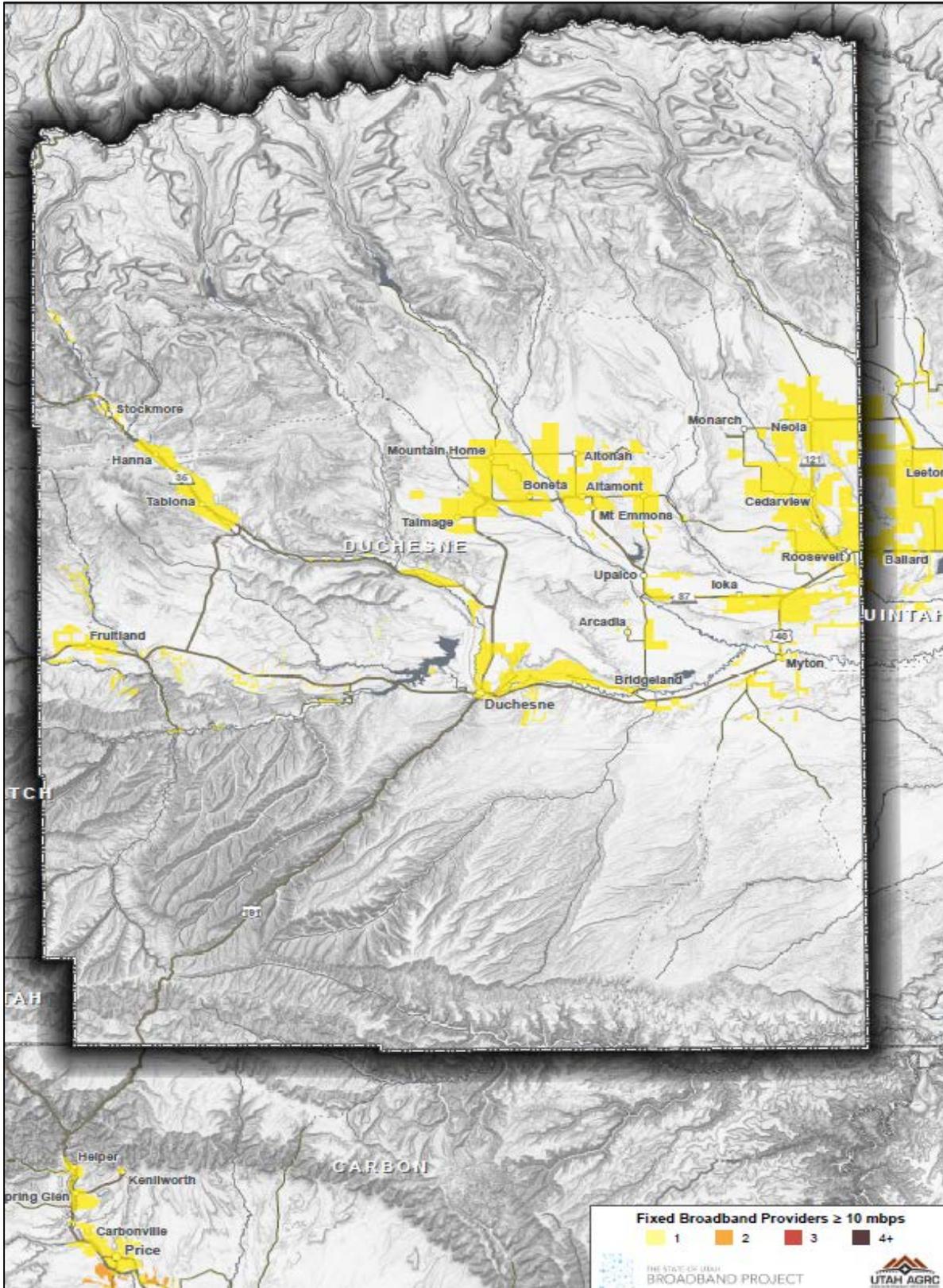
Daggett County - Number of Providers with Speeds at or Above 25 Mbps



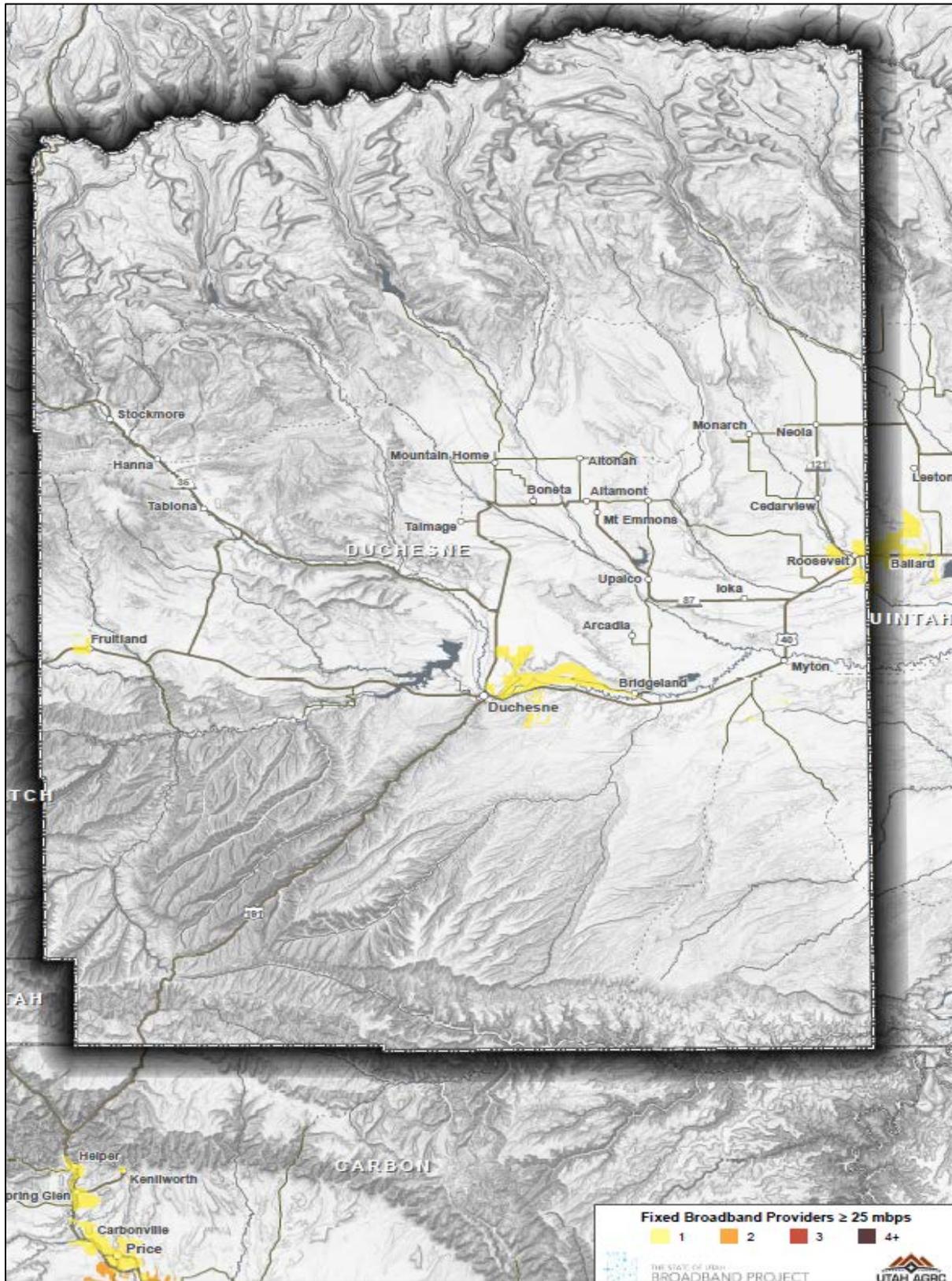
Duchesne County - Number of Providers with Speeds at or Above 3 Mbps



