

**From:** Michael F. Pitsch [mailto:mpitsch@tcw.org] **Sent:** Thursday, April 18, 2024 5:20 PM  
**To:** 'Jamie Zastrow' <jamie@progresslakeshore.org> **Cc:** 'Bob Ziegelbauer' <BobZiegelbauer@manitowocountywi.gov>; 'Luke Kalista' <LukeKalista@manitowocountywi.gov>; 'dleclair@two-rivers.org' <dleclair@two-rivers.org>; 'tpetri@two-rivers.org' <tpetri@two-rivers.org>; 'jdahlke@two-rivers.org' <jdahlke@two-rivers.org> **Subject:** RE: Manitowoc Broadband Task Force meetings

Jamie,

Right, I hadn't seen the Neverman report. Thanks.

My initial reactions to it are:

☐ *Good Service is defined as 100/20mbps or better.* ☐

So if Spectrum is promising/billing for 300/10 and actually providing <100/10, in many places how does that factor in?

If Comcast is providing 300/7 Mbps to Felician Village and 250/40 to Bank First?

If AT&T is providing 6/6 Mbps DSL to Felician Village and to the courthouse?

☐ Every Spectrum customer with the basic plan is underserved?

☐ Every AT&T DLS customer is underserved?

☐ Every Comcast customer with a 50/10 plan?

**Are these all counted as underserved?**

☐ *the FCC measures based on advertised speed, while the Manitowoc County map measures actual speed tests.* ☐

The FCC actually used SamKnows testing and MLabs most recently.

How did Manitowoc County conduct testing? Was this the PSC WISER tests? OPTI is Speedtest.net is a rating system not an accurate speed testing site. It uses multithreaded rather than linear tests like MLab and does not measure directly to the closest IXP backbone site. It has many other flaws that I won't get into here. Mlab, Cloudflare, waveform CDN at IXP backbone tests will show 50% of OPTI speeds. OPTI is for ISP advertising purposes only.

Were these tests conducted to a Chicago or Minneapolis IXP?

SamKnows, now part of Cisco Networks has very good testing firmware for routers that will do long term automated testing.

This eliminates Wi-Fi and web browser variables.

☐ *4.1 RDOF*

*The Rural Digital Opportunity Fund only has a small area in the North East corner of Manitowoc.* ☐

Map shows NW corner.

### 3. How is this a government problem?

*In one word, COST. The best (highest speed) internet is provided via fiber optic cable. **Fiber optic cable costs between \$35k and \$250k per mile.** Most banks want a 3-to-7-year payback on business loans, therefore the internet provider must be able to make enough from the customers to pay back the loan and make money to pay staff etc. □*

Simplistic answer. Competition is the obvious answer to spread out the costs. (the invisible hand of the market) This includes municipal providers.

### **Canada has figured it out.**

After big drop in ISP competition, Canada mandates fiber-network sharing | Ars Technica

*arstechnica.com □ tech-policy □ 2023 □ 11 □ canada-forces-large-fiber-isps-to-share-networks-with-small-competitors*

November 7, 2023 - In an attempt to boost broadband competition, **Canada's telecom regulator is forcing large phone companies to open their fiber networks to competitors.** Smaller companies will be allowed to buy network capacity and use it to offer competing broadband plans to consumers. Evidence received during a comment period "shows that competition in the Internet services market is declining□"

Recent history shows that AT&T was forced to do this with phone and DSL which begat TDS and others offering the same services at lower prices. Competition? Imagine that!

### **England require 1000 Mbps for all new residential construction.**

### **England Makes Gigabit Internet a Legal Requirement For New Homes (theverge.com) 45**

An anonymous reader quotes a report from The Verge: *Amendments to Building Regulations 2010 were announced by the Department for Digital, Culture, Media, and Sport (DCMS) on January 6th that mandate new homes constructed in England to be fitted with infrastructure and connections required to achieve gigabit internet connectivity.*

The difference between a copper coax cable and a fiber optic cable is the difference between:

*Copper coax cable versus Fiber optic glass strands*

***"Like a 2 inch water pipe versus a 15 mile wide river"***

*Harvard Professor Susan Crawford : Fiber: The Coming Tech Revolution1*

### 3.1 Can□t we just use satellite or cellphones?

*Quick answer? Usually YES. You can use satellite, cellular or fixed wireless access (FWA) when fiber is too expensive.*

Fiber is required to each cell tower and to each 5G wireless transmitter/receiver. And 5G requires lots of them. Incumbents see wireless as more profitable however. So they like to run fiber PAST your home, but not TO IT. BEAD monies should not be used for this!

I understand that the BEAD program is primarily about affordability and access. In my view we shouldn't discount what is happening in the real world now, or what we can learn from history. This means that we shouldn't automatically rule out some municipal ISP entities as the Final NN Manitowoc Broadband Report so dismissively did.

Future thinking involves considering what we will leave in place for our children and grandchildren, and not making the same mistakes again.

I have attached a bit of a simplistic summary graphic that shows what I have been up to lately.

Mike

PS. Remember that electricity was rolled out from 1930-1950 nationwide. It's been 30 years for fiber and over \$1 trillion of investment and we are not even close yet.

It should not be overlooked that every residence that has electricity and/or phone already has a path for fiber. The bedrock arguments are overblown with a purpose.

I am not a geologist, but how much bedrock is at a 3 foot depth where fiber is typically buried.?

