



**Department of Development and Land Services
Planning & Zoning | GIS & Land Information**
320 S. Walnut St. | Appleton, WI 54911
Outagamie County Government Center, 3rd Floor
Phone: (920) 832-5255 Fax: (920) 832-4770
www.outagamie.org

Meeting Summary

**Meeting on Broadband for Outagamie County
July 12, 2023 at 4 PM
Cicero Town Hall
N9195 County Rd X, Seymour, WI 54165**

1. Welcome and Background

Kevin Englebert, Outagamie County, welcomed participants to the meeting. Kevin provided an overview of the agenda. Participants introduced themselves. The sign-in sheet is included in this meeting summary as Exhibit 1.

2. Overview of Existing Broadband Initiatives and Q&A

a. Middle Mile Proposal

Outagamie County is partnering with Bug Tussel to improve internet access in the County. Mitch Olson, Bug Tussel, provided a general overview of the project. Mitch indicated that the project involves five components: fixed wireless, middle-mile, last-mile (fiber to the premises), cellular expansion, and community education. The project proposes seven new fixed wireless towers, a 186.6-mile middle-mile network, and fiber to the premise connecting approximately 10,500 homes/businesses (including 3,500 homes/businesses located outside the Appleton Area). The total project will cost Bug Tussel \$24 M. The funding model uses a conduit bond, which Outagamie County will guarantee.

A copy of Mitch's PowerPoint presentation is included in this meeting summary as Exhibit 4.

Participants had an opportunity to ask questions about the proposal. There were several questions related to the proposed fixed wireless towers. For instance, participants questioned whether the proposal included enough towers. It was noted that if each tower provides an average service range of five-miles, there would still be large gaps across the county. Participants inquired whether fixed wireless was a realistic solution and that it seemed expensive compared to the level of service it would provide. Some participants commented on the fact that some areas of the county appear to be over served (with coverage by towers, middle-mile, and RDOF) while other areas had no options.

In response, it was noted that while fixed wireless is not the technology offering the fastest internet access speeds, it is the most feasible solution to *rapidly* improve service in rural areas where population density is low and cost to serve is high. The total project is fixed at \$24 M, meaning additional towers cannot be added without reducing a different component of the project. That said, it was noted that the

tower sites are only proposed locations; the tower locations could be refined based on feedback to better address the needs of rural areas.

Participants inquired about the installation of the infrastructure and expressed concern that installation would retrace steps (i.e., installing fiber in areas that were recently dug up with fiber installed by a different internet-service provider). In response, it was noted that this would be the case in many instances.

Participants inquired why some areas of the county would not be served through the middle-mile proposal. They also asked what the rationale was for proposing middle-mile down a particular County highway versus another. Some asked why the middle-mile proposal went through the urbanized area despite that area being already served.

In response, creation of this initial proposal relied on existing FCC/PSC data about where service needs exist. If that data is inaccurate, the project team can consider changes. The initial proposal also factored in the objectives of Bug Tussel and the County while striving to connect as many Town facilities as possible. Participants were reminded that the purpose of the meeting was to gather additional feedback and that further refinement to the project is anticipated. The project team will evaluate the feasibility of making additional connections to specific sites and/or of installing middle-mile down different road segments.

A participant asked what the fixed wireless technology was? It will be primary canopy providing speeds of 25 Mbps.

A participant asked if subscribers will experience data caps. No, there would not be any data caps or contracts.

A participant asked what the estimated timeline for delivering fiber to the premise was. The full project is expected to be complete by the end of 2025.

A participant asked if it was possible to create a County or Town-owned network. It is legally possible if the jurisdiction passes a referendum. For example, the City of Reedsburg has done this.

b. BEAD Program & New North Broadband Alliance

Barabara Koldos, New North, presented an overview of Outagamie County's and New North's partnerships related to broadband since 2020. Then, Barbara provided an overview of the Broadband Equity, Access, and Deployment (BEAD) project. BEAD is a program funded through Bipartisan Infrastructure Bill to fund partnerships, build broadband infrastructure where it is most needed, and increase adoption of high-speed internet. Wisconsin was recently awarded \$1.06 B through the BEAD program.

Outagamie County, along with other counties in the region, have partnered with New North to identify ways to position each county in the region so that they are prepared to apply for BEAD funding when it

becomes available in 2024 and 2025. Part of this involves conducting mapping exercises to improve our data to prioritize projects.

A copy of Barbara's PowerPoint presentation is included in this meeting summary as Exhibit 5.

c. ARPA Dollars for Broadband

Sadie DiNatale Burda, Outagamie County, provided a brief update about the County's American Rescue Plan Dollars (ARPA). In 2022, the Outagamie County Board appropriated \$2.75 M of its ARPA allocation to broadband. A specific funding program has not yet been established to invest these funds. Sadie indicated that County staff plan to use the feedback received at this broadband meeting to inform how best to spend down the \$2.75 M.

3. Breakout Feedback Stations

The second portion of the meeting was intended to gather written feedback on and input into County broadband initiatives.

a. Middle Mile Feedback and Input on Last Mile Connections

Participants were provided printed maps to mark up with requested changes. The maps displayed the proposed Bug Tussel Project (including proposed tower sites and middle-mile route) as well as additional details (existing towers, Town halls, and RDOF¹ service areas). For reference, the map provided is included in this meeting summary as Exhibit 6. Participants were also provided comment cards to submit their comments and concerns. County staff and Mitch Olson made themselves available for questions and comments as participants worked on the maps. The following briefly outlines a summary of general feedback received (note: some specifics were removed to maintain anonymity):

- Outagamie County should advocate for broadband to be classified as a public utility and regulated accordingly. Access to information may be one of the largest assets for upward mobility and economic development.
- There were several requests to modify the location of proposed tower sites and to add towers to specific locations.
- There was a request to connect a school site and requests to connect additional Town Halls.
- There were requests to add coverage to areas that currently lacked any coverage. There were specific requests to add coverage to areas where there were clusters of existing residential homes along corridors and to residential subdivisions.

Feedback provided by Town representatives will be reviewed by the project team.

¹ Spectrum received a federal grant through the Rural Digital Opportunity Fund (RDOF) to build out their network in specific rural areas over the next several years.

b. County Vision, Goals, Priorities, & Digital Equity

Participants were asked to contribute to two separate dot exercises. The results of both exercises are documented in Exhibit 2 and Exhibit 3. Feedback provided will be reviewed by the project team.

4. Closing Remarks and Next Steps

Kevin Englebert thanked participants for attending the meeting. Kevin indicated all feedback received at the meeting will be reviewed. Feedback will help the County refine the County's broadband priorities and the direction of existing initiatives.