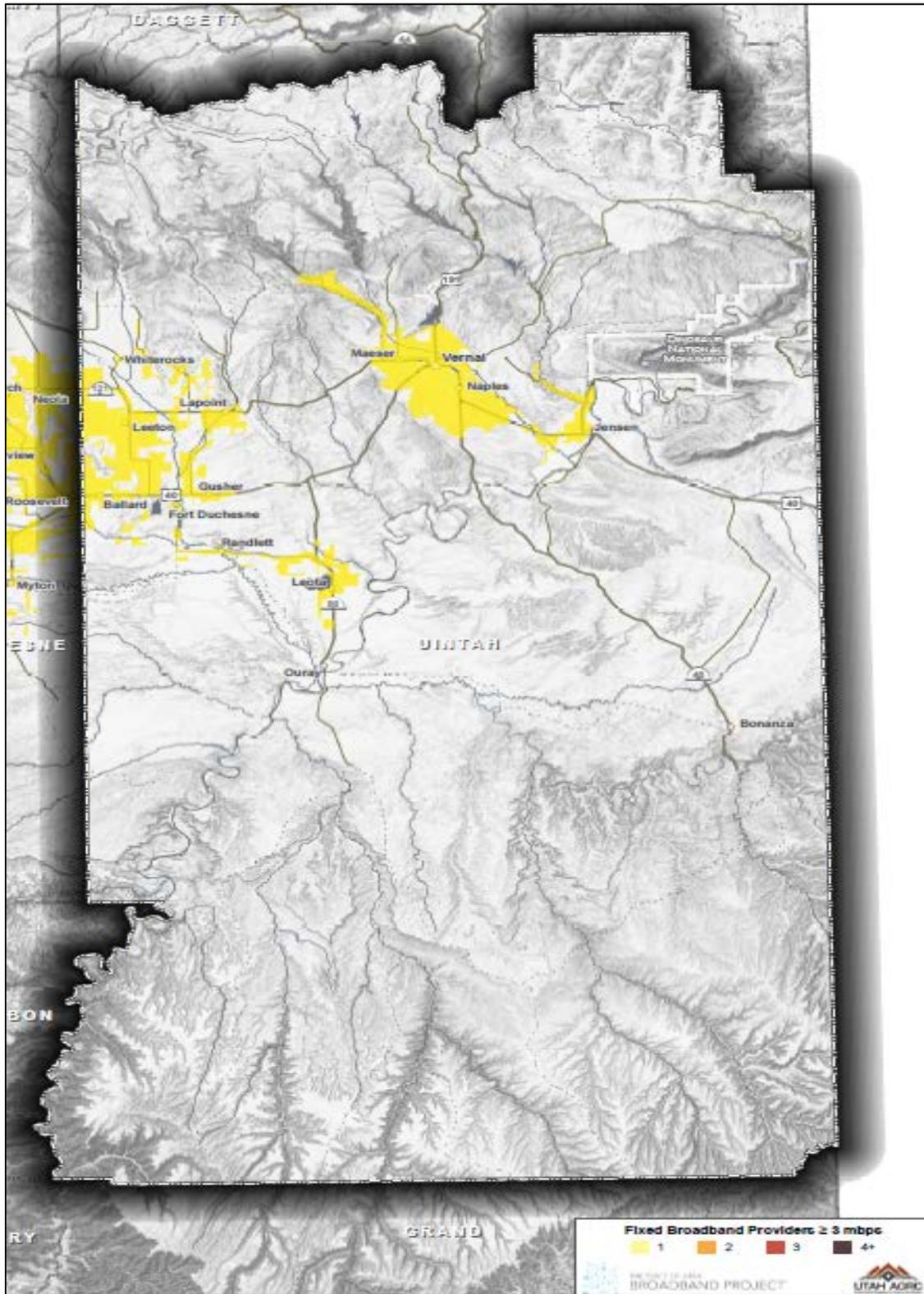
Duchesne County - Number of Providers with Speeds at or Above 10 Mbps



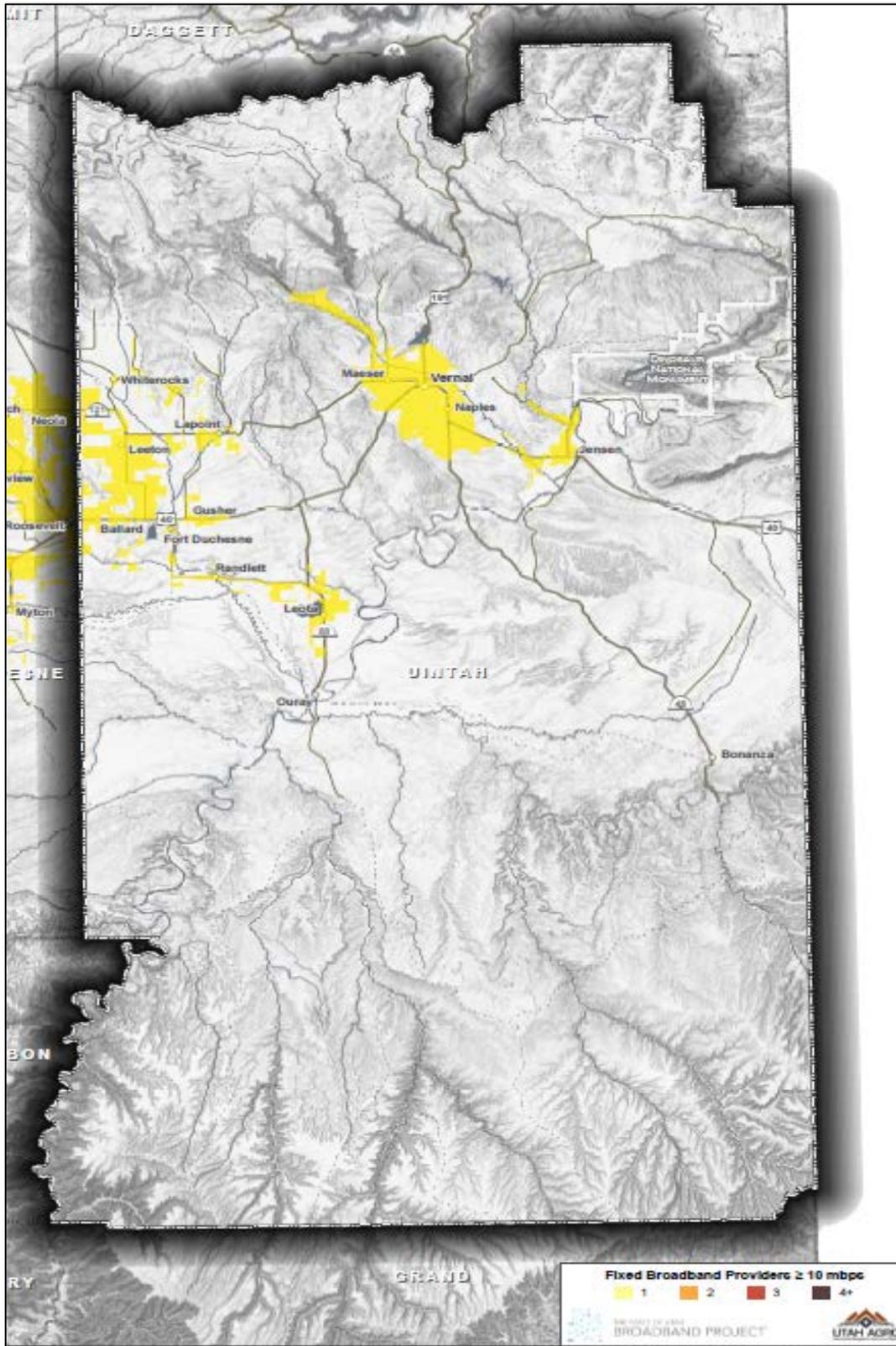
Duchesne County - Number of Providers with Speeds at or Above 25 Mbps