1 Publisher : Yale University Press (January 8, 2019)

Fiber: The Coming Tech Revolution and Why America Might Miss It Kindle Edition

by Professor Susan Crawford (Author)

Susan P. Crawford (born February 27, 1963) is the John A. Reilly Clinical Professor of Law at Harvard Law School. She served as President Barack Obama's Special Assistant for Science, Technology, and Innovation Policy (2009) and is a columnist for WIRED. She is a former Board Member of ICANN, the

founder of OneWebDay, and a legal scholar. Her research focuses on telecommunications and information law.

**From:** Jamie Zastrow [mailto:jamie@progresslakeshore.org] **Sent:** Thursday, April 18, 2024 1:43 PM **To:** Michael F. Pitsch <mpitsch@tcw.org> **Subject:** RE: Manitowoc Broadband Task Force meetings

Mike,

Thanks for the conversation today. I look forward to having your insight added to our conversations. You will be joining at the right time as we are formulating our county list of needs, next steps, and what the role of county government might be. Bob and I will discuss how to publish meeting announcements, etc. but I will be adding you to my direct list of meeting invitations.

I have attached a few reports. The □Final\_NN\_Manitowoc□□ documents are the first New North reports, and you may have those already. The Neverman report was just shared last week with our taskforce and was compiled based on recent mapping by East Central Wisconsin Regional Planning commission as part of the New North initiative. Here is some additional information and links to those maps:

- Main map page: <https://new-north-broadband-equity-access-and-deployment-hub-ecwrpc.hub.arcgis.com/>
- Regarding where funding MIGHT go, the NewNorth Overview map is the best source: <https://new-north-broadband-equity-access-and-deployment-hub-ecwrpc.hub.arcgis.com/apps/efd318bb5ff14ee8beea1ba10d522c63/explore> o Under Broadband Serviceable Location (BSL) select the □Eligible and Unserved□ layer (this is a best guess at this point).
- The New North map gives a good estimate of the locations to review for the WI PSC WBO BEAD Challenge Process <https://psc.wi.gov/Pages/ServiceType/Broadband/BEADChallenge.aspx>. Note this is the part that can overlap with updating 911 locations.

I will keep you posted as we schedule the next meeting.

Thanks!

Jamie Zastrow

Executive Director

**Progress Lakeshore**

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**From:** Michael F. Pitsch <mpitsch@tcw.org> **Sent:** Thursday, April 18, 2024 11:45 AM **To:** 'Bob Ziegelbauer' <BobZiegelbauer@manitowocountywi.gov>; 'Luke Kalista' <LukeKalista@manitowocountywi.gov> **Cc:** Jamie Zastrow <jamie@progresslakeshore.org> **Subject:** RE: Manitowoc Broadband Task Force meetings

Bob,

That□s real good.

I had a nice conversation with Jamie, and she promised to keep me in the loop as well.

Thanks, and I appreciate the invitation,

Mike

**From:** Bob Ziegelbauer [mailto:BobZiegelbauer@manitowocountywi.gov] **Sent:** Thursday, April 18, 2024 11:25 AM **To:** Michael F. Pitsch <mpitsch@tcw.org>; Luke Kalista <LukeKalista@manitowocountywi.gov> **Cc:** Jamie Zastrow <jamie@progresslakeshore.org> **Subject:** RE: Manitowoc Broadband Task Force meetings

Mike,

In the future we will post our meeting dates with the Manitowoc County weekly notices and have summaries of our meetings available for you.

Of course you are free to attend the meetings anytime.

Thanks

Bob Ziegelbauer

Manitowoc County Executive

**\*\*Please take note of my new email address and update your contacts.**

**From:** Michael F. Pitsch <mpitsch@tcw.org> **Sent:** Thursday, April 18, 2024 9:57 AM **To:** Bob Ziegelbauer <BobZiegelbauer@manitowoccountywi.gov>; Luke Kalista <LukeKalista@manitowoccountywi.gov> **Subject:** FW: Manitowoc Broadband Task Force meetings

**WARNING:** This message originated from outside of Manitowoc County's email system. Any attachments or links should be carefully considered before proceeding. Think before you click!

Bob and Luke,

Can one of you fill me in on these meetings as I haven't seen them noticed anywhere.

Meeting dates, agendas, minutes, etc.

Thanks,

Mike

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**From:** Leonard, Mark - PSC [mailto:mark.leonard@wisconsin.gov] **Sent:** Thursday, April 18, 2024 9:07 AM **To:** TDI <tdi@tcw.org> **Subject:** RE: Task Force meetings

Good Morning Mike,

I attended the Manitowoc Broadband Task Force Meeting last week. That may have been the first meeting, I'm not sure. You may want to contact your County Executive or County IT Director for information on the Task Force.

The PSC has an Electronic Records Filing (ERF) system to receive, circulate, process, and publish documents electronically. The ERF system is organized by dockets. The ERF system posts grant application instructions, submitted grant applications, Commission memos, Commission Orders, requests for comments, data requests and responses, public comments and other relevant documents to the system and makes them available on the website and to the public within one hour during regular business hours. The ERF system provides transparency and makes the activities related to the docket easy and convenient to access. Anyone with an e-mail address can sign up for notifications to receive an e-mail when new documents are filed in a particular docket.

So, when you subscribe to a docket you will get notifications for all the information mentioned above for anyone who submits related documents to the docket, that includes all ISP applications.

Please let me know if you have any other questions.

Thanks,

**Mark Leonard** *Broadband Planning and Policy Coordinator*

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