Exhibit 1. Meeting Sign-In Sheet



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Sign-In Sheet

Meeting on Broadband for Outagamie County

July 12, 2023 at 4 PM

Cicero Town Hall

N9195 County Rd X, Seymour, WI 54165

Name	Town	Email or Address (Optional)
GARY T J MM	CENTER	GBCAETJMM@GMAIL.COM
Ron Klamp	"	Ron.Klamp@hotmail.com
Harley Griesbach	Maine	hgrisbach@gmail.com
Toria Hopfengorger	Dale	toria@theworks corporation.com
Sarah Newling	Osborn	Snewling77@gmail.com
Dennis Hoffmann	Osborn	Osbornsupr1@gmail.com
Michael Barclay	Seymour	
Chuck Pluger	Bovina	clerk.treasurer@Tn.bovina.wi.gov
Barbara Koldas		barbara.koldas@theownmtl.com
Gary Riehl	Bovina	supervisor1@Tn.bovina.wi.gov
Barbara Chizek	Town of BC	townclerkbc@aol.com
Doug Wunderlich	Dale	
MIKE UBL	LIBERTY	MUBL@UBLFAM.COM
Dan Rintz	Town of Black Creek	
Debbie VanderHeide	T of Kaukauna	townofkaukaunaclerk@gmail.com

Exhibit 2. Results of Broadband Priorities: What is most important to you?

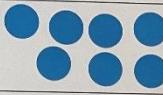
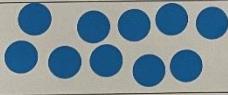
Outagamie County Potential Broadband Priorities		What is most important to you?
Instructions: Please identify your <u>top three (3)</u> broadband priorities from the list below by marking them with a blue dot.		
Priority Options		
A. Provide access to homes and businesses that are <u>unserved</u> (less than 25/3 Mbps).		I. Establish a digital skills or literacy program to increase broadband usage and awareness.
B. Improve access to homes and businesses that are <u>underserved</u> (less than 100/20 Mbps).		J. Provide internet-enabled devices to covered populations (e.g., low-income, disabled, senior citizens).
C. Provide or improve access to covered populations (e.g., low-income, disabled, senior citizens) in the county.		K. Increase awareness of and help covered populations sign up for the Affordable Connectivity Program.
D. Provide or improve access for k-12 students in the county.		L. Create programs to teach internet safety and security.
E. Ensure schools and libraries have reliable access.		M. Support a program to provide quality technical support (e.g., computer or software support).
F. Provide access to all businesses in the county (economic development).		N. Increase civic and social engagement on digital platforms.
G. Ensure all emergency services have reliable access.		O. Help to ensure municipalities have an understanding of the need to add conduit and/or partner with providers during major roadwork and bridgework.
H. Ensure all units of government have reliable access.		P. Help to improve internet affordability.
Leave a comment on a sticky-note below if you think we should focus on a different priority not listed above.		

Exhibit 3. Results of Proposed Vision and Goals: Do you agree with what is proposed?

Outagamie County Proposed Vision and Goals for Broadband		Do you agree with what is proposed?				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
VISION: All residents in Outagamie County have access to reliable internet.		● ● ● ● ●	●	●	● ● ● ● ●	●
GOAL 1: All homes and businesses have access to broadband infrastructure that achieves speeds of at least 100/20 Megabits per second (Mbps). <i>Note: 100/20 Mbps are speeds that accommodate multiple users of high-demand activities.</i>		● ●	●		● ● ● ● ● ● ● ● ● ● ● ● ●	●
GOAL 2: The County and Towns in Outagamie County collaborate to collect good data that will allow us to plan for broadband deployment and compete for broadband grants.			● ●	●	● ● ● ● ● ● ● ● ● ● ● ● ●	
GOAL 3: Residents of Outagamie County have the skills and devices to meaningfully connect to the internet.		●	● ● ● ●	● ● ● ● ●	●	
Leave a comment on a sticky-note below if you have a different suggestion.						

Exhibit 4: Bug Tussel PowerPoint Presentation



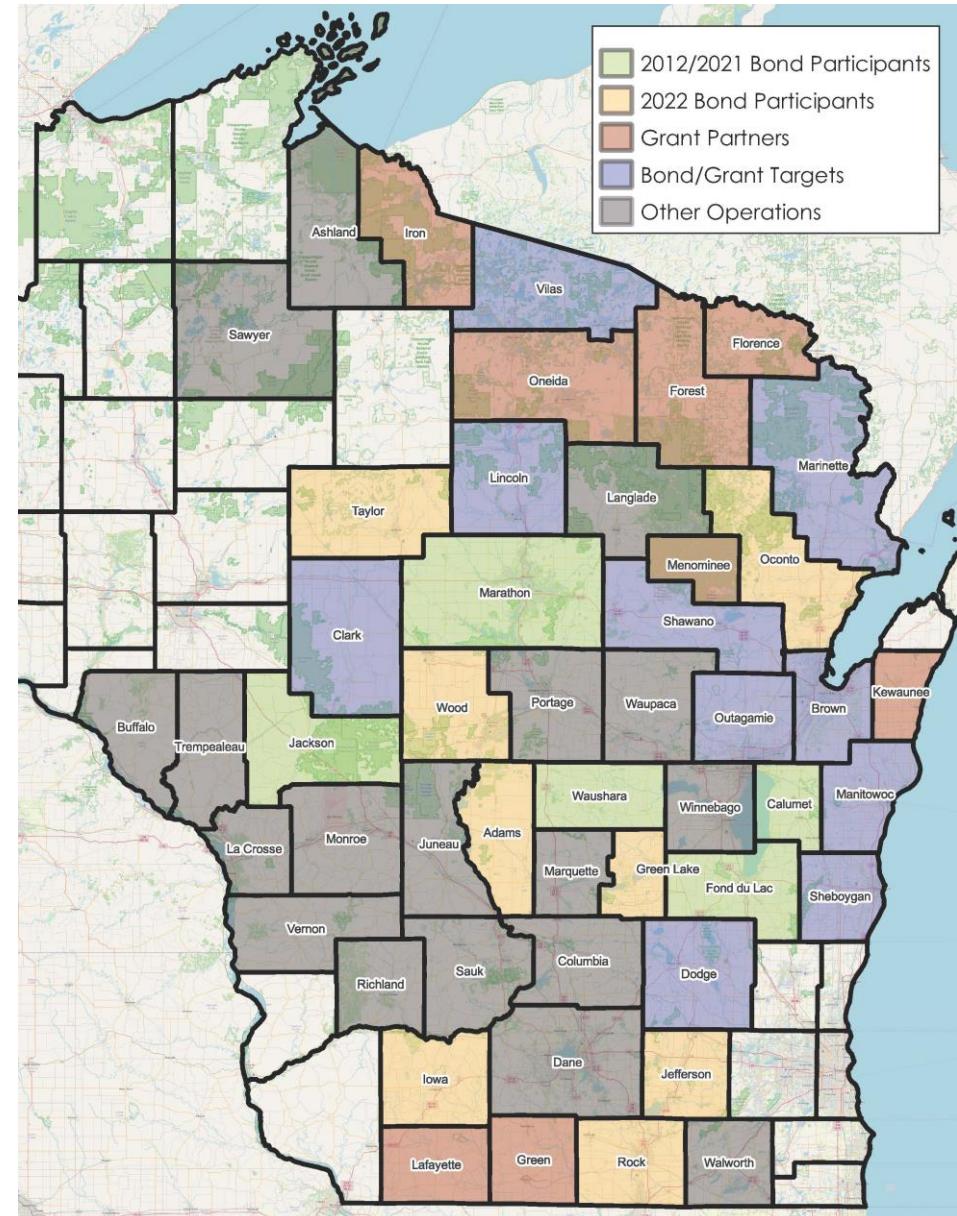
Who is Bug Tussel?