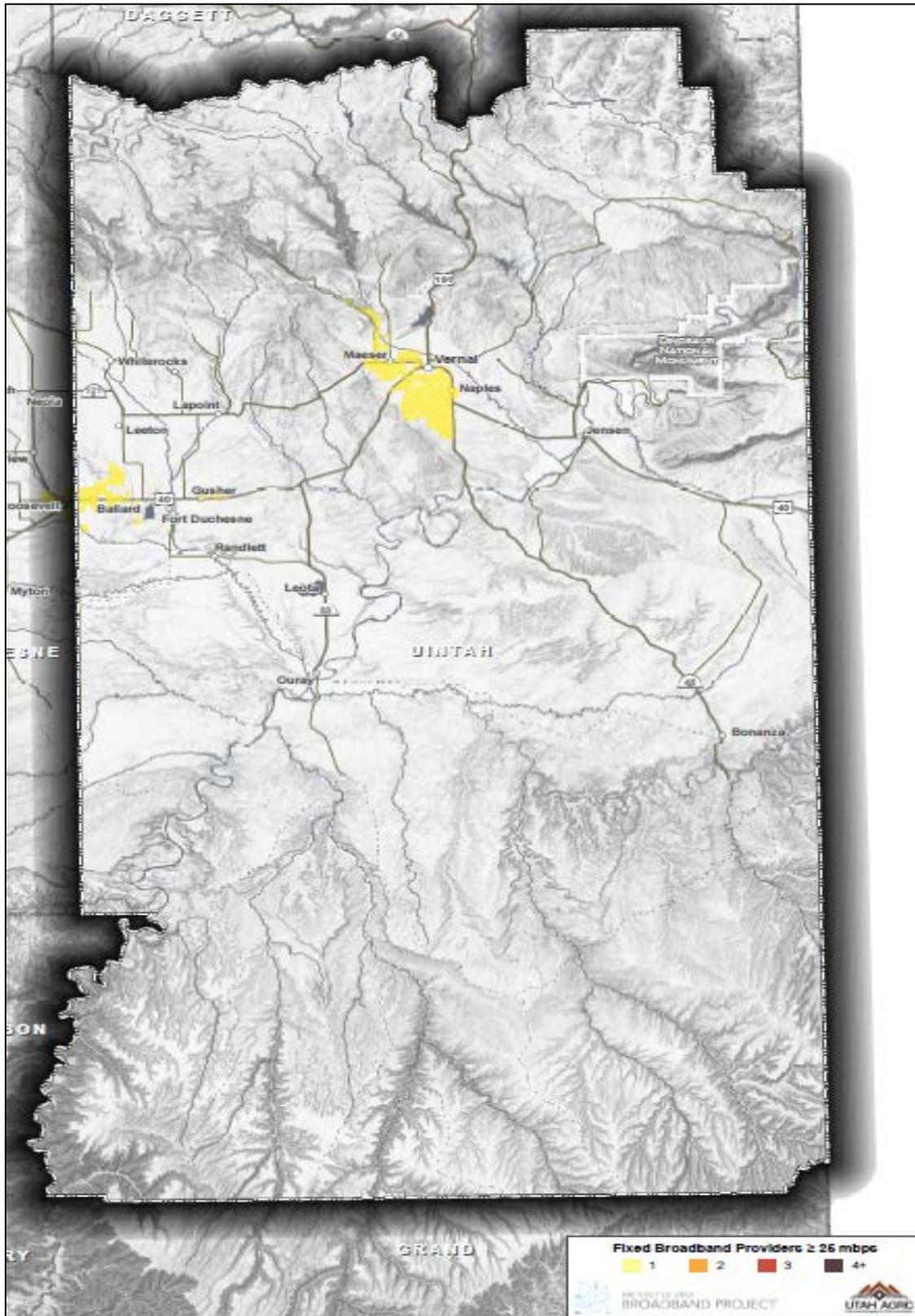
Uintah County - Number of Providers with Speeds at or Above 3 Mbps



Uintah County - Providers with Speeds at or Above 10 Mbps



Uintah County - Number of Providers with Speeds at or Above 25 Mbps



Utah Broadband Nonadopters Regional Report

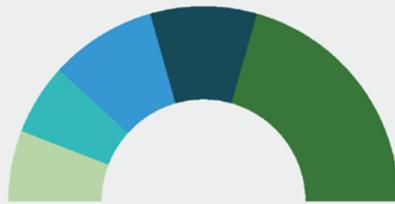
UTAH BROADBAND NONADOPTERS



UINTAH BASIN ASSOCIATION OF GOVERNMENTS REGION

The Uintah Basin Association of Governments (UBAOG) region, which includes Duchesne, Daggett, and Uintah Counties, is among the smallest Associations of Governments (AOGs) in Utah, with an estimated population of 52,254.

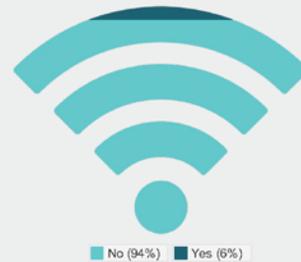
NONADOPTERS OF BROADBAND IN THE UINTAH BASIN REGION ACCESS THE INTERNET INFREQUENTLY



- Several Times Each Day (12%)
- Once a Day (12%)
- 3-5 Days a Week (18%)
- 1-2 Days a Week (0%)
- Every Few Weeks (18%)
- Do Not Access (41%)

Among the region's nonadopters, gender, marital status, race and education statistics largely mirror the state figures. The region's nonadopters were older than the state average, with an average age of 62.8 years. Respondents in the region also had a lower average household income at \$38,833 compared to the state average.

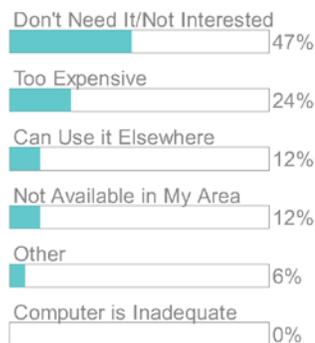
DO YOU KNOW HOW MANY ISP'S ARE IN YOUR AREA?



A majority of respondents did not know how many providers were available. Potentially due to the region's lower than average household income, 35.4 percent of respondents did not have computer equipment in the home.

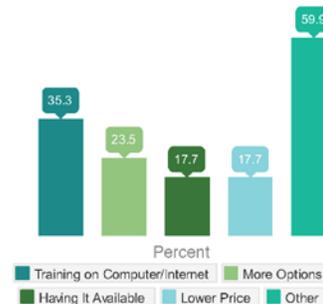
LACK OF INTEREST OR NEED

The key reason for nonadoption of broadband in the region is a lack of interest or need. In the UBAOG region, nearly half of respondents said they did not need high-speed Internet or were not interested in getting access in their homes.



KNOWLEDGE AND EXPERTISE

Respondents were asked to rate their computer skills on a scale of zero to 10, with zero being no computer skills and 10 being very highly skilled. In the UBAOG region, 41.2 percent of respondents ranked their computer skills at a zero.



What would make you more likely to have high-speed Internet access in your home?

