



Exhibit 12

Wisconsin Broadband Enhancement Grants

Information for WVLS Board of Trustees

Submitted by Joshua Klingbeil
9/16/2017

After a press release from Wisconsin State Senator Janet Bewley (25th) was shared at the August 2017 meeting of the Wisconsin Valley Library Service Board of Trustees, I volunteered to dig a bit deeper into the state of the Wisconsin Broadband Enhancement Grants program, administered by the Wisconsin Public Service Commission (PSC). It became apparent early on that this report, if presented as a direct response to a State Senator's press release, could end up being more political than informational. As Senator Bewley's press release was the original catalyst for interest in this subject, I've included it below as a point of reference.

Too late for this report, I began reaching out to several contacts in the Wisconsin Broadband Enhancement community (including State Broadband Director, Angie Dickison) to garner their feedback on the process to date and specifically the FY2018 candidates and eventual awardees. I'll continue to pursue those communications to supplement this report in the future. Rather than interpret the information – readily available on the PSC's website - I've curated several publications which contain meaningful information about or relevant to the program. This report is thus more of an informational packet than a summary of status.

I'd hoped to embed directly a copy of [Governor Walker's Press Release](#) for FY18 recipients. I was unable to reformat the web-resource into a legible PDF. To review it, please visit directly with the link above. The PSC has a comprehensive (16 page) [Frequently Asked Questions \(FAQ\)](#) which is included in the PDF version of this report.

- Senator Bewley's press release and the Wisconsin Senate District map were from: <https://legis.wisconsin.gov>.
- The 2018 Awardees flyer, Eligible Guideline Areas map, and FY2014-2017 Grant Awardee summaries were from: <https://psc.wi.gov/Pages/Programs/BroadbandGrants.aspx>.

After initial review of published information, it seems that Broadband Enhancement Grants are awarded across the State, and to projects involving a variety of private provider types and sizes. The questions of selection process, and the awarding of grants to applications with lower ratings from the review and recommendations panel are still important. It is my hope that further communication with Angie Dickison and other Broadband Enhancement leadership throughout the State will offer more clarity in that regard.



[\(/senate/25/bewley/\)](#)

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- / **Northwestern Wisconsin Shut Out of Broadband Grants**

Northwestern Wisconsin Shut Out of Broadband Grants

The latest round of Broadband Expansion Grant Recipients was announced last week. People across Northwestern Wisconsin joined together to develop plans and submit applications in hopes that a grant would help bring high speed internet to their area. Chequamegon Communications Cooperative (Norvado) and the Town of Barnes developed a plan, Price County Telephone Company worked with the Town of Windsor on a proposal. In the end, eight of the 53 applications were from Northwestern Wisconsin and would have benefited the people I have the honor of representing in the State Senate.

But once again, the hard working folks our area were disappointed. None of the one and a half million dollars that was awarded will be spent in Northwestern Wisconsin. In fact, 1/3 of that total, 500 thousand dollars, is going to 2 projects in Madison area communities.

Some of my colleagues refer to these as Rural Broadband Grants, but that's not really accurate. The grants are awarded to "underserved regions of the state". Not sure about you, but I think we're a lot more underserved than people who live in Dane County.

Two much-needed and well-prepared projects from our area were rated in the top 10 by the professional screening panel that provided recommendations to the state's public service commission. Unfortunately, the politically-appointed

commissioners rejected those recommendations and moved projects – including one that had been rated 47th out of 53 applicants – ahead of our communities.

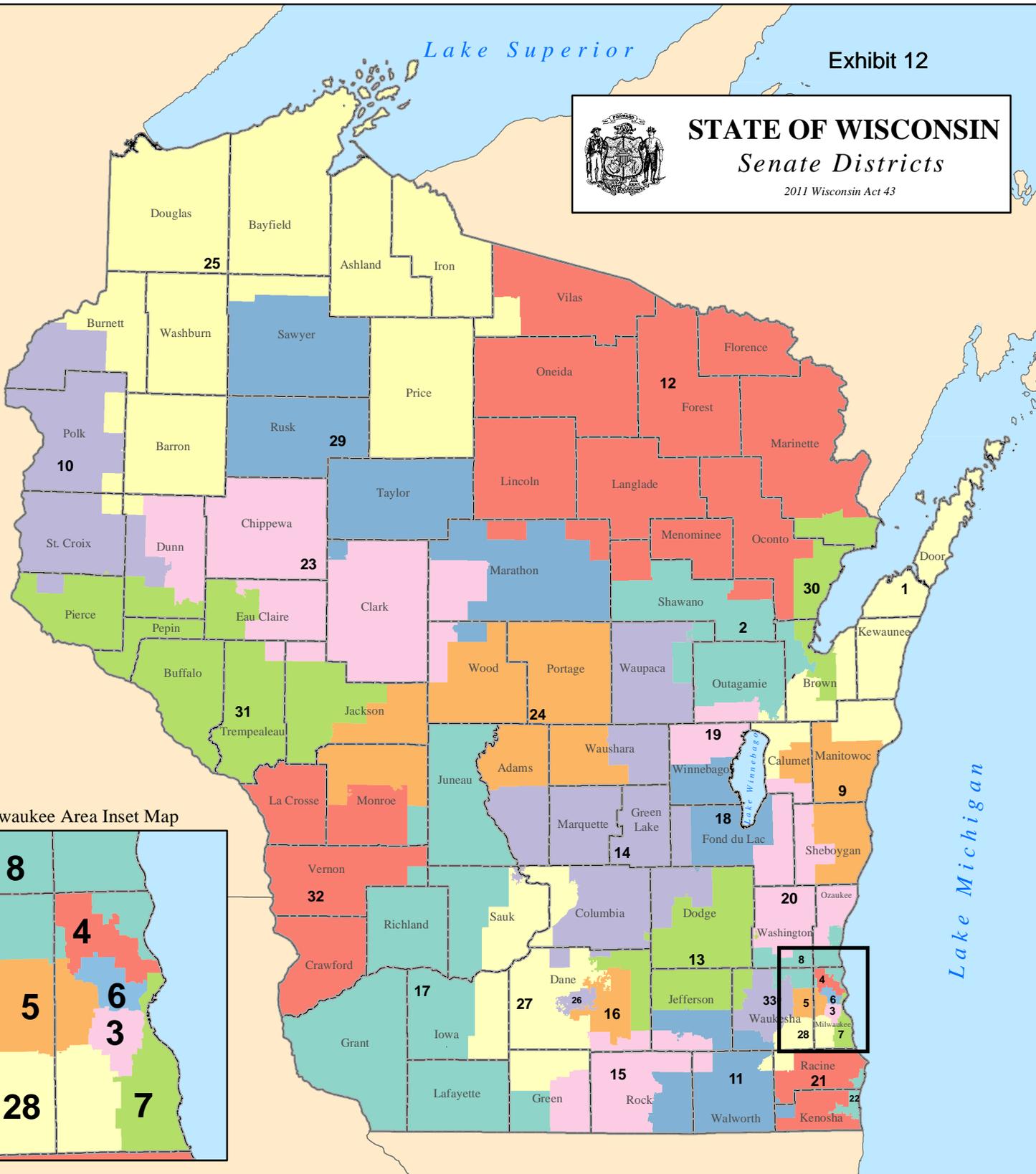
Left behind was an application for Bayfield County service that screeners rated 5th and would have improved emergency response and 911 service. On the southern edge of our district, a project for the Town of Hayward that would have quadrupled service for residents was rated 8th but rejected. And the Chequamegon Coop plan, rated 11th by professional screeners, would have served 3 times as many businesses and homes but was not among the 13 applicants chosen.

We've heard over and over... and over again that expanded broadband grants are intended for communities that need them. Once those press releases head north, however, that pledge is forgotten. Disappointingly, the commissioners appointed by Governor Walker chose projects from three large national telecommunication companies instead. Those companies just happen to employ 10 lobbyists here in Wisconsin.

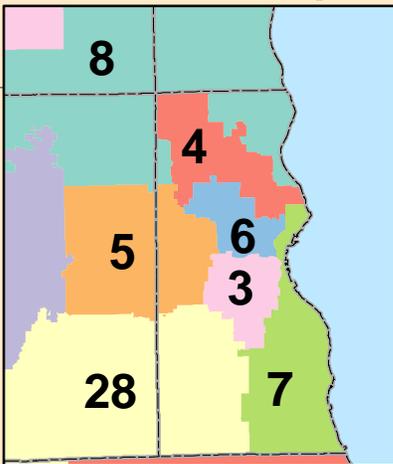
I believe it's time for your tax dollars to come home to you. I believe that state officials, either elected or appointed, should put your needs ahead of rewarding lobbyists. And I believe that when a politician promises the people that elected them that they are going to work for them, they should live up to that promise. When they say that state government spending will benefit everyone in the state, they need to make sure that happens.