- ❖ Steve Schneider founded Bug Tussel in 2003
 - ❖ Formerly VP-GM at Cellcom / NSight
 - ❖ Started building white space cellular for ATT, Cingular, T-Mobile
 - ❖ Used personal savings and \$2.1 million investment from 7 phone companies
- ❖ Raised \$27 million in 2008/2009 and brought in Paul Gehl and Todd Thiel as well as the Eddy family; formed parent company Hilbert Communications.
- ❖ Stopped providing retail cellular in 2015 and focused on broadband including purchase of dark fiber and focus on tower business.
- ❖ 177 current employees – estimated to be 250 at year end.

Year	2020	2021	2022	2023
Revenue	\$ 63,700,000	\$ 58,300,000	\$ 60,000,000	\$ 75,000,000
Total Assets	\$ 78,400,000	\$ 153,300,000	\$ 300,000,000	\$ 500,000,000
Net Income	\$ 8,000,000	\$ 19,100,000	\$ 1,000,000	\$ 12,000,000
Equity	\$ 31,300,000	\$ 39,500,000	\$ 40,500,000	\$ 152,000,000
Debt	\$ 47,100,000	\$ 113,800,000	\$ 259,500,000	\$ 348,000,000
Debt to Equity	1.50	2.88	6.40	2.29

Partnership Counties

- ❖ 2012 Bond Issuance - \$5.4M (2 Counties)
- ❖ 2021 Bond Issuance - \$70M (5 Counties)
- ❖ 2022 Bond Issuance - \$92.9M (7 Counties)
- ❖ Grant Funding - \$30M+ in total Grant Awards (18 Counties)

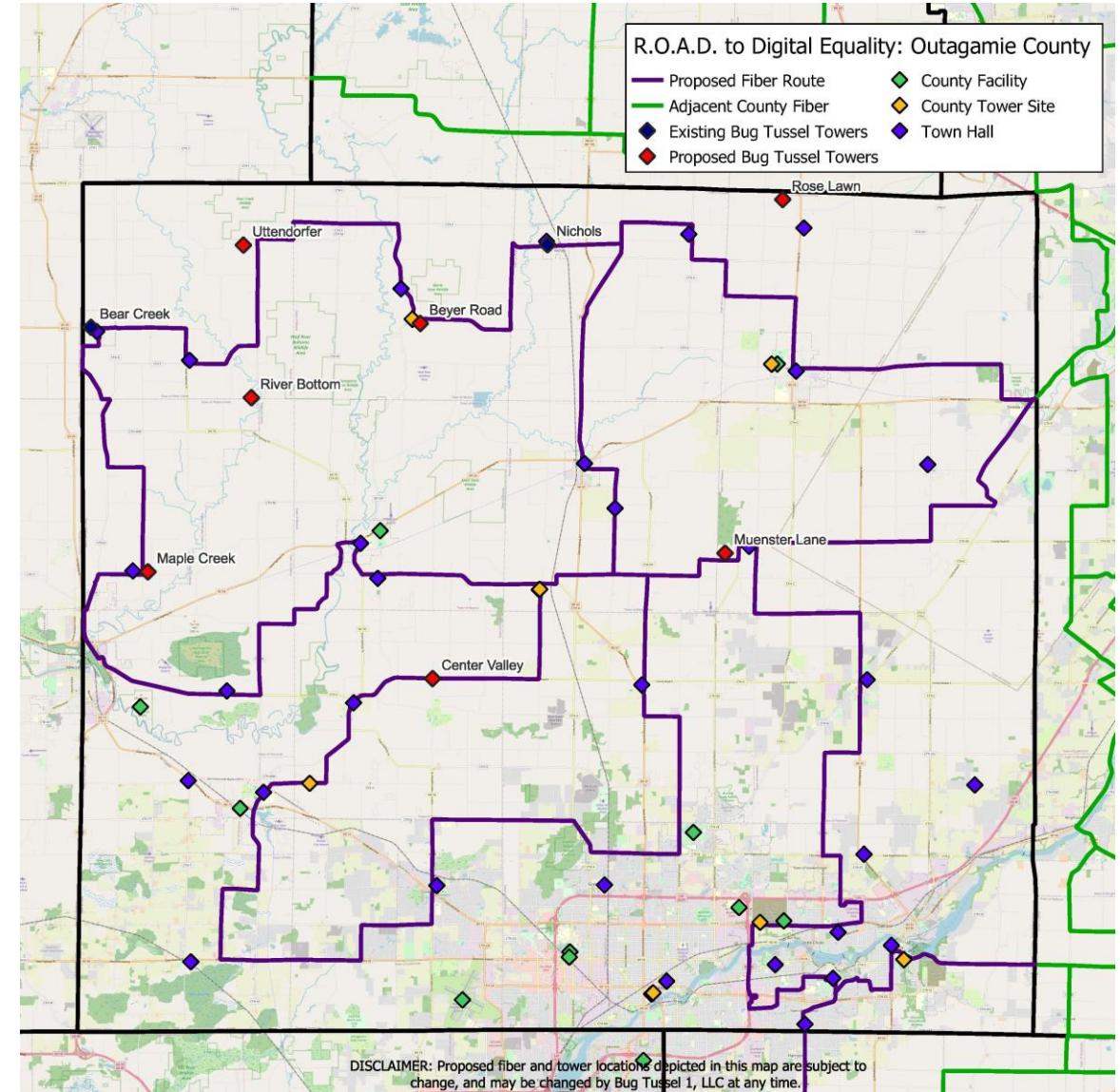


Rural Open Access Design to Digital Equality

1. **Fixed Wireless** - Near Immediate Access to 25 – 100 Mbps in rural areas
2. **Middle-Mile** – 200 to 800 Gbps DWDM network connecting population centers, tower sites, schools, government facilities, and other community institutions on a redundant ring (including connections to adjacent counties).
3. **Last-Mile** – Fiber to the premises installations along the middle-mile utilizing PON, providing speeds up to 10 Gbps to homes and businesses.
4. **Cellular Expansion** – Utilize towers and equipment constructed to benefit capacity and coverage for existing cellular carriers to eliminate dead spots improve mobile usability.
5. **Community Education** – Bug Tussel University courses in technical literacy; courses vary in complexity from internet basics to artificial intelligence and automation.

