



MARATHON COUNTY
BROADBAND TASK FORCE MEETING
AGENDA

Date & Time of Meeting: Monday, May 17, 2021 at 4:00 P.M.

Meeting Location: Conference Room 5, 212 River Drive, Wausau, WI

Task Force Members: Katrina Becker, Eric Budleski Sandi Cihlar, Sara Guild, Jacob Langenhahn, Kent Olson, and John Robinson

Task Force Purpose: Develop recommendations identifying the potential role of Marathon County in facilitating the expansion of Broadband access in Marathon County. Review the Report: Broadband for Marathon County Broadband Assessment and Plan prepared by Design Nine and develop broad policies and partnership recommendations relating to the expansion of broadband/internet services throughout Marathon County.

The meeting site identified above will be open to the public. However, due to the COVID-19 pandemic and associated public health directives, Marathon County encourages Task Force members and the public to attend this meeting remotely. Instead of attendance in person, Task Force members and the public may attend this meeting by telephone conference. If Task Force members or members of the public cannot attend remotely, Marathon County requests that appropriate safety measures, including adequate social distancing, be utilized by all in-person attendees.

Phone #: 1-408-418-9388

Access Code: 962 376 748

When you enter the telephone conference, PLEASE PUT YOUR PHONE ON MUTE!

- 1. Call Meeting to Order
2. Public Comments (15 Minute limit)
3. Approval of the April 19, 2021 Broadband Task Force Meeting Minutes
4. Educational Presentations and Committee Discussion:
A. Update On Rural Digital Opportunity Fund Auction
B. Report On State And Federal Broadband Funding Opportunities
C. Broadband Affordability
5. Policy Discussion And Possible Action:
A. Develop a Process for Investing County Resources for Broadband Expansion Efforts
B. Information Gaps and Needs
6. Next Meeting Logistics And Topics
7. Next Steps
8. Adjournment

Any person planning to attend this meeting who needs some type of special accommodation in order to participate should call the County Clerk's Office at 715-261-1500 or e-mail countyclerk@co.marathon.wi.us one business day before the meeting.

SIGNED /s/ John Robinson
Presiding Officer or Designee

FAXED TO: Wausau Daily Herald, City Pages, and
Other Media Groups
FAXED BY: T. Ranallo
FAXED DATE: 05/14/2021
FAXED TIME:

NOTICE POSTED AT COURTHOUSE
BY: T. Ranallo
DATE: 05/14/2021
TIME:



MARATHON COUNTY BROADBAND TASK FORCE MEETING MINUTES

Monday, April 19, 2021 at 4:00 P.M.
Conference Room 5, 212 River Drive, Wausau, WI

Members	Present/Web-Phone	Absent
Chair John Robinson	X	
Katrina Becker		X
Eric Budleski	X	
Sandi Cihlar	X	
Sara Guild	X	
Jacob Langenhahn	X	
Emmett McBride	X	
Kent Olson		X
Wade Carroll	X	
Lance Leonhard	X	
Amanda Ley	X	
Valerie C	X	
Kurt Gibbs	X	
Gerry Klein	X	
Vicki Resech	X	
Milton Olson	X	

1. **Call Meeting to Order**

The meeting was called to order by Chair Robinson at 4:01 pm. All participants were welcomed.

2. **Public Comments - no public comments presented.**

3. **MOTION BY GUILD; SECOND BY CIHLAR TO APPROVE THE FEBRUARY 15, 2021 BROADBAND TASK FORCE MEETING MINUTES. MOTION CARRIED.**

4. **Educational Presentations and Committee Discussion**

A. Broadband Task Force beyond the April Sunset Date

The Broadband Task Force has been extended until April 2022.

B. Update on Extension of the Update on Efforts to Expand Wi-Fi Hotspots at County Facilities

G. Klein provided an update on Wi-Fi access at Marathon County libraries, leases are being updated to allow for installation of updated wiring. The revised agreements have been provided to the communities and the equipment has been purchased.

G. Klein relayed the CCITC is currently researching “shovel ready” broadband projects, particularly at the two County campgrounds and installation of fiber service at Memorial Park. High speed internet access has been expanded at East Gate Hall, Hockey Arena and at other sites at the fairgrounds.