I'll keep fighting to make sure Northwestern Wisconsin gets its fair share. But I need your help. The next time a politician tells you that the program they're pushing will help you, make sure you ask them exactly how.

STATE OF WISCONSIN
Senate Districts
 2011 Wisconsin Act 43



Milwaukee Area Inset Map



Source: US Census TIGER 2010 data
 Projection: WTM 83/91

Notes: Senate Districts are comprised of three consecutive Assembly Districts.

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2017 - 2018 WISCONSIN SENATORS

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BROADBAND EXPANSION GRANT

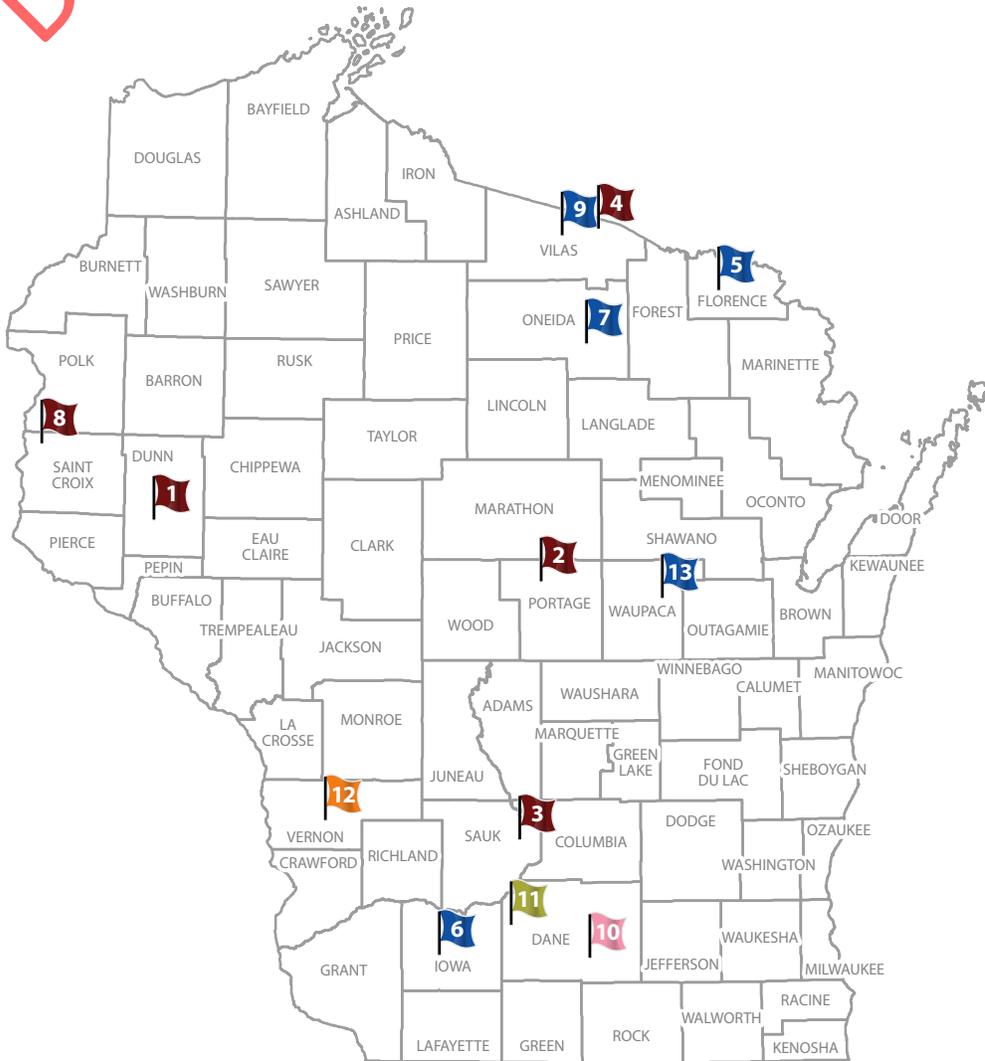
AWARDEES, FISCAL YEAR 2018

1.5 Million Grant Dollars Awarded

Exhibit 12

DRAFT
13 projects receiving **\$1.5 million**
 leveraging **\$2.3 million** in matching funds

Broadband Technology



Map Label	Primary Applicant	Award Total
1	24-7 Telcom, Inc (Town of Menomonie - Irvington)	\$153,500
2	Amherst Tel. Co. (Town of Hull Phase II)	\$170,000
3	CenturyLink (City of Baraboo)	\$167,300
4	ChoiceTel, LLC (Land O' Lakes Phase III)	\$72,846
5	Florence County (Fixed wireless)	\$66,712
6	MH Telecom, LLC (Iowa County)	\$126,162
7	Oneida County EDC (Phase III)	\$45,000
8	Somerset Tel. Co. (Town of Star Prairie)	\$90,000
9	SonicNet, Inc (Town of Conover)	\$6,765
10	Town of Dunn (Charter cable)	\$106,395
11	TDS/Black Earth Tel. Co. (Town of Vermont)	\$285,917
12	Vernon Comm. Co-op. (Fiber & fixed wireless)	\$176,587
13	Waupaca Online (Phase II)	\$32,816

Date: 8/3/2017 PSC ID: DbpmBbExpG13

Disclaimer: This map shows general coverage locations based on the mapping submissions given to the PSC by applicants. Applicants offer proposed coverage areas in a number of non-GIS and non-standardized formats. The coverage maps included with each application are considered to be more accurate for this reason. This map is for general reference purposes only.

0 15 30 60 Miles

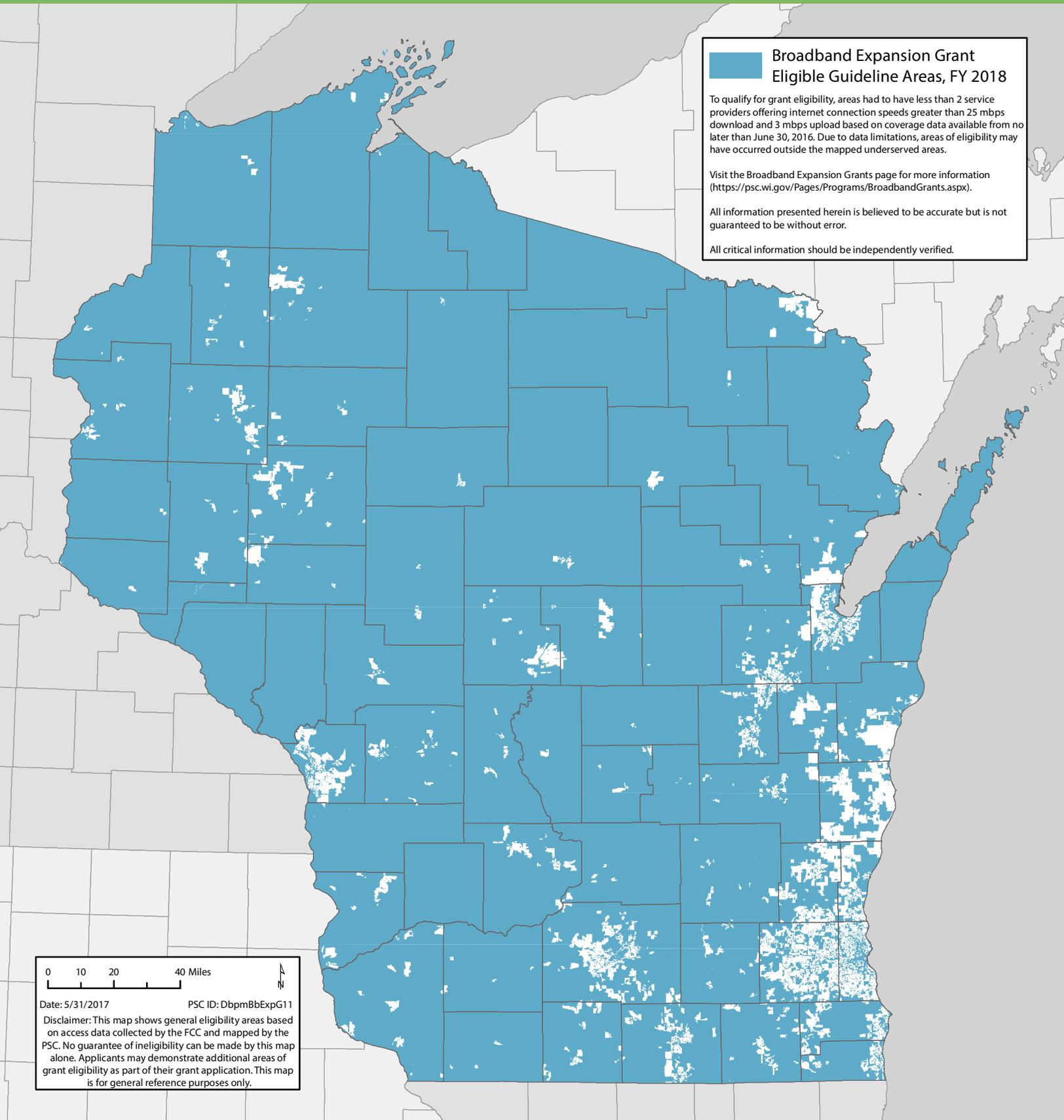
\$3.8 million
 in
Total Broadband Investment