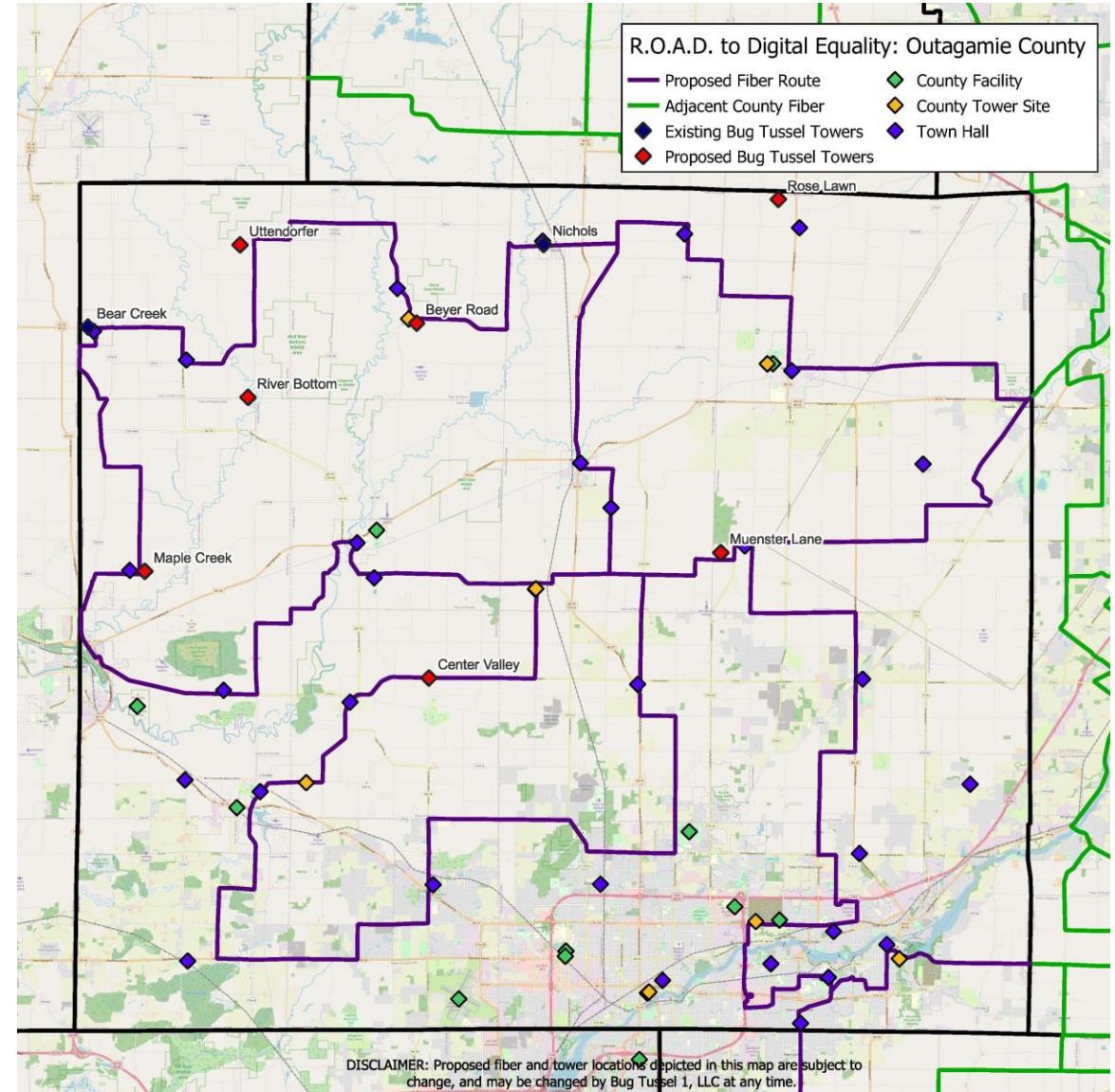
Proposed Project: Fixed Wireless (\$2.73M)

- ❖ 7 Fixed Wireless Sites
 - ❖ Bug Tussel Owned Sites
 - ❖ Colocation Space for the County



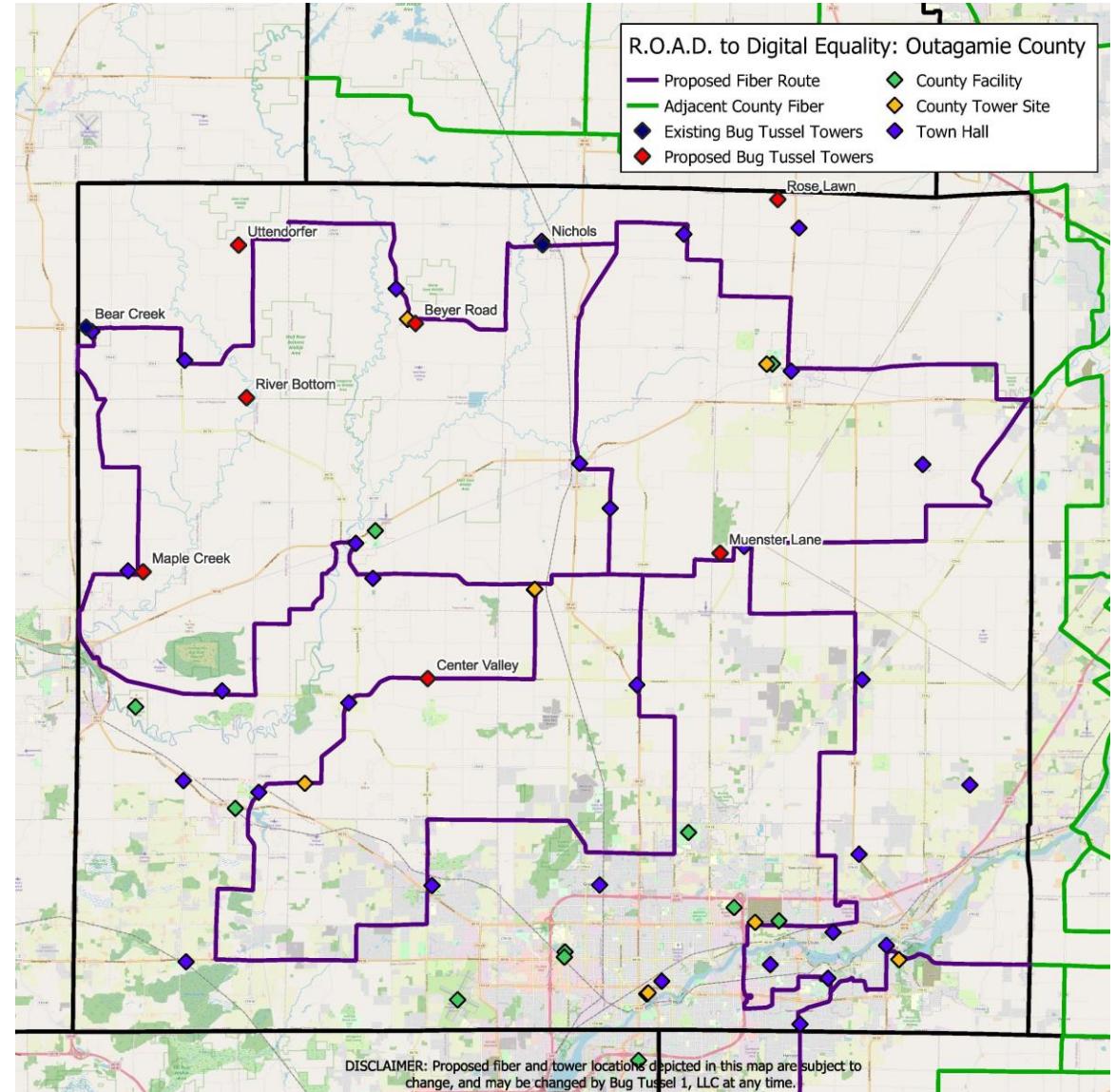
Proposed Project: Middle-Mile(\$13.06M)

