



**COLORADO**

**Department of  
Regulatory Agencies**

Executive Director's Office

July 3, 2017

Senate Agriculture, Natural Resources, and Energy Committee  
Senate Business Labor and Technology Committee  
House Transportation and Energy Committee  
House Business Affairs and Labor Committee  
State Capitol Building  
Denver, Colorado 80203

Dear Committee Members:

The attached report by the Broadband Deployment Board is hereby submitted in accordance with section 40-15-509.5 (9) C.R.S.

If Committee Members have questions or would like additional information, please contact me at [jordan.beezley@state.co.us](mailto:jordan.beezley@state.co.us).

Sincerely,

A handwritten signature in black ink, appearing to read 'Jordan Beezley', written in a cursive style.

Jordan Beezley  
Broadband Deployment Director

CC: Marisol Larez, Interim Executive Director  
Patty Salazar, Deputy Executive Director  
Department of Regulatory Agencies





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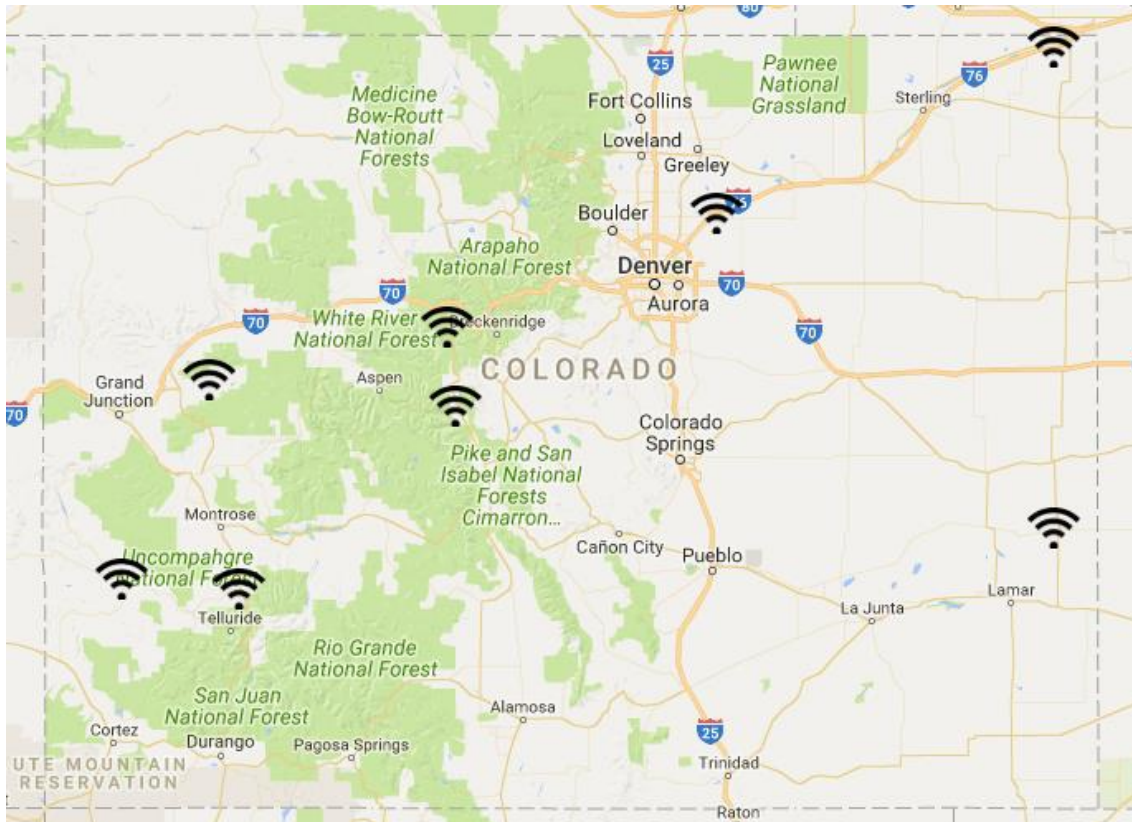
Executive Director's Office



Annual Report of the  
Broadband Fund and Broadband Deployment Board  
to the General Assembly  
July 1, 2017

Pursuant to section 40-15-509.5 (9) C.R.S. the Broadband Deployment Board (Board) is required to report annually on the projects supported by the Broadband Fund including the number of projects; the location of each project; the amount of funding received for each project; and a description of each project.