Supervisor Cihlar communicated concerns regarding potential liability concerns regarding expanding Wi-Fi access at public facilities. Administrator Leonhard gave an update that several municipalities have expressed concerns regarding content available through public Wi-Fi which the Library Board is balancing with mitigation strategies.

C. Update On Public Service Commission Broadband Expansion Grant Awards

Chair Robinson provided an update on the status of the four County supported PSC grant applications. The Wittenberg Telephone Application was ranked 4th Statewide. Chair Robinson relayed that the PSC did not want to overlap with the Rural Digital Opportunity Fund and had a preference for fiber technologies.

D. Update On Proposed Amendment To Marathon County Zoning Code 17.301 Changing Telecommunication Facilities from A Permitted To Conditional Use

Chair Robinson communicated that the County Board did not make the suggested change and telecommunication facilities will remain a permitted use in the subject zoning district(s).

E. Update On Rural Digital Opportunity Fund (RDOF) Auction

1. Coverage, schedule and level of service

Chair Robinson updated the Task Force that CCO (Charter Communications) and LTD Broadband, a company located in Minnesota, were awarded large portions of Marathon County through the Rural Digital Opportunity Fund Auction.

M. Osterberg relayed that she had contacted Charter and their representative was interested in attending the May Broadband Task Force meeting and that Charter would appreciate any information regarding addresses outside of the RDOF where the County would be interested in expanding access. Most of the area that is currently served by Frontier is within Charter's RDOF Area.

G. Klein provided a map depicting the areas of the County awarded funding through the RDOF.

Chair Robinson communicated that he had contacted LTD Wireless and that they were planning on installing fiber in the areas they were awarded through the RDOF. LTD Wireless is interested in identifying ways to accelerate the project timeline.

F. Report On State And Federal Broadband Funding Opportunities

1. 2021-2023 State Budget

The Governor's budget proposed \$204 million for broadband expansion. Chair Robinson outlined how the Governor's Broadband budget request was broken down and how it relates to grant applications.

2. Federal American Rescue Plan

M. Osterberg provided an update on the research she conducted as it relates to the Federal funds and how it intersects with other efforts - such as the Emergency Broadband Benefit where low income populations can get a broadband connection device and fiscal savings to support that device. Broadband infrastructure expansion grant was mentioned but details about that process is to be determined at the Federal level.

M. Olson communicated that the Town of Weston is interested in pooling funds from other entities to expand Broadband infrastructure. He stated that the Town does not anticipate expenses related to COVID that many other municipalities are experiencing so utilizing their funding to focus on Broadband would be a priority for them.

Administrator Leonhard provided a brief overview from NACO (National Association of Counties) as it relates to the Federal American Rescue Plan. Board Chair Kurt Gibbs also provided an update as well and reiterated they are still waiting on guidance from the Federal Government and the US Treasury. Chair Gibbs relayed that additional clarification would be available at the end of April.

5. Policy Discussion And Possible Action:

A. Statutory Changes That Would Facilitate Broadband Expansion

State Senator Petrowski requested information from Marathon County on what statutory changes could be made to facilitate broadband expansion.

E. Budleski relayed that restrictions on local government in relation to broadband infrastructure has limited broadband access in rural areas.

Supervisor Guild stated that there was a rationale to the provision limiting local government involvement in broadband expansion, however, local governments should have the option to proactively assist in expanding broadband access. She mentioned that perhaps joining other counties in this effort may have broader reach with state officials.

Chair Gibbs stated that the County needed to be very specific in its requests to the State legislature.

Supervisor Robinson recommended discussing this at the May meeting. He will conduct research on what other counties are doing and if the Wisconsin County Association is leading any action on this topic.

Supervisor Cihlar inquired if what education the Towns Association was providing on the American Rescue Funds use and inquired if there could be information provided to the Marathon County Towns.

Administrator Leonhard communicated that the League of Municipalities, Towns Association, and the Counties Association is coordinating information on the Fiscal Rescue Funds, but they are also waiting for direction from the Treasury on how the funds can be spent.

Resech relayed that she serves on the North Central WI Regional Planning Commission COVID Recovery Task Force and that the Task Force has identified access, accessibility and adoption as issues in the County.

B. Support for 2021-2023 State Budget Initiatives to Expand Broadband

Marathon County is expressing support for the broadband related initiatives in the State Budget.