- ❖ 186.6 Mile Middle-Mile Network
 - ❖ 144 Fiber Strands
 - ❖ 24 Strands for County's Use
- ❖ Connectivity for County Identified Tower Sites, Points of Interest
- ❖ Infrastructure to Support **Future FTTP Deployment**



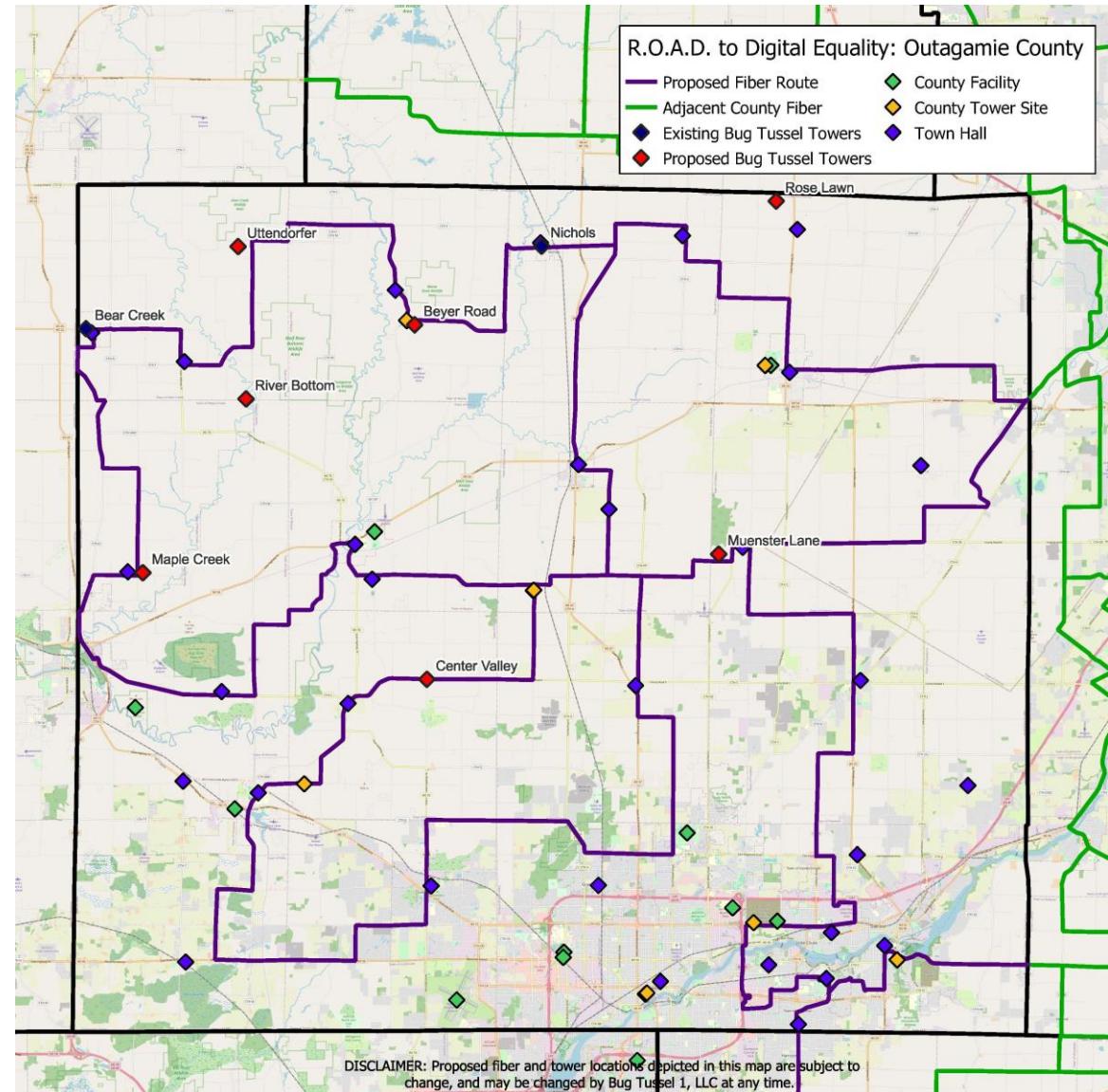
Proposed Project: Last-Mile(\$1.15M)

- ❖ Route Passes Approximately 10,500 Homes and Businesses
- ❖ 3,500 Homes and Businesses outside of Appleton Area



Project Summary:

- ❖ Core Middle-Mile Route: \$13.06M
- ❖ Towers and Wireless: \$2.73M
- ❖ Fiber to the Home: \$1.15M
- ❖ Issuance Costs: \$6.67M
 - ❖ Capitalized Interest: \$4.32M
 - ❖ Debt Service Reserve Fund: \$1.88M
 - ❖ Issuance Costs: \$0.48M
- ❖ Revenue to County: \$2.01M