WISCONSIN BROADBAND EXPANSION GRANT

ELIGIBLE GUIDELINE AREAS, FY 2018

Exhibit 12

Presented by the Wisconsin Broadband Office



**Broadband Expansion Grant
Eligible Guideline Areas, FY 2018**

To qualify for grant eligibility, areas had to have less than 2 service providers offering internet connection speeds greater than 25 mbps download and 3 mbps upload based on coverage data available from no later than June 30, 2016. Due to data limitations, areas of eligibility may have occurred outside the mapped underserved areas.

Visit the Broadband Expansion Grants page for more information (<https://psc.wi.gov/Pages/Programs/BroadbandGrants.aspx>).

All information presented herein is believed to be accurate but is not guaranteed to be without error.

All critical information should be independently verified.

0 10 20 40 Miles

Date: 5/31/2017 PSC ID: Dbpm8BExpG11

Disclaimer: This map shows general eligibility areas based on access data collected by the FCC and mapped by the PSC. No guarantee of ineligibility can be made by this map alone. Applicants may demonstrate additional areas of grant eligibility as part of their grant application. This map is for general reference purposes only.

Summary of FY 2017 Broadband Grants					
Applicant(s)	Grant amount requested	Matching funds	Total project cost	County	Description
Amherst Telephone Company (Town of Hull project)	\$150,000.00	\$382,921.00	\$532,921.00	Portage	This project proposes to build a fiber to the home service in rural Portage County, northeast of Stevens Point. The 16-mile fiber route will build past 167 residential and business locations in three townships: Hull, Dewey, and Sharon.
Black Earth Telephone Company, LLC d/b/a TDS Telecom (Town of Berry project)	\$156,500.00	\$156,500.00	\$313,000.00	Dane	This project proposes to build a dsl service in rural Dane County, northeast of the Village of Black Earth. TDS would provide dsl service to 166 households in the Town of Berry.
CenturyTel of the Midwest - Kendall, LLC d/b/a CenturyLink (City of Peshtigo project)	\$39,900.00	\$93,100.00	\$133,000.00	Marinette	This project proposes to build a 2.4-mile fiber route in the Peshtigo Industrial Park in the City of Peshtigo. The route will pass 58 business and 98 residential locations in the project area. Century currently provides dsl broadband service to 66 locations. It anticipates that if this project is built, an additional 109 locations could be connected within 24 months, or a total of 175 locations served.
Telephone USA of Wisconsin, LLC d/b/a CenturyLink (Berry Lake project)	\$134,625.00	\$134,625.00	\$269,250.00	Oconto	This project proposes to build an 8.37-mile fiber route in Oconto County to support an upgraded dsl service in the vicinity of Berry Lake. Century currently provides broadband service to 67 locations. It anticipates that if this project is built, an additional 123 locations could be connected within 24 months, or a total of 190 locations served.

<p>CenturyTel of the Midwest - Kendall, LLC d/b/a CenturyLink (Big Top Chautauqua project)</p>	<p>\$25,000.00</p>	<p>\$32,000.00</p>	<p>\$57,000.00</p>	<p>Bayfield</p>	<p>This project proposes to build a fiber route along Ski Hill Road in Bayfield County. The route will provide 1 Gbps to the Ski Hill and Big Top sites. This level of service will support the business operations of both enterprises, and also provide support for a Wi-Fi service for approximately 48,000 guests annually. The project would also locate a DSL service node along Ski Hill Road. CenturyLink currently provides broadband service to 52 locations in the area. These locations would be upgraded. Century anticipates that if this project is built, an additional 12 locations could be connected within 24 months, or a total of 64 locations served.</p>
<p>CenturyTel of Central Wisconsin, LLC d/b/a CenturyLink (Hickory Park project)</p>	<p>\$10,000.00</p>	<p>\$30,000.00</p>	<p>\$40,000.00</p>	<p>Eau Claire</p>	<p>This project proposes to update the electronics at the Hickory Park subdivision, south of Eau Claire in Eau Claire County. CenturyLink currently provides DSL broadband service to 96 locations in the project area. Century anticipates that with the upgraded service it will add an additional 94 broadband subscribers within 24 months, or a total of 190 locations served.</p>
<p>Chibardun Telephone Cooperative (Indianhead Holsteins project)</p>	<p>\$38,477.00</p>	<p>\$42,000.00</p>	<p>\$80,477.00</p>	<p>Barron</p>	<p>This project proposes to build fiber to the home service in the Town of Clinton in Barron County, just north of Poskin. The route will build past 13 farms and 1 business location.</p>
<p>ChoiceTel (Land O'Lakes Phase II project)</p>	<p>\$131,475.10</p>	<p>\$131,475.10</p>	<p>\$262,950.20</p>	<p>Vilas</p>	<p>This project proposes to build a 50-mile fiber to the home service in the Town of Land O'Lakes in Vilas County. This is a partial grant award. The intention is to connect as many as business and residential locations in Land O'Lakes as possible this year. ChoiceTel may reapply for the balance of the project next year.</p>
<p>Ethoplex, LLC (Town of Oconomowoc project)</p>	<p>\$7,886.00</p>	<p>\$8,208.00</p>	<p>\$16,094.00</p>	<p>Waukesha</p>	<p>This project proposes to build a fixed wireless service to serve 21 locations along Highlander Road in the Town of Oconomowoc in Waukesha County. The fixed wireless service will reach an additional 50 business and residential locations within the footprint of the service.</p>

Frontier North Inc. (Town of Weston project)	\$201,750.00	\$301,750.00	\$503,500.00	Marathon	This project proposes to build a 10-mile fiber route, upgrade the existing dsl service at three remote terminals, and install one new terminal in a housing subdivision southeast of Wausau in the Town of Weston. This project will provide approximately 1,245 households with broadband service with a maximum speed of 25/3, and 2,333 households with a maximum speed of 10/1. The project area includes 41 business locations as well.
Hagar Telecom, Inc. dba BEVCOMM	\$43,775.60	\$65,663.40	\$109,439.00	Pierce	This project proposes to build a 1.24-mile fiber route to connect 35 residential locations in the Town of Diamond Bluff in Pierce County.
Iron County Resource Development Association, Inc., Gogebicrange.net	\$79,101.30	\$80,101.30	\$159,202.60	Iron	This project proposes to expand the fixed wireless service that GogebicRange.net provides in Iron County. The applicants propose to place GogebicRange.net's fixed wireless equipment on four additional antenna locations. There are 1,743 business and residential locations within the footprint of the proposed fixed wireless service. Based upon the PSC's experience with fixed wireless projects, this project could be expected to serve 20% of these locations, or about 350 new customers.
Lafayette Development Corporation	\$86,084.00	\$344,336.00	\$430,420.00	Lafayette	This project proposes to build a fixed wireless internet service in Lafayette County. This is a partial award that funds fixed wireless service to Shuberts, Gratiot and Wiota. LDC may reapply for the balance of the project next year.
MH Telecom, LLC (City of Dodgeville project)	\$55,360.00	\$83,040.00	\$138,400.00	Iowa	This project proposes to build a fiber route through a business park on the east side of Dodgeville. The route will build past 8 existing businesses and 28 potential commercial locations. The fiber route could also be used to service new and existing residential locations adjacent to the business park.