Statistics

Service tiers by number of households (by County)

County	Percentage of Households with Download Speeds At or Above 3 Mbps	Percentage of Households with Download Speeds At or Above 10 Mbps	Percentage of Households with Download Speeds At or Above 25 Mbps
Uintah	99.97%	57.21%	0.00%
Daggett	100.00%	0.00%	0.00%
Duchesne	99.94%	66.66%	0.00%
Statewide	97.14%	95.60%	84.16%

SWOC Overview

The chart below represents the broadband needs of the area as deemed by the UBAOG Regional Broadband Council. One thing to note in the analysis is that the needs of both Duchesne and Uintah Counties are much different than those of Daggett County. Whereas Duchesne and Uintah Counties noted that their strengths were good infrastructure and good coverage, Daggett County representatives noted those as challenges and areas that needed more attention. On the other hand, representatives from both Duchesne and Uintah Counties listed public lands issues as major challenges.

Priority Area	Strengths	Weaknesses	Challenges	Opportunities
Telecommunications Infrastructure	Good basic infrastructure in place Good redundancy, fiber and microwave	Dead spots Limited towers Rural area/terrain	Public land issues Additional towers/lines	Addition of a "Dig-Once" policy in local building ordinances
Broadband Adoption/ Digital Literacy Training	High use	Daggett County Lack of high-speed, costs	Training for new users	To provide training for the public
Local Governments	Good infrastructure Safe, secure firewalls Supportive of broadband expansion	Lack of access in many areas Very slow in some areas (i.e., Public Safety Complex) Small staffs	Expense of faster connections New fiber lines Microwave is slower Funding	Possibly work with UEN
Public Computing Center/ Wi-Fi Access	Rural Internet Centers, provide high quality public access computing in adequate numbers including Wi-Fi Schools/libraries well connected	Lacking adequate public computing spaces in Roosevelt/Ballard area Limited availability in Daggett County	Ongoing funding for increasing bandwidth and internal connections Costs	Utah State University & Uintah Basin Applied Technology to open computer labs possibly provided to the general public Public facilities have computers and bandwidth available

Education	UEN Utah State University Uintah Basin Applied Technology College Schools are well equipped	PRI Cost is triple the amount of the Wasatch Front IT budgets Limited training for general public	Running second path out of the Uintah Basin Small schools	Could provide more training to the general public through the schools
Libraries	Established brand of 'helping people' un- biased service and information 50 public use computers in Vernal Wi-Fi free in most county facilities provided by the Library/UEN Computer centers	Funding/support infrastructure to establish satellite public computing centers Centralized locations No library in Daggett County	Ongoing funding for increasing bandwidth and internal connections and limited funding for staff for possible "branches" to serve more remote areas Outlying areas	Cooperating with senior centers, group homes, etc., to establish free Wi-Fi zones/public computing centers Wi-Fi Possibility of a new library in Daggett County.
Economic Development/ Business Needs	Local Chambers of Commerce Supportive economic development staff Supportive businesses	Businesses need for broadband	Remoteness of Daggett County creates infrastructure issues land, transportation issues	
Public Safety	Cooperation with Utah Highway Patrol, Duchesne County and Roosevelt Police Department Well trained officers	Jurisdictional issues	Basin Transit Association Limited budgets	Cooperation within public safety and local providers/education
Healthcare	Uintah Basin Medical Center Northeast Counseling Services Available	Oncology Small population limits access/raises costs in Daggett County	Tri-County Health	Telemedicine Possibility of new facilities
Transportation	Basin Transit Association Good roads	Cooperative spirit Increased traffic No rail, freeway, airport	Tribal transit Mountain passes in winter	Joint routes BTA
Rural Broadband Access	Good provider coverage Slower speeds are readily accessible	Dead spots Higher speeds less available Traffic during high use times slows speeds	Terrain Lack of fiber	Possible increases in fiber routes
Tribal Broadband Access	Finances	Desire to cooperate	Sharing	

Future Demand

Anchor Institutions and Businesses

Broadband demand is expected to increase in all industry sectors and for all types of community anchor institutions, which are local businesses and other community organizations that provide stability to the community. Local governments will require more sophisticated broadband technology as government services and processes become more fully electronic. Healthcare facilities will require greater bandwidth as medical technology advances and remote diagnosis becomes more prevalent, especially in the UBAOG rural areas. Libraries will need more advanced broadband capabilities as e-books become more prevalent and Internet access becomes more essential for the entire population. Schools will require better broadband access in order to prepare students to compete in an interconnected global economy, and the local colleges and universities will need higher broadband capacity to transfer data for research. Public safety agencies will require enhanced broadband access in order to keep improving the safety of communities as the population continues to grow. As the economy becomes more globalized, businesses in the UBAOG region will need better broadband access in order to advertise their products and services connect with customers, and compete robustly amongst other regions of the country and the world.

Residents

The population in the UBAOG region has seen significant growth over the past several years and is projected to continue to grow. As the population continues to grow and Internet access becomes more essential for all sectors of the population, residential broadband demand in the area can be expected to rise dramatically. This will be true as residents continue to adapt to an increasingly networked culture and a competitive, globalized economy. This will be especially necessary in the region's continued efforts to diversify its economic opportunities. Until expanded transportation means, like freeways, rail and air travel are brought into the region, broadband access will be the key to those diversification efforts.

Recommendations

There are always ways that broadband services can be improved within the region. UBAOG sees that there can be improvement in broadband by:

- **Increasing Capacity** – Extending broadband to places it may not currently be available, increasing bandwidth to all subscriber classes where it is available, and increasing the number of service providers offering service. This plan is the first step in identifying which areas and which services may be lacking. By doing an analysis and trying to determine the Strengths, Weaknesses, Opportunities and Challenges of each of the areas on the priority worksheet and by making a list of regional priorities. The next step is to determine how the strengths became strengths and use that knowledge to build on the weaknesses. City and county officials must have the same goals and to use the talking points brought up by the Regional Broadband Council to continue to find resources within the state that can help build on our strengths and strengthen our weaknesses. This would include encouraging local city and county officials to work with local providers, and get involved with their five year plan. They must be able to provide city and county resources to help the plan succeed. By working together, local officials and local providers will be on the same page as they determine what is best to help them achieve the region’s goals.
- **Decreasing Cost** – Reducing monthly subscriber cost per Mbps for the same level of service, or increasing bandwidth without increasing subscriber costs would require significant coordination. In order to achieve this goal, it will also be important to find what funding sources might be available to help build our area. When funding is found, it is critical that local leaders and local service providers get together to decide what would be the best way to spend available funding. Also, they must be able to work with state officials to improve access in the area, as well as use existing resources and work with providers, to build on their existing plans and work with educational leaders to determine how best to help build on their future plans.
- **Improving Growth Efficiency**–Being prepared for extreme situations and finding new connections to the outside world to increase reliability of service to the region is another way to help improve service in these areas. Collaborative development of detailed mapping of current and future infrastructure, with local city and county planners and officials, to work towards a ‘dig-once’ policy within local government agencies. This in turn helps foster a more collaborative spirit with local service providers and local government officials. By making some of this information available, it can educate the public on the importance of broadband to support future growth and future economic opportunities.

Although some areas are currently served with fiber to the premise, which is the most advanced technology available worldwide, the AOG believes broadband can be improved in many areas. Before looking at potential solutions, we should first address the question of whether government should be involved in broadband at all. There are legitimate arguments on both sides of the question.

As mentioned above, the addition of a ‘dig-once’ policy to city and county building practices, in both residential and commercial construction, would be an important addition to local policies. This policy makes it so broadband service providers are notified when a new structure is built or infrastructure is repaired, replace or added, so that they can add their hardwire connections when

it is effective and efficient. Most of the time providers are left out of the pre-construction part phase, if they were notified, much like plumbers and electrical providers, they could get their infrastructure in without having to go back after construction was completed. This would reduce costs and save time for both the provider and the home or business owners.