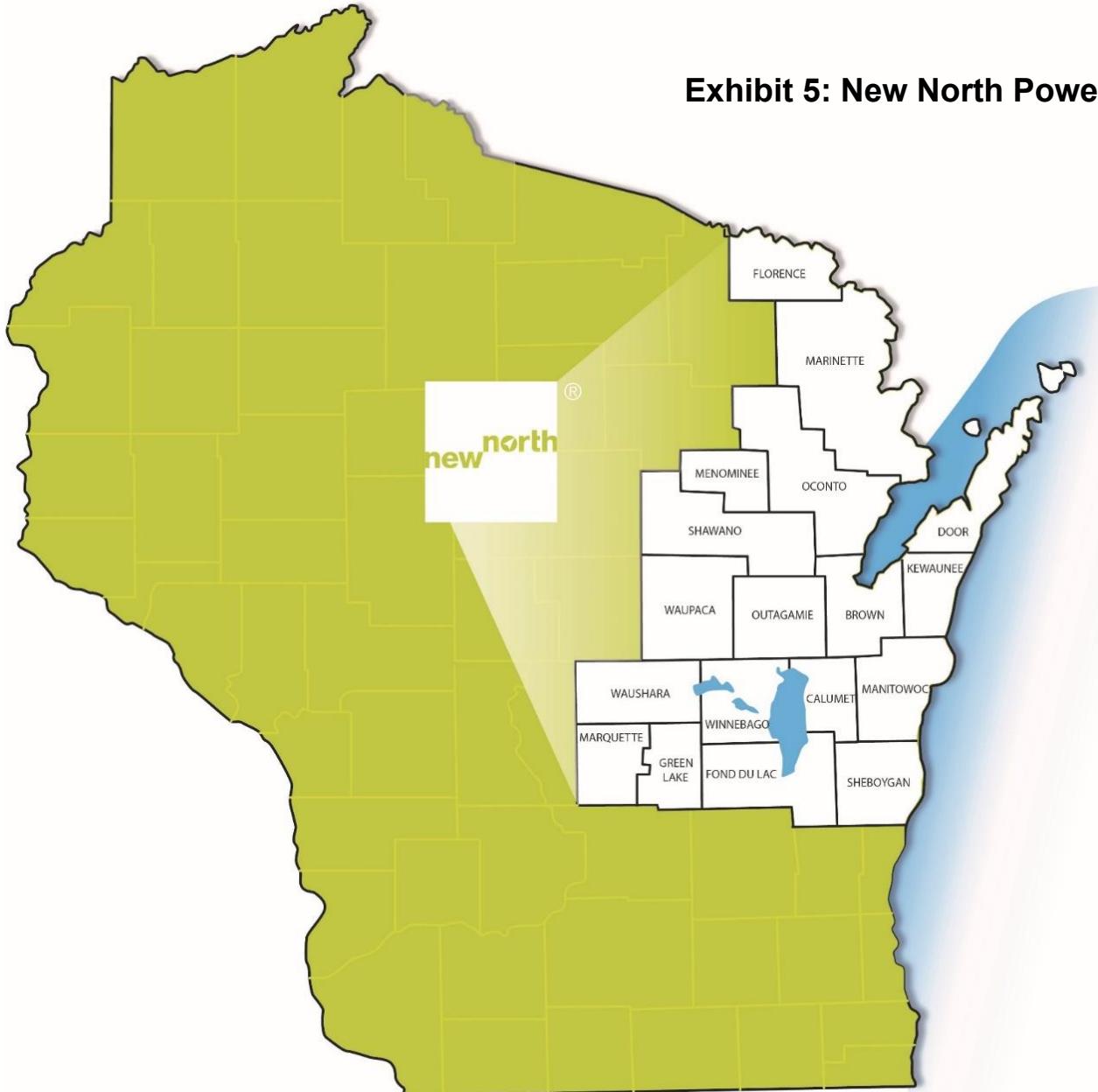
Benefits of the Program

- ❖ County Gives:
 - ❖ Access to Capital: \$24.0M Conduit Bond
 - ❖ Capitalized Interest (3 years)
 - ❖ Interest Only (2 years)
 - ❖ Principal and Interest (25 years)
- ❖ Bug Tussel Gives:
 - ❖ Collateral: First Lien on Constructed Assets; Hilbert Guaranty (additional 40 basis points)
 - ❖ Dark Fiber: 24 strands of fiber connecting County identified objectives
 - ❖ Colocation: Space on 7 Bug Tussel towers for County use

bugtussel

R.O.A.D. TO DIGITAL EQUALITY: OUTAGAMIE COUNTY

Exhibit 5: New North PowerPoint Presentation



Regional Broadband Update:
BEAD Local Planning

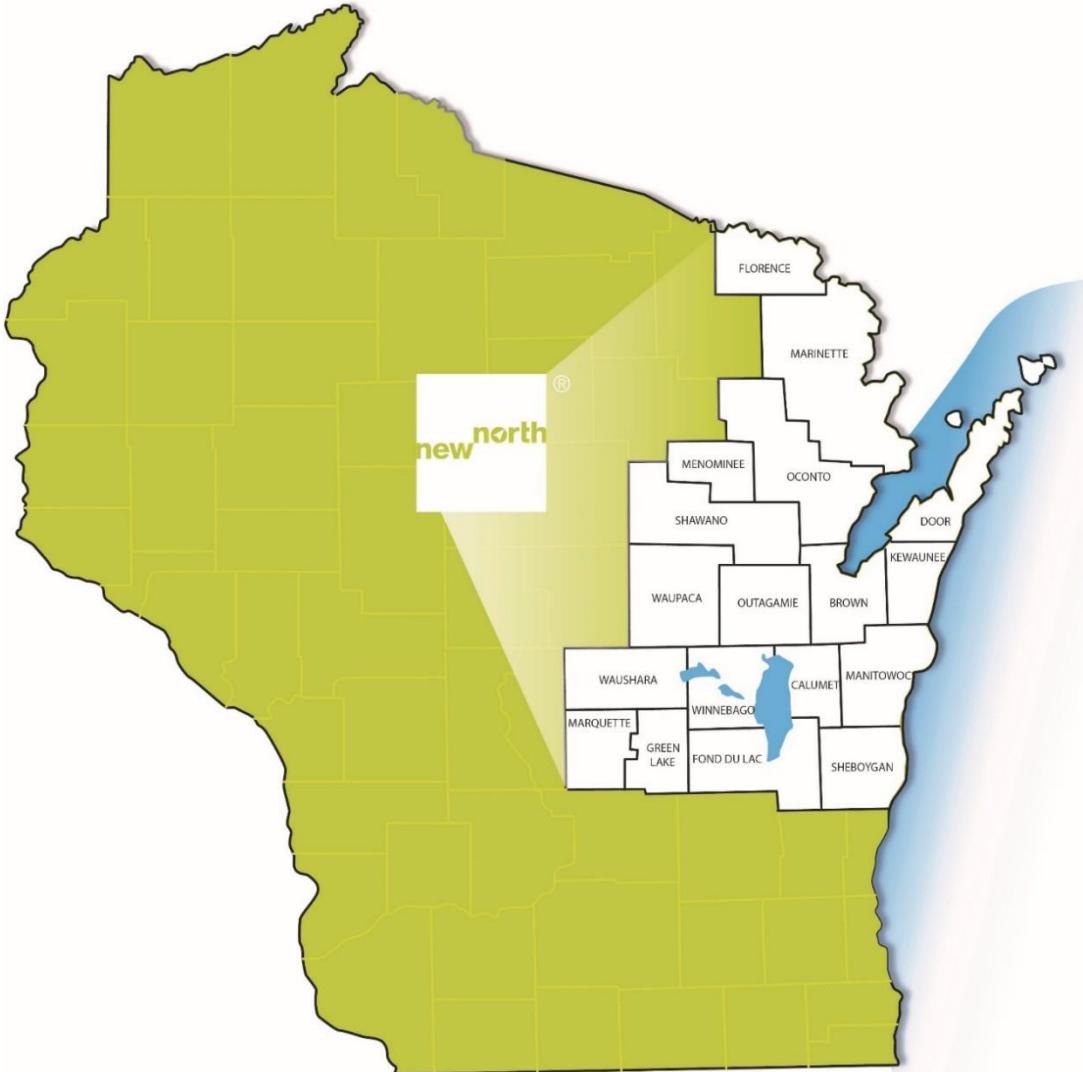
presentation to



07.12.23



thenewnorth.com



mission

To be a catalyst for regional prosperity for all through collaborative action

shared vision

To be nationally and globally competitive for personal, community and economic growth

value

Inclusive Collaboration - Representing the collective region for business investment and for individuals looking to make the New North their home

outcome

Measurable net increase in higher paying jobs, improved social and economic well-being, while maintaining our superior quality of life

Regional EDOs

1. Visions Northwest
2. Momentum West
3. 7 Rivers Alliance
4. Prosperity Southwest
5. Grow North
6. Centergy
7. MadREP
8. New North
9. Milwaukee 7

WISCONSIN
ECONOMIC DEVELOPMENT



Broadband Access Study – Timeline (Pre-Award)

- EDA Notice of Funding Opportunity – May 2020
- Convening of EDA Broadband Task Force Members – May 2020
- Gather necessary data, support, match, etc. – May – October 2020
- EDA Application Submission – September 30, 2020

Broadband Access Study – Timeline (Post-Award)

- Official Award Notification – May 2021
- Project Initiation – September 2021
- Study portion completed - December 2021
- Release of final New North regional plan - February 2022
- 1:1 County Read-Outs - February 17 – April 2022
- Final reports complete - May 2022

PRESIDENT JOE BIDEN

BUILDING A BETTER AMERICA

BUILD.GOV

BIPARTISAN INFRASTRUCTURE FUNDING

Roads & Bridges

\$110B



Broadband Expansion

\$65B



Airports & Ports

\$42B



Electric Vehicles

\$15B



Electric Grid Upgrade

\$65B



Improved Water Quality

\$55B



Modernize Public
Transit

\$39B



Transportation Safety

\$11B



Passenger & Freight Rail

\$66B



Climate Resilience

\$50B



Environmental Clean-Up

\$21B



Reconnecting
Communities

\$1B



Broadband Equity, Access and Deployment

Funding pool

\$42.45B

A program to get all Americans online by funding partnerships between states or territories, communities, and stakeholders to build infrastructure where we need it and increase adoption of high-speed internet.