<p>Oneida County Economic Development Corporation, Northwoods Telcommunications Technologies, LLC d/b/a Northwoods Connect</p>	<p>\$180,566.00</p>	<p>\$222,670.00</p>	<p>\$403,236.00</p>	<p>Oneida</p>	<p>This project proposes to build an expansion of the existing fixed wireless service in the northern portion of Oneida County. The project will install service on three existing and four new communications towers at an advertised speed of 25 Mbps down. The footprint of these tower is approximately 310 sq miles, reaching 7,957 local residences and businesses. The applicants state that they believe the project will eventually sign up 3,750 customers, including 40 business locations.</p>
<p>24-7 Telcom, Inc. (Town of Red Cedar project)</p>	<p>\$67,500.00</p>	<p>\$67,500.00</p>	<p>\$135,000.00</p>	<p>Dunn</p>	<p>This project proposes to build fiber to the premises service in the vicinity of the Village of Rusk, adjacent to I-94, just east of City of Menomonie in Dunn County. The route will build past 17 homes and 16 businesses. The project area is a narrow strip of land bounded on the north by an active rail corridor and on the south by the interstate. The purpose of this project is to improve the usefulness of this area for commercial development.</p>
<p>Wittenberg Wireless (Village of White Lake project)</p>	<p>\$92,000.00</p>	<p>\$97,734.93</p>	<p>\$189,734.93</p>	<p>Langlade</p>	<p>This project proposes to build fiber to the home service in the Village of White Lake in Langlade County. Wittenberg expects to connect about 100 businesses and residences to its fiber service.</p>
<p>TOTAL</p>	<p>\$1,500,000.00</p>	<p>\$2,273,624.73</p>	<p>\$3,773,624.73</p>		

Summary of FY 2016 Broadband Grants

Exhibit 12

Applicant(s)	Grant amount awarded	Matching funds	Total project cost	Status	Description
Amery Telephone Co.	\$99,000.00	\$393,200.00	\$492,200.00		This project will build a fiber route along rural roads in the Amery Tel. Clayton exchange. The project area is located in the Town of Vance Creek in southwest Barron County. The fiber route will pass about 150 locations. Initially, Amery expects to install its broadband fiber to the home service to about 110 of those locations.
CenturyTel of the Midwest - Wisconsin, LLC Cumberland Project	\$140,970.00	\$303,030.00	\$444,000.00		This project will build 9 mile fiber route and upgrade electronics at five serving devices. Potential service to 34 businesses and 490 residences.
CenturyTel of the Midwest - Wisconsin, LLC Sullivan Project	\$145,558.00	\$235,442.00	\$381,000.00		This project will construct 7.3 mile fiber route and upgrade electronics at two serving devices. Potential service to 15 businesses and 242 residences.
Chequamegon Communications Cooperative, Inc. Town of Cable Project	\$98,000.00	\$123,095.00	\$221,095.00		This project will provide fiber to the home to 65 locations in the Town of Cable, southwest of City of Cable, WI. Town of Cable will contribute \$5,000 and assist future development by securing easements and rights of way.
Chippewa County, Wisconsin Independent Network, LLC	\$286,165.00	\$260,000.00	\$546,165.00		This project will build a 5.4 mile fiber route to connect two business parks on the south side of Chippewa River to existing fiber facilities. 25 existing businesses have indicated interest in fiber service from the fiber ring. Spare fiber could support additional public and private use in the future.
ChoiceTel LLC, Town of Land O'Lakes	\$249,093.00	\$249,092.00	\$498,185.00		This project will build an 18 mile route to serve locations in Town of Land O' Lakes in Vilas County. Initially, potential service to 59 businesses and 250 residences. ChoiceTel will expand its network to cover potential 97 businesses and 1,184 residences within 2 years.
GogebicRange.net, Iron County Resource Development Association	\$41,914.00	\$36,785.00	\$78,699.00		This is a fixed wireless project. It will build 3 wireless towers in northern Iron County, 1 in Hurley and 2 others west of Hurley. Potential service to 30 businesses and 2,293 residences.
City of Reedsburg, Reedsburg Utility Commission	\$69,300.00	\$254,000.00	\$323,300.00		Extend fiber service to 2 rural subdivisions in Town of Delton in Sauk County. Potential service to 100+ residences in the 2 subdivisions. The extent of current broadband service is disputed. The residents of the subdivisions consider themselves to be unserved.

Siren Telephone Co. (Village of Webster project)	\$150,000.00	\$778,854.00	\$928,854.00		This project will provide fiber to the home service to potentially 310 homes in the Village of Webster. Siren Telco also intends to expand this project to over 1,000 homes and small businesses in Webster area in future years.
Wittenberg Wireless LLC (Silver Birch Ranch project)	\$150,000.00	\$266,125.00	\$416,125.00		This project will build a fiber route to a Cellcom cellular tower north of White Lake, and north to vicinity of Sawyer Lake and Silver Birch Ranch. Will initially serve potential of 305 households and seasonal residences in the Sawyer Lake Silver Birch Ranch area and the Cellcom tower in White Lake. Wittenberg Wireless plans to would also expand its fiber service south to the Village of White Lake in 2017.
Wittenberg Wireless LLC (Village of Mattoon)	\$70,000.00	\$73,608.00	\$143,608.00		This project will build a fiber route to Village of Mattoon in Shawano County. Will provide fiber to the home service a potential 15 businesses and 180 residences in Mattoon, and an additional 20 residences along fiber route.
TOTAL	\$1,500,000.00	\$2,973,231.00	\$4,473,231.00		

Summary of FY 2015 Broadband Grants

Applicant(s)	Grant amount awarded	Matching funds	Total project cost	Status	Description
Village of Weston, Charter Business, MCDEVCO, and Wausau Region Chamber of Commerce	\$73,977.92	\$73,977.92	\$147,955.84		This project extends Charter cable facility under Hwy 29 east of Wausau to two business parks. Construction of the route is complete. Charter will build out its network to individual customer locations in spring 2016. This project now serves 4 customers. Will extend service to 7 vacant lots in one business park, and 38 potential business condo units in the second park.
Bayfield County, Norvado f/k/a Chequamegon Telephone Coop.	\$19,282.00	\$5,000.00	\$24,282.00	complete	This project extended fiber service to two campgrounds to support WiFi broadband access for the campers. Project is complete.
Forest County Potawatomi Community and Millennium Economic Development Corporation d/b/a/ Forest County Economic Development Partnership	\$95,500.00	\$95,500.00	\$191,000.00	complete	This project extended CenturyLink DSL internet service to the vicinity of Blackwell, about 20 mi. south of Crandon. Construction of the fiber service is complete. Installation of customers is underway. Project impact: 79 tribal households and 120 non-tribal households in the Blackwell township.
Telephone USA of Wisconsin d/b/a CenturyLink (CL), Crawford County EDC, Prosperity Southwest Wisconsin (PSW), Village of Ferryville, and Town of Freeman Ferryville Project	\$125,000.00	\$183,008.00	\$308,008.00	complete	This project extended DSL service to Ferryville in northwest Crawford County. Construction is complete. The initial sales effort is underway. Project impact: 224 households.
Waupaca Online	\$12,369.39	\$12,369.40	\$24,738.79		This is a fixed wireless internet service in Waupaca County. Will upgrade the software installed at 18 points of presence to support higher bandwidth internet service. Project will complete in summer 2016. Project impact: 1,330 households.
Somerset Telephone Co.	\$80,000.00	\$167,000.00	\$247,000.00	complete	This project extended fiber to the home service in Somerset Township in St Croix County. Project is complete. Project impact: service to 75 households and 5 businesses.
Oneida County EDC, Oneida County, Town of Minoqua, Town of Hazelhurst, Ministry Health Care, Marshfield Clinic, Minoqua J1 School District, Lakeland Union High School, Grow North, and Northwoods synKro LLC	\$46,450.00	\$39,010.00	\$85,460.00	complete	This is a fixed wireless project in rural Oneida County north and west of Rhinelander. Installation of WiMAX facility on 3 wireless towers is complete. Initial sales effort is underway. Currently, the service has 45 customers. Expects to have 800 customers in 3-5 years.
TOTAL	\$452,579.31	\$575,865.32	\$1,028,444.63		