The Broadband Deployment Board awarded \$2,105,483 in grants from the Broadband Fund to eight rural broadband infrastructure deployment projects. Six of the grant awards were to the original applicants, and two were to CenturyLink through the right of first refusal process. When complete the projects will provide broadband access to over 4,700 households and 175 businesses in Eagle, Cheyenne, Kiowa, Lake, Mesa, Montrose, Ouray, Prowers, Sedgwick and Weld counties.



Fiscal Year 2016-2017 Broadband Fund Grant Project Locations

**Fiscal Year 2016-2017 Broadband Fund Grants:**

<b>Grantee</b>	<b>Nucla-Naturita Telephone Company</b>			
<b>Location</b>	Near Nucla and Naturita in Montrose County			
<b>Project Name</b>	Gobblers Knob Upgrade			
<b>Budget</b>	Total Project Cost	\$57,779	Funds Awarded	\$43,334
	Total Spent To-Date	\$0	Total Grant Reimbursement To-Date	\$0
<b>Project Status</b>	Project Underway - On Schedule			
<b>Current Progress Report (Q3)</b>	Equipment identified and ordered.			
<b>Project Summary</b>	<p>The project is a microwave enhancement of the grantee's Gobblers Knob site located approximately 6 miles west of Nucla, to the San Miguel Basin area, via the grantee's microwave site at Pony Draw. The enhancement will be accomplished with a 2-hop microwave capable of 700 Mbps. The microwave will connect to an Adtran TA5000 DSL shelf supplying the 48 connected households with broadband Internet access capable of at least 25Mbps download and 3 Mbps upload and with latency levels that allow for real-time communications. The grantee will purchase, install, test and operate the equipment.</p>			
<b>16-0084</b>	<b>NE Colorado Cellular, Inc. dba Viaero Wireless</b>			
<b>Location</b>	Near Sheridan Lake, Towner and Brandon in Kiowa County			
<b>Project Name</b>	Sheridan Lake, Towner and Brandon			
<b>Budget</b>	Total Project Cost	\$634,799	Funds Awarded	\$395,452
	Total Spent To-Date	\$86,310	Total Grant Reimbursement To-Date	\$54,022
<b>Project Status</b>	Project Underway - On Schedule			
<b>Current Progress Report (Q3)</b>	Tower locations secured. FAA approval obtained for the Sheridan Lake South location, approval for the North location is still pending. Approval up at the Kiowa County Commissioners meeting on 5/11.			
<b>Project Summary</b>	<p>The grantee will construct two 195 foot towers designated as Sheridan Lake North, located approximately 9.52 miles Northwest of Sheridan Lake and Sheridan Lake South, located approximately 10.4 miles South of the Sheridan Lake. The grantee must obtain suitable land to purchase or lease for the tower sites including obtaining all necessary zoning and permitting, including FAA clearances and FCC licenses for the microwave backhaul. 3.65 GHz TDD base stations and associated antenna and transmission lines will be installed on each of the new towers and on each of the existing towers located in Towner and Sheridan and operated by the grantee. Microwave radios and associated antenna and transmission lines will be installed on each of the new towers. The grantee must test all installed equipment to ensure proper operation and provide last-mile broadband service of at least 25 Mbps download and 3 Mbps upload with latency that enables real-time communications to the 334-square mile service area.</p>			
<b>16-0085</b>	<b>Chaffee County Telecom LLC, dba Colorado Central Telecom</b>			
<b>Location</b>	In and near Twin Lakes in Lake County			
<b>Project Name</b>	Twin Lakes and Southern Lake County Project			
<b>Budget</b>	Total Project Cost	\$384,452	Funds Awarded	\$288,338
	Total Spent To-Date	\$33,150	Total Grant Reimbursement To-Date	\$24,863

Project Status            Project Underway - On Schedule  
Current Progress Report (Q3)    The draft conditional use permit has been submitted for the Sugarloaf tower site, public hearing on May 22nd. The Granite site received U.S. Forest Service priority status. Xcel is processing the request for Sugarloaf site power connection. Tower engineering and purchase is complete for the Sugarloaf site.