Supervisor Guild motioned to direct Chair Robinson to communicate the Task Force's support for the funding in the Governor's budget allocated for broadband and that they include funding for broadband expansion in the final state budget. Motion seconded by Supervisor Cihlar.

C. Developing a Process for Investing County Resources for Broadband Expansion Efforts

1. Transparency And Accountability

Chair Robinson communicated that the Task Force had established a minimum service level of 50 Mbps/10Mbps previously.

E. Budleski communicated that 50/10 is the minimum level of service and the proposal should be scalable.

Supervisor Guild inquired if this would be a baseline for determining if the County could provide funding assistance and suggested preference for applications providing a higher level of service, greater number of households and businesses served.

Chair Gibbs stated that different technologies have varying speed capacities and that there is a preference for fiber to the home. Gibbs suggested a separate criteria for non-fiber technology.

2. Priority areas for broadband expansion

Last year's focus was on the northern towns with deteriorating copper infrastructure. Chair Robinson stated that the utilization of RDOF funds may lead to some prioritization.

M. Osterberg stated that when prioritization was shared with Charter, that was not helpful for them. Rather they wanted addresses of customers that wanted to be served or needed expanded service.

E. Budleksi stated that education is needed on what constitutes high speed internet and broadband service. Supervisor Cihlar asked about telehealth opportunities covered by the Lincoln County survey.

M. Osterberg replied that was the third use that survey respondents would use broadband to access telehealth care.

6. Next Meeting Logistics And Topics

Chair Robinson stated that at the next meeting the Task Force would continue discussion on coordinating with internet service providers with hopefully having internet service providers present to discuss the RDOF, additional information on the American Rescue Plan, opportunity to partner with Towns, and continue discussion on how to determine priorities for the County.

7. Next Steps

8. Adjournment

CHAIR ROBINSON ADJOURNED THE MEETING AT 5:28 PM.

Respectfully submitted by,
Jason Hausler

Broadband Project Evaluation Criteria

The Marathon County Broadband Task Force will consider the following criteria when evaluating broadband projects:

Broadband Project Evaluation Scoring Sheet

Evaluation Factor				
	POOR (1)	AVERAGE (2)	GOOD (3)	EXCELLENT (4)
Speed of Service	Project will provide speeds of 25 Mbps/ 3 Mbps	Project will provide speeds of 50 Mbps/ 5 Mbps	Project will provide symmetrical speeds of 100+ Mbps	Project will provide 1 GB
Number Served				
Project will serve 100+ households				
Project will serve 200+ households				
Project will serve 10+ businesses				
Project will not duplicate existing broadband (25/3 Mbps) service				
Project will provide service to underserved area	There is an existing ISP providing broadband in the proposed area	There are two or more ISPs providing inconsistent service or providing service not meeting the Federal definition of broadband	There is one ISP providing inconsistent service or providing service not meeting the Federal definition of broadband	There are no other ISPs providing service in the project area
Subtotal – Number Served				
Value				
Proposed residential monthly service cost	Greater than \$100/month	\$75 - \$100 per month	\$50 - \$75 per month	Less than \$50 per month
Project Timeline				
Efficient construction plan				
Total – All Evaluation Points				



High Speed Internet in Rural Lincoln County: Summary of 2020 Broadband Survey

Prepared by Melinda Osterberg, Community Development Educator with assistance from Rebecca Kludy, Program Assistant

In late 2020, Lincoln County-Extension, in collaboration with Lincoln County, conducted a survey of property owners in the unincorporated portions of the County to determine high speed internet availability and demand within the County. The community anecdotally understood that there was limited access to broadband outside of the County's incorporated cities of Merrill and Tomahawk, however, additional quantitative data was needed to ensure informed decision-making processes and assist in productive communication with area internet service providers, community stakeholders, and potential funding partners.

One thousand, three hundred and sixty-two households completed the Lincoln County Broadband survey communicating their current access and need for high-speed internet. Respondents lived throughout Lincoln County. Consistent with their percentage of Lincoln County households, the majority of respondents resided in the Towns of Merrill, Bradley and Pine River.

A third of respondents did not have access to reliable high speed internet service, with nearly 33% of respondents indicating that they do not have access to broadband at their residence.