Summary of FY 2014 Broadband grants

Exhibit 12

Applicant(s)	Grant amount awarded	Matching funds	Total project cost	Status	Description
CCI Systems, Eau Claire County, CESA 10, Chippewa Valley InterNetworking Consortium, Sacred Heart and St Joseph's Hospitals	\$139,467.00	\$118,533.00	\$258,000.00		This is a fixed wireless project in east central Eau Claire County, adjacent to Lake Eau Claire. The grant awarded funds to build one communications tower with a large transmission footprint at a location within a county park. The overall goal of the project is to provide broadband service to an unserved area in eastern Eau Claire County. CESA 10 and the Augusta, Fall Creek and Osseo-Fairchild School Districts participated in the project to provide broadband service to students living in rural areas of those districts. Sacred Heart Hospital, St. Joseph's Hospital and Hospital Sisters Health System joined the application as well to provide patients with broadband service to support home health monitoring units and teleconferencing services provided by the hospitals.
Central State Telephone Co. (TDS) Cranmoor Project	\$85,663.21	\$85,663.20	\$171,326.41	complete	This project extended TDS/Central State Telephone DSL broadband service in the Cranmoor telephone exchange, just west of the Wisconsin River opposite Wisconsin Rapids in Wood County. The project replaces a lower quality "switcher line" in that exchange. TDS completed construction of a 3.65 mile fiber route and service installation to 90 households in May 2015. The project changed the serving telephone switch for Cranmoor from Solaris/Wisconsin Rapids to Central State Telephone Co.
CenturyLink Trout Lake Project	\$80,989.00	\$19,245.00	\$100,234.00	complete	This project will extended DSL service to about 95 households in the Trout Lake area in southwest Vilas County. Project is complete. 66 households subscribed to the broadband service in the initial sales effort.
ChoiceTel and City of Eagle River Highway 17 project	\$47,177.00	\$43,200.00	\$90,377.00	complete	This project built a 27 mile fiber route along Highway 17 between Rhinelander and Eagle River (\$3,350 per route mile). It is a middle mile project, providing a second broadband route to Eagle River and permitting upgraded service for over 300 users. The project also provided upgraded internet service to Eagle River municipal offices. Project is complete. In 2016, ChoiceTel will use spare capacity in the fiber route to connect to three Cellcom towers along Hwy 17.

CONTINUED

ChoiceTel and City of Eagle River Highway G project	\$68,313.00	\$69,693.46	\$138,006.46		This project will construct a 9 mile fiber route along Cty Hwy G northwest of Eagle River in Vilas County. There are over 300 residences and businesses along the fiber route. Project funding includes a 50% match. Completion in 2016.
SonicNet, Vilas County Economic Development Corp., and the Towns of Cloverland, Phelps and Winchester	\$11,283.10	\$11,283.11	\$22,566.21	complete	This is a fixed wireless project in Vilas County, Wisconsin. SonicNet built three new communications towers. The towers are located in areas where the existing Internet service was provided by 3G mobile service and satellite technologies. Project is complete. SonicNet has added 65 customers in 2015. Expects to add 320 customers in 3-5 years.
WIconnect Wireless and Prosperity Southwest Wisconsin Regional Economic Development Corporation	\$35,469.00	\$1,000.00	\$36,469.00	complete	This is a fixed wireless project. WIconnect upgraded service to 550 existing customers and expanded its network to an additional 450 customers, located south of the Wisconsin River in northern Grant and Iowa Counties and in Highland in Richland County. Project is complete.
TOTAL	\$468,361.31	\$348,617.77	\$816,979.08		

Note: The Commission initially awarded the seven applicants a total of \$500,000 in grants. The CenturyLink, TDS and SonicNet projects were completed under budget.

Frequently Asked Questions regarding the Broadband Expansion Grant Program

1. What is the purpose of the Broadband Expansion Grant Program?

The purpose of the Broadband Expansion Grant Program is to encourage the deployment of advanced telecommunications capability in underserved areas of the state.

In a recent federal report on deployment of broadband service, the Federal Communications Commission found that broadband deployment in Wisconsin was slightly below the national average: 13% of the population in Wisconsin (or 744,002 people) lack access to at least one broadband service, compared to the national average of 10%; and 43% of Wisconsin residents living in rural census blocks (or 710,485 people) lack access to at least one broadband service, compared to the national average of 39%.

This is the challenge the state faces. There is a disparity between the quality of broadband service available in urban areas and that available in many rural areas of the state at this time. The state is expanding and devoting additional funds to programs intended to bring broadband service to some of the 700,000 people in Wisconsin that currently lack access to broadband service.

The key issue here is simply funding. To offer a decent broadband service, the service provider must often either upgrade or bypass existing older telephone facilities. Both of those options are expensive. In urban areas there is usually a sufficient concentration of customers to pay for the cost of those improvements. A broadband service option is now available in all urban census blocks in the state, and most areas have a choice between two or more providers.

However, in many rural census blocks, the incumbent local exchange carrier and other telecommunications providers have determined that it is not possible to build an upgraded broadband service financed through monthly rates for service. To address this issue, the state offers Broadband Expansion Grants to providers and local communities to subsidize construction of broadband facilities in rural areas and to reduce the financial risk of the building out the broadband service. This program has already achieved some notable results:

- 42 grants have been awarded in FY 2014 - 2017. The state has pledged about \$3.9 million in grant funds, and has already paid out \$1.4 million to date.
 - 10 grants have been approved for fixed wireless systems
 - 10 grants have been approved for Digital Subscriber Line (DSL) systems
 - 18 grants have been approved for fiber to the home/premises (FTTH)
 - 3 grants have been approved for fiber and co-axial cable backbone facilities
 - 1 grant has been approved for a Wi-Fi system
- These 42 grant projects have connected or will connect 600 businesses and over 20,000 homes to high-speed broadband service.

- One example of the impact of this program is in Chippewa County. Chippewa County set apart several areas within Chippewa Falls for commercial development. Many of the components that would bring about economic growth in the area were in place. Chippewa Falls had an excellent transportation infrastructure, a well-trained workforce to fill job openings, access to excellent schools, and had enacted zoning and other local ordinances to facilitate commercial use of the property. Even so, the sales of lots in Chippewa Falls business parks stalled. The concern the county heard repeatedly was that the existing broadband service could not support the level of operations the businesses were trying to establish.

The state, the county and the service provider, Wisconsin Independent Network, LLC, together provided the funds to build a fiber ring in Chippewa Falls. The impact was immediate. One business purchased a lot in the business park based upon the location of the fiber route disclosed in the county's Request for Proposals. A second business, a retail distribution company, purchased a lot in the business park soon after the fiber route was built. Additional existing businesses in Chippewa Falls are considering shifting service to the new fiber ring in 2017 as the construction phase of the project is completed.

2. What are the common Broadband Service Technologies in use?

Broadband communications services are offered to subscribers using several alternative technologies. The more popular methods to connect to the internet include:

- Landline switched-access service

Internet access is still offered over the traditional analog landline facilities. Dial-up access to an internet service provider uses the voice portion of the telephone access line, preventing simultaneous or dual-use of the line. This technology provides a low-speed data rate that is increasingly disfavored for Internet communications.

- Digital Subscriber Line (DSL)

DSL transmits digital IP-formatted messages over standard telephone lines. The DSL service can be used simultaneously with the voice telephone service over the same telephone access line. This is possible because DSL uses higher frequency bands – the voice band range of the telephone line is 0 to 4 kHz, while DSL transmits signals in the range of 25 kHz to 1.5 MHz. A DSL modem is required to access the DSL signal. DSL provides continuous access to an internet service provider.

- Cable Internet

Cable internet service uses the hybrid fiber co-axial cable deployed by cable television companies providing television service. Cable provides continuous access to an internet service provider. Cable is expensive because it requires the provider to replace or bypass the existing copper telephone facility with a second wireline network. A cable modem is required with this technology choice as well.

- Fiber-to-the-Home/Premises (FTTH)

FTTH is an alternative means to provide communications service by connecting a business or residence to the switch entirely by an optical fiber from an optical network interface at the point of entry at a residence or business. The optical fiber replaces the existing copper telephone line to a residence. As with cable internet, FTTH is expensive because it requires the provider to replace or bypass the existing copper telephone facility. Currently, FTTH service provides much faster connection speeds than DSL or cable internet service.

- Fixed wireless

Fixed wireless connects a subscriber's home to a serving antenna by radio link. In the past, fixed wireless has been popular in rural areas because it can be installed without incurring the cost of a wireline network. The frequencies for fixed wireless are generally limited to line of sight. The coverage area can also be limited depending upon whether the broadcast spectrum in use is licensed or not. Transmission speed for fixed (and mobile) wireless depends upon the transmission technology. Third generation (3G) WiMAX provides an IP-formatted signal with a download speed of up to 6 Mbps while Fourth generation (4G) LTE provides a similar IP-formatted signal with a download speed of up to 300 Mbps.

- Mobile wireless

A variety of mobile wireless carriers offer internet access using the 3G and 4G LTE transmission technologies. The introduction of wireless 5G service will begin in 2017. In rural areas, antennas are located to facilitate communication while travelling along roads. Locations away from major roads in the northern portion of the state often lack access to a mobile wireless signal. Mobile wireless internet service can have significant monthly data limits.