Project Summary        The project requires the construction of two new tower sites: One at the Granite heliport and another at Sugarloaf Mountain near Turquoise Lake. The Granite heliport site will feature a 40-foot tower engineered by SkyTower, Inc. The tower will be triangular with a 40-inch span between each leg, anchored by a concrete base or drilling into bedrock. The Sugarloaf Mountain site will also be engineered by SkyTower, Inc. Lake County has dropped the requirement that the Sugarloaf tower be disguised as a mining headframe. In addition to those primary hops, Colorado Central Telecom will install micro pop repeater sites as needed to cover areas not serviced by the primary towers at Granite and Sugarloaf.

Colorado Central Telecom will incorporate both 4G LTE and Wi-Fi 802.11ac MIMO in its last-mile fixed wireless infrastructure. Grantee's last-mile microwave links will be backhauled through the Granite heliport site. From there, the Granite site will be backhauled to Colorado Central Telecom's Methodist Mountain tower using a licensed Trango GigaPlus 2+0 microwave radio. Backhaul for the Methodist tower can be routed to either, Center, Salida or Nathrop via a licensed microwave Trango GigaPlus 2+0 radio. The grantee will purchase, install and test all equipment to ensure broadband access of at least 25Mbps download and 3Mbps upload with sufficient latency to allow for real-time communications in the service area.

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<b>16-0086</b>	<b>CenturyLink Inc.</b>			
Location	In and near Hudson and Keenesburg in Weld County			
Project Name	Hudson and Keenesburg Project			
Budget	Total Project Cost	\$299,200	Funds Awarded	\$299,156
	Total Spent To-Date	\$0	Total Grant Reimbursement To-Date	\$0
Project Status	Project Underway - On Schedule			
Current Progress Report (Q3)	Project planning and more detailed engineering work has been completed. The provision of fiber termination panels at central offices begun. Permitting process has begun.			
Project Summary	The grantee will upgrade five Digital Subscriber Line Access Multiplexer's (DSLAM) located at (1) 450 5th Ave Hudson, (2) 605 Ash Hudson, (3) 374 Woodard Ave Keenesburg, (4) 7799 Weld County Rd 59, Keenesburg, (5) 80 S Main Keenesburg. The grantee will install fiber to the DSLAM's located at (1) 450 5th Ave Hudson, (2) 605 Ash Hudson, (3) 374 Woodard Ave Keenesburg, (4) 7799 Weld County Rd 59, Keenesburg, (5) 80 S Main Keenesburg. The grantee will test all equipment and ensure Broadband Internet access with at least 25 Mbps download and 3 Mbps upload and sufficient latency to allow for real-time communications to the last mile connections identified in the Right of First Refusal Written Plan.			

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<b>16-0087</b>	<b>PC Telcorp, Inc., dba PC Telcom</b>			
Location	In and near Ovid, Sedgwick and Julesburg in Sedgwick County			
Project Name	Ovid, Sedgwick and Julesburg Project			
Budget	Total Project Cost	\$85,232	Funds Awarded	\$55,400
	Total Spent To-Date	\$0	Total Grant Reimbursement To-Date	\$0

Project Status            Project Underway - On Schedule  
Current Progress Report (Q3)    All equipment has been ordered and received. The grantee is coordinating with Viaero for utilization of 3.65 GHz spectrum prior to installing equipment. Installation expected to begin at the end of April.

Project Summary        The grantee will replace existing Alvarion wireless access points and antennas with Telrad LTE wireless access points and antennas on the "Sedgwick Tower" and "Julesburg Tower." Work will include running new cables, installing equipment, adjusting equipment and testing equipment to ensure service of at least 25 Mbps downstream and 3 Mbps upstream speeds with latency that allows for real-time communications.