PROGRAM HIGHLIGHTS

Entities eligible to apply for this program include:

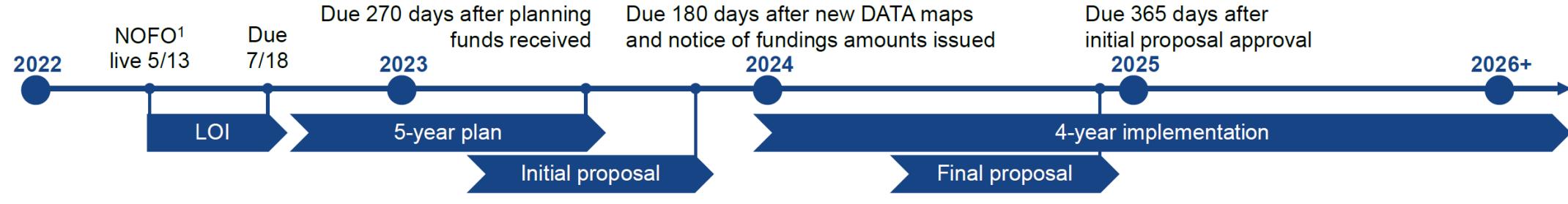
- All 50 States
- The District of Columbia and Puerto Rico
- Other Territories: U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands

Example eligible uses of funds include:

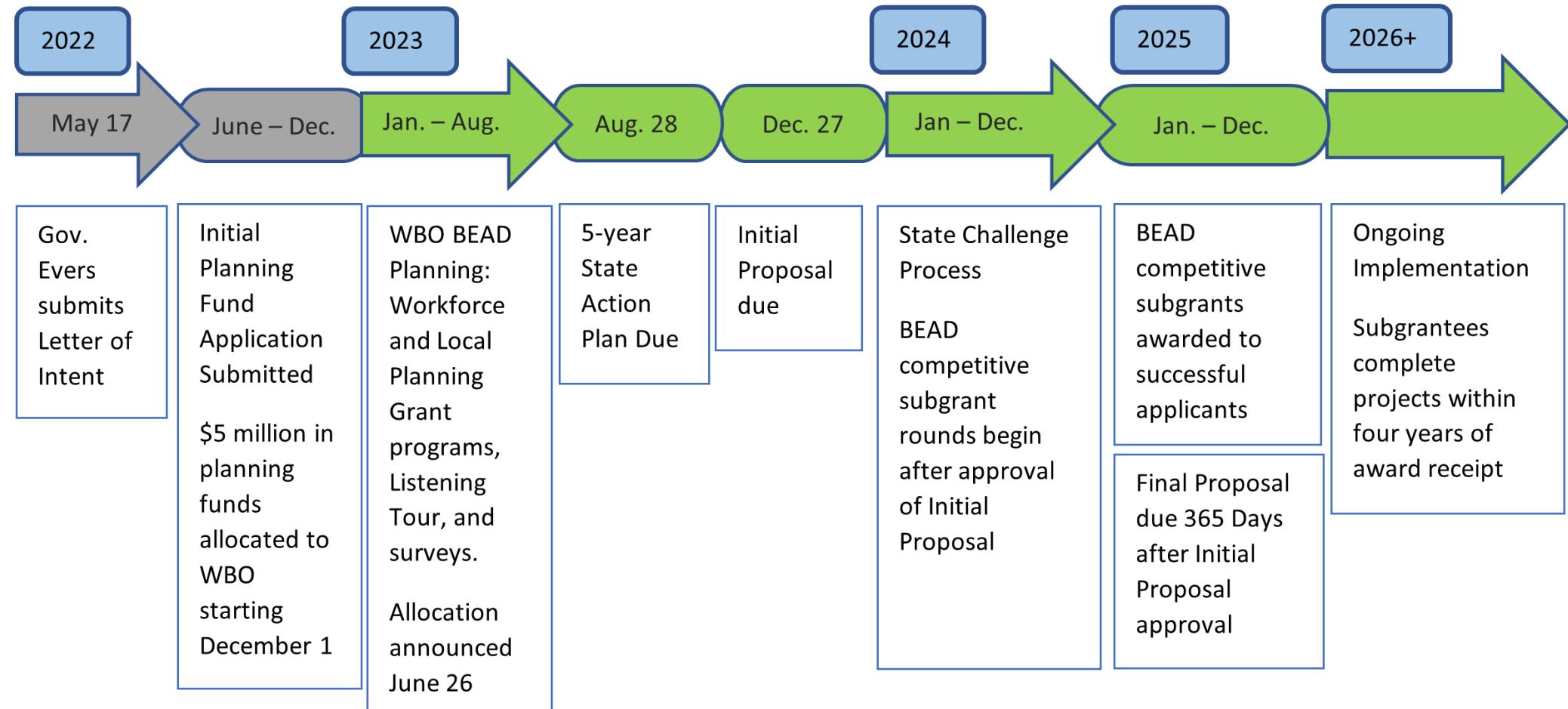
★ Planning for deployment of Internet	★ Deploying or upgrading Internet	★ Installing Internet in multi-tenant buildings	★ Implementing adoption and digital equity programs	★ Workforce and job training
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ESTIMATED TIMELINE

Timeline approximate unless exact date specified



Estimated BEAD Program Timeline



Source: PSC-WI Internet for All

BEAD Local Planning Grant Program

- \$1.5m allocation of \$5m NTIA award
- Letter of Intent – Election to Participate
- Input to PSC's five-year action plan
- Technical Assistance Partners
 - UW-Extension
 - WEDC

BEAD Local Planning Grant Program – Letter of Intent Election to participate and receive formula funds



Section II: Election to Participate

Please select whether your county or Tribe elects to:

Participate in the BEAD Local Planning Grant Program **collaboratively with a Regional Economic Development Organization (REDO)**

Specify REDO:

Participate in the BEAD Local Planning Grant Program **collaboratively with the Great Lakes Inter-Tribal Council**

Participate in the BEAD Local Planning Grant Program **independently**

Not participate in the BEAD Local Planning Grant Program

Section III: Primary Point of Contact

The primary point of contact will be the recipient of further communication from the Wisconsin Broadband Office regarding the BEAD Local Planning Program and need not be the authorized representative signing below.