- Satellite Internet service

Satellite-based communications services offer an attractive telecommunications alternative for individuals that are located in remote areas. Subscriptions to satellite services are generally driven by the demand for television service in rural areas that lack a cable television service provider. This technology is affected more than the others by adverse weather and network congestion. Satellite internet access also suffers from high latency (or the time it takes for a transmission signal to make a round trip between originating and terminating ends of the calls). High latency diminishes the utility of Voice over IP communications, interactive on-line gaming and remote control device applications.

3. Who is eligible to apply for a broadband expansion grant?

The statute contains two eligibility requirements that each application must satisfy.

- First, an applicant must be either an organization operated for profit or not for profit, a telecommunications utility, or a public entity that has entered into a partnership with an eligible organization or telecommunications utility.

- Second, the statute authorizes the Commission to make grants to eligible applicants to construct broadband infrastructure in underserved areas. This would eliminate applications proposing to build in areas regarded as served.

The Commission has interpreted the requirement that public entities obtain or include a private party in the application to mean more than simply submitting a letter of support at the time of the application. The Commission has accepted a range of approaches, including a formal joint venture agreement or equivalent, a partnership agreement specifically tailored to the broadband grant program, co-applicants on the grant application filing, and a statement from the parties indicating the level of participation each partner will contribute.

A telecommunications utility is eligible to apply for a grant, even if that telecommunications utility is municipally-owned. A municipally-owned telecommunications utility pays the agency's remainder assessment, telecommunication relay service assessment, telecommunications trade practices assessment and universal service assessment in the same proportion as other telecommunications utilities. The Commission affords a municipally-owned telecommunications utility the same benefits and privileges that come with that status as well.

There is no distinction made in state law between the traditional carriers that in the past provided telephone service as a regulated entity, and the newer carriers that have entered the local exchange market after the state and federal government decided to eliminate exclusive telephone franchise boundaries. The distinction between incumbent local exchange carrier and competitive local exchange carrier that is found in federal law does not exist in state law. Thus a variety of ILECs and CLECs are eligible to apply for a broadband grant as telecommunications utilities.

Certification under state law does not depend upon geography or exchange boundaries. The state certifies a company based upon the telecommunications service the company offers for sale to customers.

The Commission has ruled in three instances that an applicant was ineligible to apply for a grant. In each instance, the applicant was a public entity that lacked a private partner.

4. Which geographic areas of the state may receive a broadband grant?

The purpose of the Broadband Grant program is to encourage the deployment of advanced telecommunications services in underserved areas of the state. To decide the geographic areas of the state that are currently underserved for purposes of the broadband grant program, the Commission defines the two terms:

Broadband Service means a communications service providing to end users, at a minimum, two-way data transmission with speeds of at least 25 Mbps for download transmission and 3 Mbps for upload transmission, but does not include a commercial mobile radio service or a broadband service in which a stand-alone satellite provider connects directly to the end user with a satellite connection.

Underserved Area means an area in the state, delimited by a census block boundary as defined by the US Department of Commerce, that is served by fewer than 2 broadband

service providers, or an area that an applicant has demonstrated in its application is underserved notwithstanding the fact that the proposed service area lies within a census block that has been designated as served.

Grant applications that propose to provide broadband service in areas served by two or more broadband service providers that each offer service at a speed of 25/3 or greater will be regarded as ineligible to participate in the grant program.

5. The state broadband map is not accurate with respect to my neighborhood. How much weight will the state broadband map be given in the grant application process?

The Broadband Office uses data collected by the Federal Communications Commission (FCC) for the majority of its coverage mapping. The FCC collects data, including coverage speeds, technology types, and other connectivity information, from providers of broadband service using its Form 477. There is an important convention underlying the data reported by Form 477. Most of the coverage data from the Form 477 is provided by census block. A provider indicates coverage over a census block when at least one customer is served within that area. Thus, while coverage data, maps and related tools attempt to highlight areas of the state that have internet access, there exists a degree of inaccuracy due to this reporting convention. The maps produced by the Broadband Office may overstate the extent of broadband availability in some areas as a result.

Because of the potential inaccuracy of the Form 477 data, the broadband grant application instructions provide as follows:

- Where the broadband map indicates that a proposed grant project area is underserved, the Commission will accept the map as sufficient evidence of the actual broadband service in place;
- But where the map indicates an area is served by two broadband services providing 25/3 service, the applicant is permitted to provide additional information to show that the broadband map is not accurate with respect to the proposed project area.

6. How do you determine what broadband services are in place in an area?

The state Broadband Map is a good resource to answer this question as well. The data the FCC collects from Form 477 identifies the providers of broadband service in each census block. PSC staff has access to the FCC data and prepares the state Broadband Map from that data. The map displays for each census block the name and service details for each provider that has indicated that it provides service in a given census block.

The PSC does not collect data on its own in any general or systematic fashion. However, on occasion, the PSC staff will survey customers and providers to determine or re-verify information regarding broadband service status in a given area of interest.

7. When is the next broadband grant cycle? How will the Commission inform interested persons that it is accepting grant applications?

The Commission will post on its website, <http://psc.wi.gov>, information on upcoming broadband grant opportunities as details become available. Commission staff will also send out an announcement by e-mail when the next grant cycle officially kicks off. A person that wishes to receive the broadband grant announcement should send a short (one-sentence is enough) message to the State Broadband Office at PSCStateBroadbandOffice@wisconsin.gov, requesting that his or her name be added to the e-mail address list.

8. What resources are available to assist an individual preparing a grant application?

Staff at the State Broadband Office are available and willing to provide assistance to any individual preparing to submit an application for a broadband grant. Staff will **NOT** help write the application nor advise individuals on how proposed application content might be treated by a screening committee or the Commission in a subsequent review. The grant application instructions provide a specific process for obtaining a clarification regarding the required application content.

Inquiries into the state broadband office often ask for the links to the following three items:

- State Broadband Map

The coverage map discussed above is available at the following link:

<http://www.broadbandmap.wisconsin.gov/>. When the page loads, a user may select the map layers of interest by toggling the various layers on or off using the check boxes to the left of the map.

- CAF II Map

A second map available from the Link Wisconsin website concerns the coverage areas for the Connect America Fund discussed below. The coverage map for the CAF II area in Wisconsin is available at the following link: <http://www.broadbandmap.wisconsin.gov/SimpleCaf/>. A map that shows the coverage areas for CAF II, A-CAM and CAF II auction areas is being developed.

- Grant applications from prior grant cycles

In preparing a grant application, a grant writer might find it useful to review the applications submitted in prior grant cycles. The grant applications and other documents and correspondence related to the Broadband Expansion Grant program are available through the PSC's ERF (Electronic Regulatory Filing) system:

To search for applications from prior grant cycles, go to the homepage of the PSC's website, <https://psc.wi.gov/Pages/Home.aspx>, and select 'Docket Search.'

In the three boxes to the left under the caption ‘Search,’ type in the docket number for the prior grant cycle, and click on ‘Search.’ When the docket name comes up, select the tab for ‘Documents.’ This should bring up a list of documents on file for that docket number. The grant applications are usually among the documents filed earliest, and will be found toward the bottom of the list of documents. The docket numbers for the prior grant cycles are:

- FY 2017: 5-BF-2017
- FY 2016: 5-BF-100
- FY 2015: 5-GT-100
- FY 2014: 5-GF-237

Other questions related to the administration of the broadband grant program may be addressed to the following staff:

Director, State Broadband Office

Angie Dickison
Angie.Dickison@wisconsin.gov
 (608) 267-9138

Broadband Expansion Grant Program Manager

Dennis Klaila
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9. How does the Commission evaluate the grant applications, and decide which applications should be funded? Besides the priority factors, what other information does the Commission consider when awarding broadband grants?

Wis. Stat. § 196.504 gives the Commission authority to establish criteria for evaluating grant applications. The statute requires that the criteria adopted by the Commission give priority to applications that include any of seven priority factors listed in the statute.

The Commission usually appoints a screening committee to review the grant applications and provide a summary report comparing the relative merit of each application. The screening committee will rank the grant application under review in order of merit, giving equal weight to the seven priority factors. The priority factors are:

- Matching funds. An application will receive higher priority based on the amount and type of matching funds the applicant proposes to invest in its project.