Goals

Along with the above recommendations, the following are some regional goals that the UBAOG region could strive to achieve in the future. These goals are a common undertaking to all sectors in the region, while sector specific goals and actions in the following section will serve as a foundation to advance all sectors in the use of broadband, and thereby collectively elevate the region's overall performance.

Goal 1: Promote Education and Awareness of Broadband Capacity and Utilization

The idea of providing additional training in the utilization of broadband and what it can mean to the region was brought up several times and the council meetings. By setting a goal to promote the use of broadband and educate about the future of its capabilities will help everyone understand its importance. This could be achieved by a public/private partnership with local providers and educational institutions coming together to provide educational opportunities for students and the community alike. This public private partnership could include the Uintah Basin Applied Technology College (UBATC), Utah State University (USU) and local providers.

Goal 2: Promote Technology Infrastructure Development and Deployment

Supporting the deployment of infrastructure and services to advance broadband and cellular services in the region is a key strategy. This is where a potential 'dig-once' policy could be initiated. A 'dig-once' policy provides a great way for the local officials to promote the importance of technology to the future of the region. By having local leaders and building officials work with local service providers to ensure that technological improvements get the same importance as other utilities, such as water, sewer and power, it lets potential residents and businesses looking at coming to the area know that those improvements are a high priority. The best way to resolve this issue could be to require broadband infrastructure to be in place as part of the permitting process. Local officials should develop a strategy to require developers to address the issue at the time of development.

Goal 3: Promote Utilization and Adoption of Broadband Services and Other Technologies

The support of universal service through the development and use of land line and wireless applications, both of which are critical to developed and undeveloped communities is an important region strategy. This can be done by encouraging pricing structures for broadband and

cellular services that will promote utilization and stratified rates for special populations such as the elderly, those with disabilities and lower income sensitivity, thus minimizing the lack of knowledge of broadband and its potential benefits to all citizens.

Goal 4: Promote Economic Opportunity and Development

It is important to ensure that both small and large business enterprises have the necessary telecommunications infrastructure and applications to foster growth and competitiveness. Also, the need for economic diversity in the region is necessary to avoid the boom and bust pattern that has plagued the region over the past 40 years. One way to counter the lack of transportation in the area is to have a highly developed broadband system. This can provide a way to bring in businesses to the region that rely heavily on transportation needs. The key to accomplishing this goal is to continue to work with the local economic development agencies to educate potential businesses of the infrastructure in place, and the plans for growth in the future. This is another reason why it is important for local community leaders and local service providers communicate future plans with each other. One way this could be done is to have both local service providers and local county and city offices assign representatives from each to meet regularly to help strengthen the relationship and keep each abreast of future plans.

Goal 5: Utilize Broadband and Other Technologies to Improve Public Safety

The enhancement of broadband, wireless, two-way voice and video for interoperability of first responders is an important part of the region. Because of our isolation of the region, it is important that the local emergency personnel have reliable resources in the event of an emergency. Local government should have the capacity to rapidly convey information about incidents via the Internet, live video programming, radio and other means such as Facebook with resident feedback in real time for certain emergency events. It is important that local providers and local emergency personnel meet and inform each other of their needs and services so that in case of emergencies, citizens and emergency personnel can stay informed. Also, it will be important for local agencies to keep up with the updates in regards to the FirstNet progress, or other federal programs that could exist in broadband adoption.

Conclusion

It is important that the communication between local leaders and local service providers that has been introduced with the compilation of this plan continue. This communication will be important to the growth of services in the area. Because of the isolation of the region, communication with the outside world becomes even more important. Open dialogue, effective communication and welcome input from both sides will be the key to how efficient the growth of the broadband and other services will be in the region.

It is also important to note that for such a small and isolated area, broadband access is readily available to most residences and businesses. It has been a great economic attractor for the area.

With the work of local providers, those seeking new opportunities will not be hindered by lack of broadband and communication services.

Existing Resources

- Daggett County Bookmobile Library
Number of Public Computers: n/a
Public Wi-Fi Access: No
*currently in the planning stages

- Duchesne County Library – Duchesne Branch
130 South Center Street, Duchesne, Utah
435-738-2800
Number of Public Computers: 7
Public Wi-Fi Access: Yes

- Duchesne Senior Center
734 North Center Street, Duchesne, Utah
435-738-1171
Number of Public Computers: 4
Public Wi-Fi Access: Yes
Available primarily for senior citizens

- Roosevelt Center – Department of Workforce Services
140 West 425 South #300-13, Roosevelt, Utah
801-722-6500
Number of Public Computers: 17
Public Wi-Fi Access: Yes
Available primarily for job searching purposes

- Uintah County Library
204 East 100 North, Vernal, Utah
435-789-0091
Number of Public Computers: 40
Public Wi-Fi Access: Yes

- Vernal Center – Department of Workforce Services

1050 West Market Drive, Vernal, Utah

435-781-4100

Number of Public Computers: 28

Public Wi-Fi Access: Yes

Available primarily for job searching purposes

- Golden Age Center

155 South 100 West, Vernal, Utah

435-789-2169

Number of Public Computers: 4

Public Wi-Fi Access: Yes

Available primarily for senior citizens

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UTAH BROADBAND NONADOPTERS

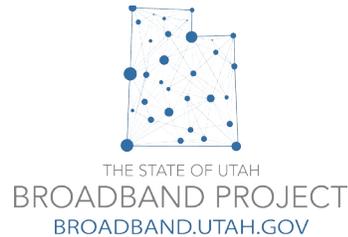
REGIONAL REPORT: UINTAH BASIN

ASSOCIATION OF LOCAL GOVERNMENTS REGION



NONADOPTERS OF BROADBAND:

UINTAH BASIN ASSOCIATION OF LOCAL GOVERNMENTS REGION



Regional Report
June 2014

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UINTAH BASIN ASSOCIATION OF GOVERNMENTS REGIONAL REPORT

UNDERSTANDING NONADOPTION

Beginning with the passage of the Telecommunications Act of 1996, which directed the Federal Communications Commission (FCC) and state commissions to promote the universal deployment of both basic and advanced telecommunications capability, national policy has evolved to where universal Internet availability has become a stated national goal. Subsequent acts and directives from successive presidents have more specifically directed several agencies to encourage expanded broadband deployment and to increase their efforts aimed at promoting broadband adoption. For example, in 2004, a directive was issued from then President Bush for universal affordable broadband technology by 2007. These efforts have intensified under the current administration as programs funded under both the Universal Service Fund (USF) programs and the American Recovery and Reinvestment Act have contributed to increased infrastructure and promotion.¹

Universal access to and use of broadband speed Internet is seen as a critical economic development factor, and one of the primary drivers of improved and enhanced employment and learning opportunities, medical services and a wider scope of entertainment and recreation.

The Pew Research Center's Internet and American Life Project has tracked the expansion of Internet use in the United States across time, space and among traditionally lower use groups. Despite this work, relatively little has been done to thoroughly examine those who continue to choose not to adopt despite widespread availability and ongoing reductions in relative cost.

In this study we explore only those who report not having broadband speed Internet, which we found is better described as high-speed Internet, available in their home. These 'nonadopters' represent the remaining part of the broadband gap that had been explored in our earlier work and in a plethora of previous literature on broadband adoption. This survey, in fact, was a direct result of our earlier work which along

with the U.S. Census's work, failed to find a substantial rural urban broadband gap in Utah.

The purpose of this exploration is to better understand the nonadopter, who they are, their reason(s) for nonadoption, what skills and experience in using the Internet they have, and what would influence them to become an adopter of high-speed Internet. The answers to these questions will provide the information policymakers and broadband providers need to consider as they grapple with the issue of if and how nonadopters can become adopters.