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<b>16-0088</b>	<b>Optimus Communications LLC</b>			
Location	In and near Collbran in Mesa County			
Project Name	Collbran Colorado and Eastern Plateau Valley Project			
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Budget	Total Project Cost	\$150,000	Funds Awarded	\$112,500
	Total Spent To-Date	\$39,045	Total Grant Reimbursement To-Date	\$29,284
Project Status	Project Underway - On Schedule			
Current Progress Report (Q3)	The grantee purchased 60' tower for Palisade Point link, two existing microwave links, and equipment for Plateau City radio site. Repairs of cable infrastructure have begun.			
Project Summary	The grantee will purchase and install wireless microwave backhaul equipment at the Optimus Communications LLC main office in Grand Junction. This equipment will connect to new microwave backhaul equipment purchased and installed by grantee on the existing Palisade Point tower on the Grand Mesa. The Palisade Point equipment will connect to the Cable Head End building in Collbran CO. Microwave equipment will be purchased installed at the Cable Head End connecting the backhaul to the existing cable infrastructure owned by the grantee. The grantee will use Cisco routing equipment and DOCSIS 3.0 system for internet distribution over the cable infrastructure. The grantee will purchase, build and install a solar powered communications site with a microwave link from Palisade Point to the Vega tower. The grantee will purchase and install three 120 degree 5.8Ghz antenna and three 5.8 Ghz radios at the Vega tower. Grantee will purchase and install an additional microwave link from the Cable Head End to the Plateau City tower. The grantee will purchase and install four 90 degree 5.8Ghz antenna and 12 AC 5.8 Ghz radios at the Cable Head End tower and the Plateau City tower. The grantee will purchase, install and test all equipment to ensure 25Mbps download, 3Mbps upload and latency sufficient to enable real-time communications is provided over both the cable and wireless infrastructure.			

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<b>16-0089</b>	<b>CenturyLink Inc.</b>			
Location	Ridgeway in Ouray County			
Project Name	Ridgeway Project			
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Budget	Total Project Cost	\$841,200	Funds Awarded	\$841,200
	Total Spent To-Date	\$0	Total Grant Reimbursement To-Date	\$0
Project Status	Project Underway - On Schedule			

Current Progress Report (Q3) Project planning and more detailed engineering work is complete. The provision of fiber termination panels at central offices begun. Permitting process is underway. Local government officials requested DSLAM sites be changed from the original plan. As a result, the DSLAMs at 265 Lena and 125 Lena were consolidated at a new location, 526 Clinton. CTL said that the change will not impact the project footprint. A meeting with CDOT has been set to discuss challenges with the terrain.

Project Summary The grantee will upgrade eight Digital Subscriber Line Access Multiplexer's (DSLAM) located at: (1) 97 Chipeta Dr., (2) 1000 Clinton, (3) 265 N Lena, (4) 501 W Otto, (5) 109 Village SQ, (6) 222 Vista DR (7) 125 S Lena ST (8) 309 Sherman.

The grantee will install fiber to the DSLAM's located at (1) 97 Chipeta Dr., (2) 1000 Clinton, (3) 265 N Lena, (4) 501 W Otto, (5) 109 Village SQ, (6) 222 Vista DR (7) 125 S Lena ST (8) 309 Sherman.

The grantee will test all equipment and ensure Broadband Internet access with at least 25 Mbps download and 3 Mbps upload and sufficient latency to allow for real-time communications to the last mile connections identified in the Right of First Refusal Written Plan. At least 750 of the locations served must have availability of speeds of 100/10, at least 100 of the locations served must have availability of speeds of 40/20, and at least 140 of the locations served must have availability of speeds of 40/5.

<b>16-0090</b>	<b>Futurum Communications Corporation, dba Forethought.net,</b>			
Location	<b>Brainstorm Internet</b>			
Project Name	Red Cliff in Eagle County			
	Red Cliff Project			
Budget	Total Project Cost	\$93,471	Funds Awarded	\$70,103
	Total Spent To-Date	\$0	Total Grant Reimbursement To-Date	\$0
Project Status	Grant Agreement Signed			
Current Progress Report (Q3)	Waiting on U.S. Forest Service permits.			
Project Summary	From the CenturyLink Fiber Demarc, the grantee will install fiber through two Ski Cooper buildings, trenching from the edge of Ski Cooper building to Lift Hut and through existing conduit from Hut to the Lift towers and aerial on existing cable path on towers to Lift House. At the Lift House grantee will construct a mount, engineered by the manufacturer to the Lift House infrastructure. On this structure, grantee will install a 4ft. Dish pointing to Red Cliff. At Red Cliff, a reciprocal licensed radio will be installed on 80ft tower being built by the Town of Red Cliff. The grantee will deploy LTE Fixed wireless radio equipment from the Red Cliff tower. LTE fixed wireless will deliver 25MB/5MB and potentially higher speeds as standards evolve. The grantee will purchase, install and test all equipment ensuring broadband internet service to the Town of Red Cliff of at least 25 Mbps download and 3 Mbps upload with latency sufficient to enable real-time communications.			