Comparing the significance of matching funds from one application to the next can be difficult. On one hand, the willingness of some local governments to contribute matching funds is perhaps the best measure of the urgent need for adequate broadband service in these communities. On the other hand, some applications propose in-kind contributions

that include salary expense for individuals whose salary would have been paid in any event, or equipment expense for items that have already been purchased and would have been used for a variety of construction projects regardless of the grant project. However, in-kind contributions can be disregarded altogether. In some instances, a cash and in-kind contribution indicates a company or corporate decision to commit its own funds to advance a promising project, to forego possible earnings in the near term in order to secure better earnings down the road, or to achieve other non-monetary goals.

- Public-private partnerships. An application that includes a city, village, town, or county as a participating partner, in partnership with a telecommunication provider or other private organization, will receive priority.

To receive priority credit, the grant application must offer more than a simple letter of support from a town or village. A public-private partnership can be memorialized in a joint venture agreement or other writing. If the partnership has not been reduced to a written agreement, then the application should provide a short description of the management role, financial commitment, or other contribution to the project for each participating partner. Often a public partner's participation is evident from the matching funds it is contributing to the project.

The inverse situation can be a problem as well. A public applicant must engage the active participation of at least one private partner. The Commission has decided that contracting for a service by itself is not sufficient. There must be some indication in the application that a private partner has agreed to participate in the application. This showing is required both to establish eligibility for the application and also to obtain credit for a public-private partnership during the merit evaluation.

- Existing broadband service. An application proposing to serve an unserved area shall receive priority.

In some instances, an applicant will need to provide additional information to receive credit for this priority factor. If the broadband map indicates that the project area is served by at least one broadband service provider offering a 25/3 level of service, the applicant may provide additional information to show that the broadband map is not accurate with respect to the proposed project area. This additional information can be a letter from one or more potential customers indicating the level of service indicated by the broadband map is not available at their location, or a statement by the applicant that the broadband map is not accurate based upon service requests and interactions with customers. A detailed report from an engineering consultant or a survey of broadband speed measurements in the project area will be accepted, but is not required to establish this point.

- Scalability. An application that demonstrates a commitment to increase the size or scope of its broadband network in the future shall receive priority. An application that discusses possible growth potential, but declines to make a specific commitment regarding future growth of the broadband network, shall receive a lesser priority.

This priority factor is intended to consider the longer term growth potential of the project facility once construction of the proposed project is complete. Many applications are

limited to the customers and geographic area the project targeted in its application. Fixed wireless projects are generally limited to the footprint of the antennas, and by power and range limits imposed by federal spectrum licenses. However, some wireless and landline systems are built with spare capacity and specific plans on how to use that spare capacity to build out service in the area.

This priority factor can be difficult to measure. Comparisons between broadband technologies can be difficult as well. For example, fiber projects are often built with spare fiber capacity because it is much less expensive to include that spare capacity in the original build out than it is to add additional capacity or reinforce existing routes in a subsequent construction project. Other technologies tend to build networks to match the existing customer base because the cost of adding additional capacity at the time that new customers are identified is roughly comparable to adding that capacity during the initial build out.

The application instructions on this point permit a variety of answers. Applicants are invited to provide a sensible description of the potential for continued future development of customer base and service options not captured specifically by the description of the project proposal itself.

- Economic development. An application that demonstrates the potential to promote job growth or retention, expand the property tax base or improve the overall economic vitality of the municipality or region shall receive priority.

This priority factor invites a discussion of how a proposed grant project might promote the growth of the local economy by installing improved broadband service. Some grant proposals target business customers, and the economic impact the application hopes to accomplish is evident on its face. Other impacts can be a bit indirect, but no less important. For example, a fixed wireless service in a rural county could impact the decisions of tourists and seasonal residents to use the facilities or extend their stay in the area.

- Project impact. An application that proposes to serve a larger geographic area or a larger number of customers or communities in an area shall receive higher priority than one that serves a comparatively smaller geographic area or a fewer number of potential customers or communities in an area.

The factor is often among the more important of the measures characterizing an application. The staff memorandum will provide an estimate of the actual number of customers that will likely be served by the project, and an estimate of the grant dollars requested per location served. Thus, staff attempts to provide a simple measure of the impact of the project and the cost to accomplish that result. This measure is useful to compare the relative utility of competing grant proposals.

The record before the Commission consists of the grant applications, the public comments in support and in opposition to the grant proposals, the screening committee's ranking of the grant applications, and a briefing memorandum from staff discussing the relative merits of each application. In its review and decision, the Commission is free to give more weight to one or

two of the priority factors, or give weight to other information provided in the application. Some items of additional information that the Commission could take into account include:

- The total number of persons served by a given application when compared to applications of equal priority.
- The degree to which the proposed project will duplicate existing broadband infrastructure.
- The degree to which the proposed project will enhance the ability of individuals to access health care service from home.
- The degree to which the proposed project will enhance the ability of students to access educational opportunities from home.
- The degree to which the proposed project would impair the ability of a broadband service provider or competing broadband service provider to extend broadband service to areas adjacent to the proposed project shall receive a reduction in priority.
- Whether an applicant is certified as a Broadband Forward! Community. However, applicant should note that the Commission has not made any determination that such certification is specifically or necessarily applicable to grants for broadband facilities under Wis. Stat. § 196.504.
- The download and upload transmission speeds the application proposes to provide.
- Any one or more of the factors in Wis. Stat. § 196.03(6) that the applicant believes its project would specifically and materially advance for benefit of the public interest with respect to communications facilities. However, applicant should note that the Commission has not made any determination that the criteria in Wis. Stat. § 196.03(6) respecting telecommunications services and facilities are specifically or necessarily applicable to grants for broadband facilities under Wis. Stat. § 196.504.

10. Will the Commission schedule a public comment period after the grant applications have been submitted? Do the Commissioners see these comments before deciding which grant applications should be funded?

The Commission usually provides a three-week public comment period after the grant applications have been filed. The comments are posted on ERF under the docket number for the current grant cycle. Staff provides the Commission a list of the comments received, and those comments are available to that Commission as part of the record of the docket. Staff will also discuss in the briefing memorandum specific public comments that raise issues of importance in evaluating the relative merits of individual applications.

11. How long does a successful grant applicant have to complete the construction of the broadband facilities?

The order awarding grants will provide a specific date on which the grant award will expire and the unused grant balance will be returned to the general grant account for disbursement to other future projects. In the past, the Commission has set that expiration date for the grant award at the end of 24th month after the month in the Commission awards the grant. This two-year window for construction can be extended by the Commission for good cause. An applicant would need to apply to the Commission for an extension.

12. Who actually receives the grant funding? The main applicant? The private provider/partner who actually does the construction?

This will vary from project to project. When the Commission staff set up the grant, there will need to be a single entity that receives the grant funds, and disburses the funds to other project partners as appropriate. It is usually clear which applicant or application partner should handle the funds, but sometimes this needs to be discussed after the grant award is made.

13. What are the reporting requirements for a grant project? After a project is complete, are there reporting requirements to the PSC or elsewhere?

In its Order Awarding Grants, the Commission will specify the reporting requirements an applicant must comply with. In past orders, the Commission has required both interim project reports and a final summary report on the project. The Commission may suspend scheduled grant payments until the required reports are filed.

14. How do fair wage labor laws and prevailing wages come into effect for the construction of these projects?

The state does not contract directly with any construction company to build the broadband facilities funded by a broadband grant. Rather, the grant funds are paid as reimbursement to an eligible applicant upon filing of paid invoices and documented expenses incurred on behalf of the project. If needed, the applicant selects a third party to build the project facilities. There is an expectation that applicants and sub-contractors will comply with applicable state and federal laws. In past orders, the Commission has not imposed any additional requirements that would condition the choice of a construction company or impact the labor wage rate the construction company uses.

15. Where can you find a list of the approved grant applications?

The grant applications that correspond to each approved grant award are posted on-line. See Question 8 for instructions for locating grant applications from prior years in the PSC's ERF system.

16. What is the Connect America Fund?

In 2011, the FCC undertook an extensive reform of its interstate universal service and inter-carrier compensation programs. One portion of this reform effort redirects funds from certain universal service programs to a new support fund intended to promote deployment of broadband communications services throughout the county. This new support fund is referred to as the Connect America Fund (CAF) program.

The FCC divided its CAF support into subcategories supporting price-cap telecommunications carriers, rate-of-return telecommunications carriers, wireless service providers and tribal telecommunications service providers. The first category of support consists of ten large telecommunications carriers that originate and terminate about 83% of the telecommunications traffic in the county. This group of carriers include three that operate in Wisconsin: AT&T, CenturyLink and Frontier Inc. The CAF program for price-cap carriers in Wisconsin is the principal federal effort to improve broadband service in the state.