What Influences Broadband Nonadoption

Literature exploring Internet adoption rates has generally advanced four theories for why individuals do not have in-home high-speed Internet service. These four theories present substantially different public policy prescriptions for correcting the problem. For policymakers, determining which of the competing theories (or which combination of them) best explains consumer behavior has substantial real-world policy impacts. The survey questions and the analysis of respondent's answers builds from these theories.

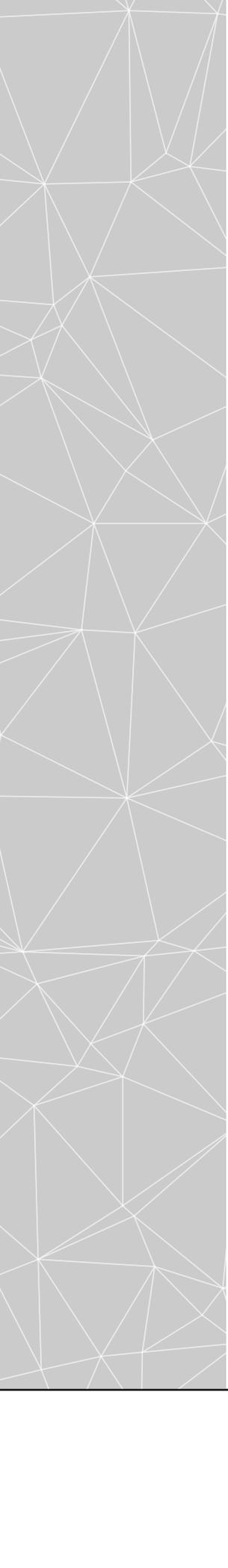
Questions of Price

The first and most common explanation of nonadoption is that of price sensitivity on the part of consumers. The literature on this subject asserts that due to relatively high, though falling, prices for these services, many consumers are simply unable to afford in-home high-speed Internet.

The usual policy prescriptions suggested by advocates of this theory are relatively straightforward and begin with the *ex ante* expectation that a reduction in price is necessary. A possible but controversial policy alternative that follows from this assumption would consider subsidizing either (or both) the development costs for deployment and the end user's cost.

Questions of Availability

The second, and formerly the most common theory that spurred our earlier work on this subject is that of availability. This theory suggests that nonadoption is a result



of lack of deployment and availability and that most nonadopters will be clustered where deployment has not yet or will not occur because of questions of scale and profitability. For example, in one estimate Jon Peha of Carnegie Mellon University finds that “roughly one-third of households in rural America cannot subscribe to broadband Internet services at any price.”²

Again possible policy prescriptions from this theory are relatively straightforward, incentivizing and subsidizing deployment. One policy approach that is commonly advocated by proponents of this theory mimics the goals if not the approach of the rural telecommunications and electrification policy that brought these services to rural areas through subsidies and incentives paid for through surcharges on existing service.

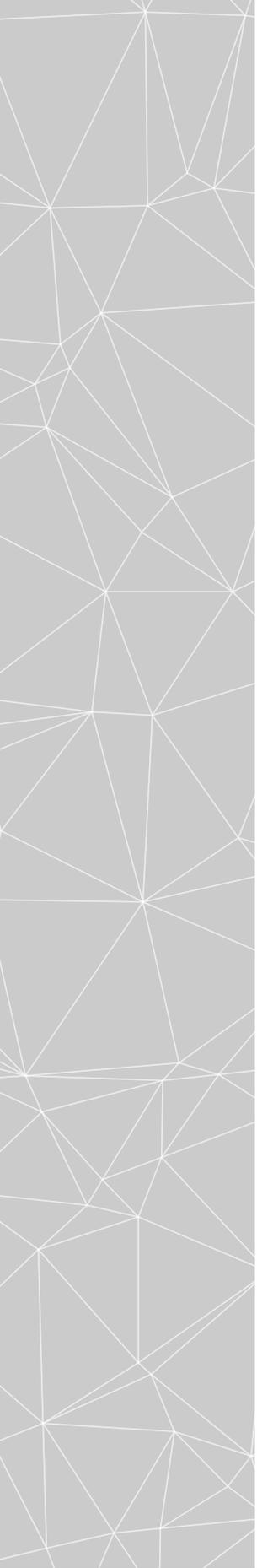
Questions of Knowledge and Expertise

Unlike the first two theories of nonadoption, some have advanced the idea that the primary problem facing nonadopters is a lack of knowledge and skill on the part of the nonadopter in using and experiencing high-speed Internet and computing in general. Proponents of this approach point to lower levels of adoption among senior citizens and the increase in adoption after training or experience as evidence of its efficacy.

Here the policy prescriptions are more complex and are focused on education, outreach and individual assistance to push forward adoption by those who lack the skills. These programs are costly both in terms of fiscal and human resources. Those who advocate them have often suggested that partnerships between the public sector and non-profits could provide these nonadopters with skill training and assistance and look to the programs deployed at senior centers as prototypes for how these programs might be designed.

Questions of Demand and Preference

The fourth theory of nonadoption suggests that rather than structural impediments to adoption, like price, availability or knowledge and expertise issues, there are those whose consumer preferences simply align away from a desire to adopt. In fact the Pew Research Center, which has conducted numerous surveys about adoption, found that in the United States, 15 percent of American adults do not use the Internet.



They found that a third of those non-users (34 percent) “think the Internet is just not relevant to them,” and expressed a lack of interest or need in getting online. Of Internet non-users, 92 percent are not interested in starting to use the Internet or email in the future.³

Further, both a study from the Government Accounting Office completed in 2010 and one by Gregg LaRose⁴ suggest lower income, less educated and elderly individuals are much less likely to want broadband access. These studies suggest that the gap in adoption of service is not an issue of supply; it’s an issue of demand.

Here the policy implications are both clear and disheartening to the policymaker wishing to increase adoption. If individuals have no interest in a product it is nearly impossible to create demand absent some coercive requirement to purchase.

Expanding access to information, education, medical reference and employment is in the interest of public welfare. While these are compelling reasons for providing universal access to broadband Internet in the U.S., understanding why nonadopters don’t adopt is of critical importance. If price is simply too high or service is simply not available, clear though controversial policy alternatives exist. If individuals lack knowledge or expertise training programs can be provided, but if there simply is no demand, these high-cost programs and subsidies will do little to sway nonadopters. Even in these cases if the driving purpose of broadband deployment to a given group is enhancement of educational goals or increased access to medical information, broadband community anchor institutions such as public schools, libraries or medical centers could be provided more cost effectively than community-wide deployment.

In the following analysis, we provide the results of the survey described earlier and explore which of the theories we find evidence for from our interviews with nonadopters across the state.

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NONADOPTERS OF BROADBAND IN THE UINTAH BASIN ASSOCIATION OF GOVERNMENTS REGION

The Uintah Basin Association of Governments (UBAOG) region, which includes Duchesne, Daggett, and Uintah Counties, is among the smallest Associations of Governments (AOGs) in Utah, with an estimated population of 52,254.⁵

Nonadopters of broadband in the UBAOG access the Internet infrequently.

About how often do you access the Internet?

Several Times	11.8%
Once a Day	11.8%
3-5 Days a Week	17.7%
1-2 Days a Week	0.0%
Every Few Weeks	17.7%
Do Not Access	41.2%

Nonadopters are older and have lower income than the state average.

Among the region’s nonadopters, gender, marital status, race and education statistics largely mirror the state figures. The region’s nonadopters were older than the state average, with an average age of 62.8 years. Respondents in the region also had a lower average household income at \$38,833 compared to the state average.