1. Name	2. Position
3. Email	4. Phone

Plan of Work

Overall goal:

To best utilize planning grant funds to position each county and the region to be prepared to apply for the \$1.06B BEAD funding for implementation



Funding

- Total Grant to New North: \$302,567.25* (does not include Winnebago County)
- New North retained 10% for project management.
 - \$15,000 back to each participating county, less \$5,000 if participating in optional collaborative mapping

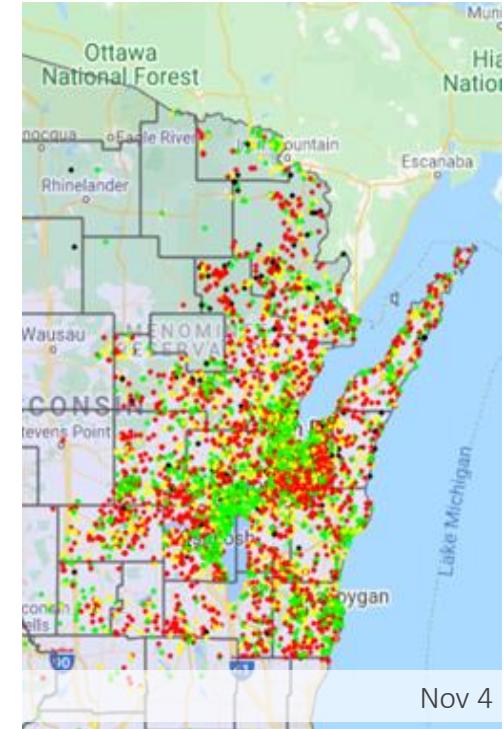
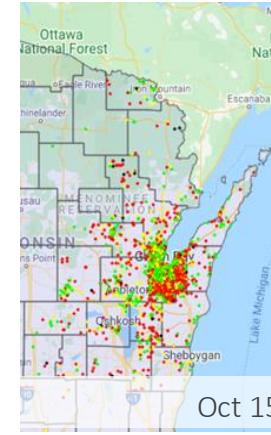
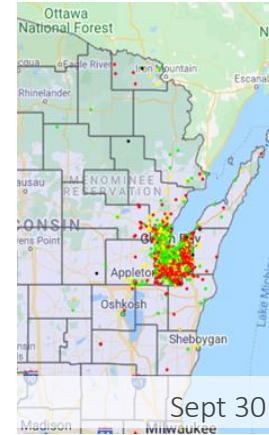
Plan of Work

Activities (through June 2024)

Sample allowable activities that may be completed:

Training
Hosting meetings with ISPs
Staff time
Outreach for speed tests

Outreach for surveys
Translation of materials
Overlay of maps



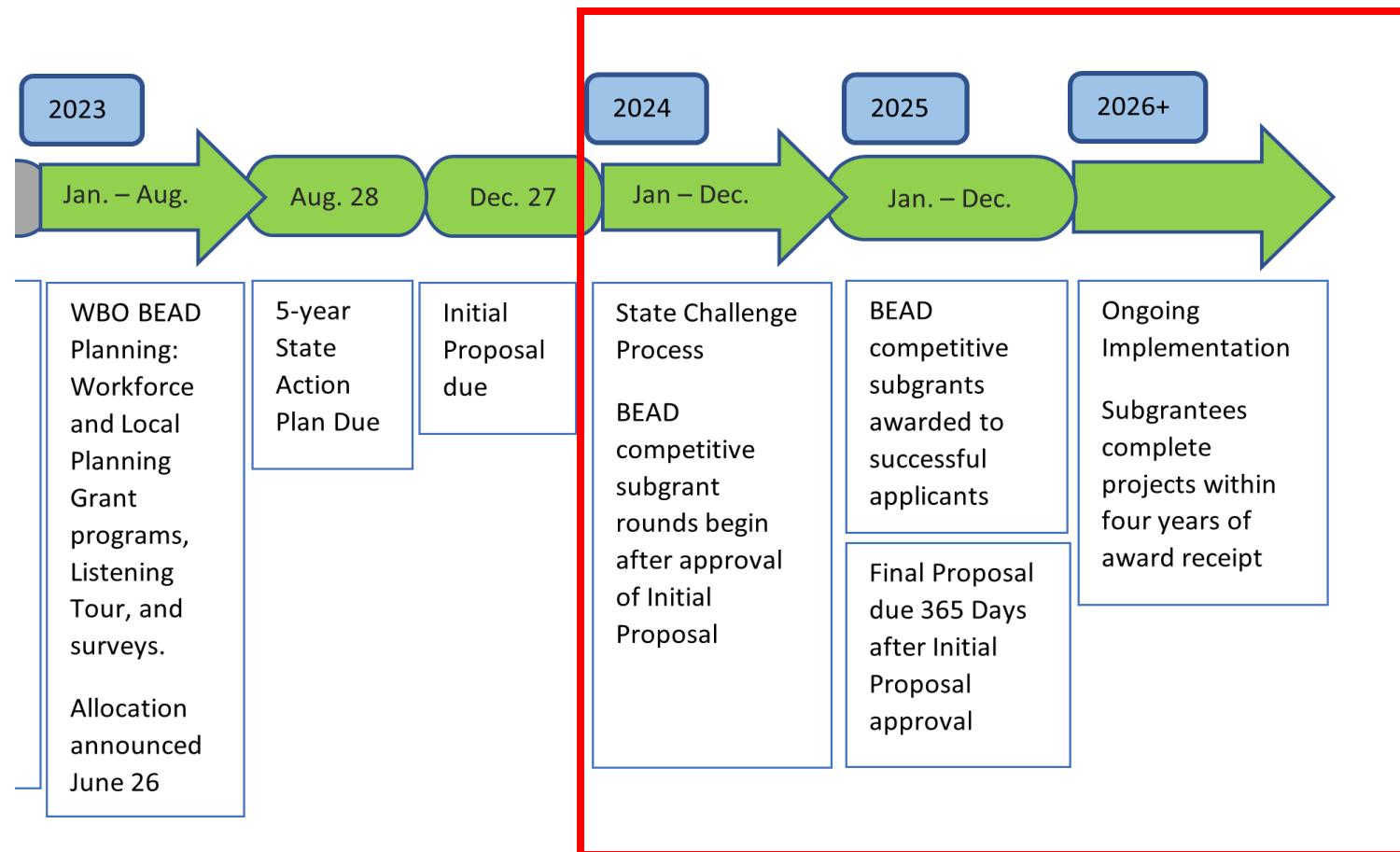
Timeline:

June 19 Documentation/Deliverable from New North to PSC
July 1, 2024 Complete work outlined by New North Broadband Alliance

Collective list of activities: Overlay Mapping, Surveys, Translation of Materials, Training, Staff Time

[Brown County Map](#)

Now What?



Activities to prepare for BEAD grant awards:

- Assist in WISER Survey Collection
- Collaborate with Statewide mapping, incorporating data sources not included.
- Continue New North Broadband Alliance collaborative efforts
- Use maps to prioritize projects
- Convening of Regional ISPs

Thank you!

Exhibit 6: Broadband Map

Broadband Map