- CAF I

The first phase of the program (known as CAF I) provided \$38,470,000 to upgrade 241,500 supported locations in 30 Wisconsin counties with broadband service less than 768 Kbps/200 Kbps. The price-cap carriers committed to bringing the quality of broadband service at least up to 3 Mbps/768 Kbps for each supported location. CAF I upgrades were completed in 2015.

- CAF II

In 2015, the FCC initiated the second phase of this program (CAF II). Under CAF II, the FCC has agreed to provide \$570 Million over 6 years (2014-2020) to the three price-cap carriers to upgrade 230,000 locations in Wisconsin with existing broadband service less than 4 Mbps down/1 Mbps up.

- AT&T will receive \$54 Million to upgrade service to 24,513 homes and businesses.
- CenturyLink will receive \$330 Million to upgrade service to 129,203 homes and businesses.
- Frontier will receive \$186 Million to upgrade service to 76,735 homes and businesses.

In accepting this support, the three carriers agreed to improve the available broadband service to at least 10 Mbps down/1 Mbps up. The carriers committed to a construction schedule in return for the support it is receiving – each carrier must have 40% of its Wisconsin supported locations

in service by the end of 2017; 60% by end of 2018; 80% by end of 2019; and 100% by end of 2020.

Finally, a cautionary note that may prove important in some cases: the price-cap carriers need only upgrade service to 95% of its supported locations to meet the administrative requirements of this program. It is expected that the locations that prove to be too costly to serve at this time will be addressed in an auction that the FCC will schedule at a future date.

- A-CAM

In 2016, the FCC issued a public notice and offer of support for the rate-of-return telecommunications carriers throughout the country. This is termed the Connect America Fund: Alternative Connect America Cost Model proceeding for rate-of-return companies (CAF: A-CAM). The Wisconsin rate-of-return carriers receiving support to upgrade service to locations in Wisconsin are:

- Amery Telcom, Inc. will receive \$14,475,160 over 10 years to upgrade service to 3,586 supported locations.
- Bruce Telephone Company, Inc. will receive \$9,677,940 over 10 years to upgrade service to 1,199 supported locations.
- Clear Lake Telephone Company will receive \$6,911,080 over 10 years to upgrade service to 1,133 supported locations.
- Coon Valley Farmers Telephone Company, Inc. will receive \$9,050,900 over 10 years to upgrade service to 1,235 supported locations.
- Farmers Independent Telephone Company will receive \$10,225,230 over 10 years to upgrade service to 1,756 supported locations.
- Hillsboro Telephone Company, Inc. will receive \$8,784,440 over 10 years to upgrade service to 1,033 supported locations.
- Mount Horeb Telephone Company will receive \$10,011,150 over 10 years to upgrade service to 1,251 supported locations.
- Manawa Telecommunications, Inc. will receive \$7,704,650 over 10 years to upgrade service to 1,659 supported locations.
- TDS, Inc. will receive \$188,792,320 over 10 years to upgrade service to 35,379 supported locations.
- Union Telephone Company will receive \$23,892,540 over 10 years to upgrade service to 3,611 supported locations.
- Wittenberg Telephone Company will receive \$10,099,910 over 10 years to upgrade service to 1,905 supported locations.

The A-CAM carriers have committed to a construction schedule in return for the support it is receiving – each carrier must have 40% of its Wisconsin supported locations in service by the end of 2020; 50% by end of 2021; 60% by end of 2022; 70% by end of 2023; 80% by end of

2024; 90% by end of 2025; and 100% by end of 2026. As with the CAF II program, carriers that complete deployment to at least 95% of its supported locations in Wisconsin will be deemed to be in compliance with their respective deployment obligations.

- CAF II Auction

In May 2016, the Commission adopted a framework for an additional segment of the CAF II program. The CAF II Auction is intended to provide support to supported locations that the price-cap carriers determined that they could not serve or upgrade at the CAF II level of support. Under the CAF II Auction program, all eligible entities can bid to receive support to offer voice and broadband service meeting the Commission's requirements for a ten-year term. In other words, the parties bidding on these locations are not limited to the price-cap carriers that received the original support funds from the CAF II program.

The preliminary eligible census blocks include certain high-cost census blocks located in price cap carrier territories that, based on June 30, 2015 Form 477 data, are not served by the incumbent price cap carrier or an unsubsidized competitor with voice and broadband at speeds of 10/1 Mbps or higher. Other details on the CAF-II Auction program are expected to be announced in 2017.

17. How is Broadband Service Defined?

The definition of broadband service is drawn from two proceedings conducted by the Federal Communications Commission (FCC). These two proceedings address the same topic of broadband service, but do so with dissimilar purposes.

- Annual Report to Congress Concerning the Deployment of Advanced Telecommunications Capability

The first FCC proceeding is the annual progress report on deployment of broadband service. This report is prepared in response to 47 U.S.C. § 1302 (b)(1). This statute requires the FCC to determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion, and report its findings to Congress annually. This is an important report for this Commission also because it is an excellent source for current summary data on the extent of broadband service in Wisconsin and nationally.

The term "advanced telecommunications capability" is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology. 47 U.S.C. § 1302 (d)(1).

To evaluate the progress that the country is making in deploying advanced telecommunications capability, the FCC first selects a benchmark broadband service against which reported service quality is measured. The FCC has chosen several benchmarks over the years. Most recently, the FCC has set the benchmark service as one which permits customers access to an actual download speed of 25 Mbps and an actual upload speed of 3 Mbps (25/3).

In selecting this benchmark, the FCC first noted that, of the households in the country that have the option of selecting a 25/3 service or better, 29% of households currently have chosen a broadband service that is 25/3 or faster. The FCC also considered the current products and applications as well as those likely to become available in the near future, and noted as follows:

- Participating in an on-line class, downloading files, and streaming a movie by multiple members of household at the same time requires a 25/3 connection
- Viewing 2 HD videos at the same time requires a 25/3 connection
- Streaming a video using the newer 4K or ultra HD format requires a 25/3 connection
- Participating in an on-line video chat requires a 25/3 connection
- Participating in an on-line class and uploading a file at the same time requires a 25/3 connection

As discussed above, the Public Service Commission has elected to mirror the national benchmark as the basis for its definition of broadband service:

Broadband service means a communications service providing to end users, at a minimum, two-way data transmission with speeds of at least 25 mbps for download transmission and 3 mbps for upload transmission, but does not include a commercial mobile radio service or a broadband service in which a stand-alone satellite provider connects directly to the end user with a satellite connection.

The Wisconsin definition differs from the national benchmark definition in two respects. First, the Wisconsin definition includes both switched and non-switched telecommunications services (as does the FCC in some circumstances). Second, the Wisconsin definition uses transmission speed as a proxy for other measures of broadband capability, while the FCC in the Connect America Fund proceeding discussed below now requires support recipients to commit to specified levels for transmission speed, latency and data capacity to qualify for the support offered under that program.

- Connect America Fund

The second FCC proceeding relevant to this topic is the Connect America Fund, discussed above. The CAF program has employed an evolving standard for broadband speed and service quality to bring the service available in rural and high cost areas into rough equivalence with the service available in urban areas.

In the recent orders implementing the CAF II Auction, the FCC established four technology-neutral tiers that the bidding parties would commit to:

- Minimum performance tier. The minimum performance tier requires bidders to commit providing broadband services of at least 10 Mbps downstream and 1 Mbps upstream and offer at least 150 gigabytes of monthly usage.

- Baseline performance tier. The baseline performance tier requires bidders to commit providing broadband services of at least 25 Mbps downstream and 3 Mbps upstream and offer at least 150 gigabytes of monthly usage, or that reflects the average usage of a majority of fixed broadband customers, using Measuring Broadband America data or a similar data source, whichever is higher.
- Above-baseline performance tier. The above-baseline performance tier requires bidders to commit providing broadband services of at least 100 Mbps downstream and 20 Mbps upstream and offer an unlimited monthly usage allowance.
- Gigabit performance tier. The gigabit performance tier requires bidders to commit providing broadband services of at least 1 Gbps downstream and 500 Mbps upstream and offer an unlimited monthly usage allowance.

The significance of these tiers for the Wisconsin broadband expansion grant program is that the FCC may use a Phase III of the CAF program, beginning in 2021, to implement this range of service options in the price-cap service areas nationwide. The Wisconsin broadband expansion grant program has already approved grant awards for projects meeting the above-baseline and gigabit performance tiers. It is likely this will continue as broadband service transitions to these more demanding standards.