Key Findings: Reasons for Nonadoption

1. Lack of Interest or Need

The key reason for nonadoption of broadband in the region is a lack of interest or need. In the UBAOG region, nearly half of respondents said they did not need high-speed Internet or were not interested in getting access in their homes.

What is the main reason you do not have high-speed Internet access at home?

Don’t Need it/Not Interested	47.0%
Not Available in My Area	23.5%

Too Expensive	11.8%
Other	11.8%
Can Use it Elsewhere	5.9%
Computer is Inadequate	0.0%

2. Knowledge and Expertise

Respondents were asked to rate their computer skills on a scale of zero to 10, with zero being no computer skills and 10 being very highly skilled. In the UBAOG region, 41.2 percent of respondents ranked their computer skills at a zero.

What would make you more likely to have high-speed Internet access in your home?

Other	59.9%
Training on the Computer/Internet	35.3%
More Options	23.5%
Having it Available	17.7%
Lower Price	17.7%

3. High Cost

Just over 11 percent of respondents in the UBAOG region said the high cost of broadband is the main reason for nonadoption. Nearly 18 percent of respondents in the UBAOG region said that if high-speed Internet were to cost less, they would be more likely to get access in their homes.

4. Lack of Availability and Knowledge

A majority of respondents did not know how many providers were available. Potentially due to the region's lower than average household income, 35.4 percent of respondents did not have computer equipment in the home.

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

No	94.1%
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Yes

5.9%

Conclusion: The key reason for nonadoption in the UBAOG region is that nonadopters express a lack of interest or need for having in-home access to high-speed Internet.

Endnotes

1 In the US, a broadband Internet connection is defined as a connection with capabilities of at least 768 kbps. Other countries have different definitions. Canada uses 1.5 Mbps.

2 Federal Communications Commission WC Docket No. 07-38 via <http://www.rupri.org/Forms/RuralBroadbandFinal.pdf>

3 Zickuhr, Kathryn. 2013, September 25. Who's Not Online and Why. Pew Research Internet Project. Retrieved from: <http://www.pewinternet.org/2013/09/25/whos-not-online-and-why/>

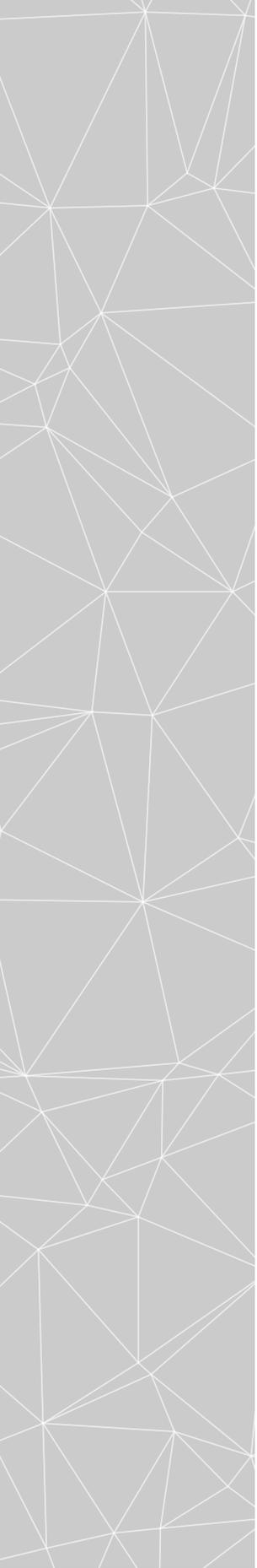
4 LaRose, R., Gregg, J. L., Strover, S., Straubhaar, J., & Carpenter, S. (2007). Closing the rural broadband gap: Promoting adoption of the Internet in rural America. *Telecommunications Policy*

UINTAH BASIN ASSOCIATION OF GOVERNMENTS REGION

The Uintah Basin Association of Governments (UBAOG) region, which includes Duchesne, Daggett and Uintah Counties, is among the smallest of the regions included in this report, with an estimated population of 52,254. The Uintah Basin, which is nestled among the Uintah Mountains is often known as the 'Basin.' The region has been home to substantial oil and gas development in recent years, the effects of which can be readily identified in the local communities especially in the somewhat varying nature of the population. The UBAOG region also has a substantial Native American population and is home to large portions of the Uintah and Ouray Indian Reservation.

Demographic Picture

The respondents' demographic information in the UBAOG region varied somewhat from the state averages. In this region, slightly more respondents were female (52.9



percent) than the state average (47.6 percent). Respondents in the UBAOG region were older than the state average, with a mean age of 62.8 years compared to the state mean age of 56.2 years. This region saw a somewhat narrower age distribution among respondents with stronger clustering in the upper age ranges than the state as a whole, which saw a wide distribution of age for respondents. This older overall age is a direct result of the area having a much higher percentage of respondents with household members over 61 years old (62.5% in Uintah compared to 47.75% statewide). In the UBAOG region, the percentage of respondents who were married was 35.3 percent, substantially lower than the state average of 48 percent. Other categories within marital status also differed considerably from the overall state averages.

Total household income for respondents in the UBAOG region was much lower than the state average. In the region, the mean total household income was \$38,833 compared to the state's mean of \$51,347. The standard deviation for this region's income is substantially lower than the state average, meaning that respondents' income is less varied here than in the state as a whole.

The employment status among respondents mirrors the state average with two exceptions: a smaller percentage of respondents are employed part time and a substantially higher percentage of respondents are retired. The two largest groups of nonadopters by employment status are those who are retired and those who are employed full-time. Of respondents in the region, 52.9 percent were retired, compared to the state average of 42.8 percent, likely reflecting the older age demographics of the region. The second biggest category of nonadopters was full-time employed residents, with 29.4 percent of respondents in the UBAOG region, similar to the state average of 30.4 percent. This employment information mirrors our age data, particularly in this region as most nonadopters are older and therefore, more likely to be retired.

Statistics on race show a majority of respondents are white, both in the UBAOG region and in the state overall. The region varies substantially from the state averages in terms of the diversity of races with 5.9 percent of respondents reporting Native American heritage compared to the state average of 4.2 percent. Education statistics are similar between the region and the state, with the largest categories of

nonadopters being those who completed high school or obtained a GED and those who completed some college. In the UBAOG region, 29.4 percent of respondents completed high school or a GED, compared to 28 percent of the state overall. The smallest education category for nonadopters both in the region and the state was some high school, with 5.9 percent of the region's respondents and 4.2 percent of the state's overall respondents.

The demographic realities of the UBAOG region indicate a region that is older with a lower average income than the state while mirroring state averages on most other demographic variables.

Low Internet Access Rates Among Nonadopters

Respondents were asked how often they access the Internet, and 41.2 percent of respondents in the UBAOG region said they never access the Internet. Additionally, 17.7 percent said they access the Internet once every few weeks and about 17.7 percent said they access it about three to five days a week. Those numbers are dramatically different than the state's overall breakdown of Internet access frequency. Respondents in the Uintah Basin are much more likely to report no Internet usage than the state average where 24.8 percent statewide indicate no use.

Similarly, more respondents do not pay for a data plan on their cell phone, at over 75 percent in the UBAOG region compared to about 65 percent statewide. In the UBAOG region, the frequency of Internet access among nonadopters is lower than the already low state average, although it is not clear whether that is due to lack of interest or desire to access the Internet, limited computer skills, the high cost of Internet access or limited access to technology. To better understand these drivers we examine the role each of these reasons below.

Reasons for Nonadoption: Lack of Interest or Need

The key reason found for nonadoption at both the state level and in the UBAOG region was a lack of interest or need. In the UBAOG region, 47 percent of respondents

said they did not need high-speed Internet or were not interested in getting it. That number was similar, although slightly higher, than the state as a whole, at 44 percent.

Respondents were also asked if they are interested in obtaining a faster connection, and lack of interest was expressed once again. In the UBAOG region, 70.6 percent of respondents were not interested in having a faster high-speed connection now or in the future. At the state level, that number was substantially lower but still over 60 percent. This means nearly three-quarters of respondents at the regional level and over half at state level are not interested in obtaining high-speed Internet.

Finally, respondents were asked about what would make them more likely to have high-speed Internet access in their homes. More than a third of respondents in the area said that training on the computer or Internet would make them more likely to get high-speed Internet access, and nearly a quarter indicated more options in service would increase the likelihood. This suggests that the lack of interest in high-speed Internet may be related to the low level of computer and Internet skills among nonadopters. When asked what other reasons would make them more likely to adopt high-speed Internet, 17.7 percent said availability and 17.7 percent said a lower price.

With these results, little can be done to increase adoption rates for broadband if lack of interest is the root of the problem. In this region, there is some evidence that a more diversified marketplace could potentially increase interest. Interestingly, despite the low level of interest, nonadopters in the region said they would see benefits from access to high-speed home Internet service in terms of work productivity (52.9 percent), their children's education (39.4 percent), their own education (17.7 percent) and shopping (41.2 percent). These benefits, however, have not translated directly into interest in obtaining access to high-speed Internet in the home. Because increasing demand is difficult, we turn to other reasons for nonadoption that policymakers may be able to more effectively address.

Reasons for Nonadoption: Knowledge and Expertise

When respondents were asked about their computer use and expertise, results found evidence that a lack of expertise about computers in general, and the Internet

specifically, is likely playing a key role in nonadoption both in the UBAOG region and in the state.

Respondents were asked to rate their computer skills on a scale of zero to 10, with zero being no computer skills and 10 being very highly skilled. In the UBAOG region, 41.2 percent of respondents ranked their computer skills at zero, which is well above the state average of about 23 percent. Over 76 percent of respondents ranked their computer skills at a five or lower. Likewise, nearly three-quarters of respondents have not participated in a class, seminar or other program to improve their computer or Internet skills. This lack of skills is probably contributing to nonadoption in the UBAOG region.

However, when respondents in the UBAOG region were asked what would make them more likely to have high-speed Internet access in their homes, only 35 percent answered training on computer and Internet use would increase the likelihood of adoption. Providing training and educational programs geared toward increasing computer literacy and Internet skills might be a potential way to increase adoption rates for broadband, although at a substantially lower impact rate than other regions.

Reasons for Nonadoption: Price

Another reason cited for nonadoption at both the state and regional level is that high-speed Internet services are too expensive. Of respondents in the UBAOG region, 11.8 percent reported that the cost of access was the main reason they did not have in-home broadband Internet. This rate is far lower than the nearly one-fifth of respondents statewide who reported price as the primary reason.

To further explore this area, respondents were asked how much high-speed Internet costs, and their responses were widely distributed. One third of respondents said that high-speed Internet service costs under \$25 per month, another third said between \$46 and \$55 per month, and the final third of respondents said between \$66 and \$90 per month. A 2011 study by Ryan Yonk and Randy Simmons, at Southern Utah University and Utah State University respectively, found that broadband customers

statewide were actually paying, on average, between \$42 and \$43 per month for high-speed Internet service.

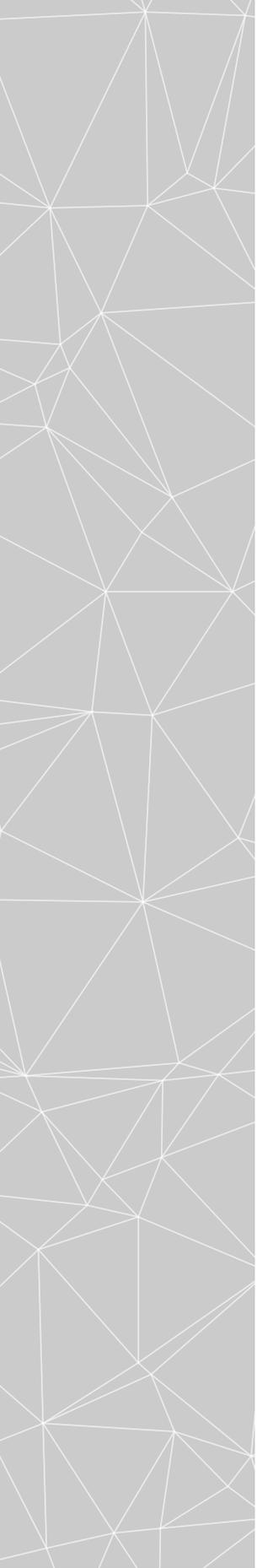
When asked what a reasonable monthly price should be, almost half of respondents at the state level and exactly 50 percent in the UBAOG region said high-speed Internet should cost less than \$25 per month. Another 25 percent answered that \$31-40 would be reasonable and 25 percent thought it should cost over \$50. This split tolerance for prices with a larger cluster at the low end is likely due to the high variability of incomes in the region. For comparison, Yonk and Simmons found that rural respondents in Utah were willing to pay an average of \$33.13 per month for high-speed Internet services compared to non-rural respondents who were willing to pay \$34.75.

Despite the respondents from this region clustering at low price thresholds, only 17.7 percent of respondents in the UBAOG region said that if high-speed Internet were to cost less, they would be more likely to get access in their homes. Based on these data, reducing the cost of high-speed Internet will have limited impacts on increasing adoption in this region.

Reasons for Nonadoption: Not Available

Another reason found for nonadoption is that the technology necessary to access high-speed Internet may not be available. Unlike many other AOG regions and the state as a whole, respondents in the UBAOG region more frequently reported a lack of access to high-speed Internet. Despite this perceived lack of penetration, only 23.5 percent of respondents cited lack of availability as the primary reason they do not have home based high-speed Internet. Additionally, only 5.9 percent of respondents knew how many providers were available in their area compared to the state average of 15.2 percent.

Data for broadband availability show that Uintah, Duchesne and Daggett Counties all have broadband available to nearly 100 percent of households at download speeds of at least 3 Mbps. In Duchesne County, 99.9 percent of residents have access to 3 Mbps service and 97.85 percent have access to 10 Mbps, but only 17.88 percent of households have access to download speeds of at least 25 Mbps. Uintah County is similar to Duchesne County where almost 100 percent of residents have access to



3 Mbps and 99.77 percent have access to 10 Mbps and then drops to 36.3 percent of households with download speeds at 25 Mbps. In Daggett County, 100 percent of residents have access to 3 Mbps but no residents have access to higher speeds. This data shows that broadband availability in the region, particularly in Daggett County, is below the rest of the state and that lack of availability may be a key factor in limiting adoption. This analysis also did not evaluate specific upload speeds by county, which was done in order to facilitate an enhanced evaluation of download speeds by county.

Within the region, 64.6 percent of UBAOG respondents did not have computer equipment in their homes. This result is close to the 61.4 percent of respondents statewide who reported that they had a computer in their home. The low rate of computers in homes is likely contributing to nonadoption since they are the most common type of hardware used to access high-speed Internet.

To increase adoption rates, policymakers have two potential options in this region. First they could provide trainings to encourage nonadopters to utilize broadband technologies. As for the lack computers in the home, this is a more difficult policy question to solve because it is not clear if people are not purchasing computers because they cannot afford them, because they don't know how to use them, or because they are simply not interested in using them. Second, there does appear to be some potential for additional build out and increased service provisions that might entice some potential users to adopt. A combination of policies may be needed to address skill levels, price, availability and demand.

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