Lack of high-speed may also have a social and economic cost for Lincoln County. Of the 33% of survey respondents who did not have adequate access to broadband, a third indicated that they were likely to start, move or grow a business in Lincoln County if they had access to adequate, reliable, and affordable broadband internet services. One survey respondent commented, "Broadband has gone from a want to a need in our current situation and it is likely to become more critical as time goes on."

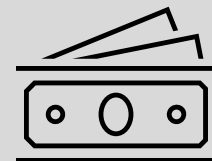
Lack of Access

Nearly a 1/3 of respondents, or 445 households, indicated that they did not have access to high-speed internet at their residence.



Expensive Service

Households that did have access to a monthly subscription for high-speed internet service often paid a great deal for service. Twenty-eight percent of households paid in excess of \$80 monthly.



Economic Development & Entrepreneur Cost

About a third of respondents that did not have access to broadband indicated that they were likely to start, move or grow a business in Lincoln County if they had access to high quality internet service.

Key Survey Findings

Key takeaways from the Lincoln County 2020 Broadband Survey include:

- **Internet service was generally poor.** Even when respondents reported satisfaction with internet service, many did not actually have access to high-speed internet. Using <https://www.speedtest.net/> the vast majority of respondents (78%) did not have internet that met the Federal definition of broadband internet (speeds of 25 Mbps download/3 Mbps upload).
- **Even poor internet service is expensive.** Survey respondents indicated that they paid 28% of respondents paid greater than \$80 per month to access the internet, while 49.1% of respondents paid greater than \$60 per month for internet service.
- **Cost limits access to high-speed internet.** Over thirteen percent of respondents indicated that they did not subscribe to internet service due to cost. Other than availability, the number one factor limiting respondents from having a monthly subscription to broadband service was cost.
- **Many respondents were dissatisfied with incumbent internet service providers and wireless technology.** When offered the opportunity to share their thoughts many respondents expressed frustration that incumbent internet service providers were providing a poor level of service or had not expanded service. There was also frustration over the lack of reliable access to the internet from satellite providers.

Survey Method

In mid-November 2020, a postcard inviting households to respond to the survey was sent to all improved addresses in the unincorporated areas of Lincoln County. The unincorporated areas include all lands within the County outside of the incorporated cities of Merrill and Tomahawk. Individuals could respond to the invitation by going directly to the survey website or by requesting a paper survey be mailed to them.

One thousand three hundred and sixty-two households responded to the survey. The US Census Population and Housing survey indicates that Lincoln County has an estimated 12,625 households in 2019. Of the 12,625 households estimated in Lincoln County, 8,387 are located within the Cities of Tomahawk and Merrill, indicating 4,238 households are within the unincorporated portions of the County. This would indicate that approximately 32% of households in the unincorporated areas responded to the survey. Even accounting for errors, such as a respondent's household being outside of the target survey area, this response rate is very good and is considered statistically significant.

What does statistically significant mean? Simply stated, data that is statistically significant is likely not due to chance or another cause and probably reflects the population as a whole.

Existing Broadband Environment¹

Lincoln County is served by a mix of broadband technologies, fiber or cable service is available within the majority of the municipal boundaries of the Cities of Merrill and Tomahawk, while the unincorporated areas are served by a mixture of satellite, fixed wireless, and DSL service. Each technology has unique characteristics and capacity for accessing the internet.

¹Source: (1) Federal Communication Commission. "Types of Broadband Connections." July 23, 2014. Available at: <https://www.fcc.gov/general/types-broadband-connections>.



Fiber

Fiber optic broadband technology is generally considered the future of broadband, providing up to 10000 Mbps symmetrical upload and download speeds. Fiber broadband works by sending a beam of light through fiber optic glass cables which are typically buried beneath the ground. At some point, most other broadband technologies connect to the fiber backbone to access the internet. In some instances, particularly within incorporated and more highly developed areas fiber is provided directly to the premise, providing the residence or business with the ability to access the internet in a fast and reliable manner.

Cable

Broadband service is provided through coaxial cable that is the same infrastructure that is used to deliver cable television service. Moderate cable service can provide speeds in excess of 100 Mbps download/25 Mbps upload. Unlike fiber service, upload speed is considerably slower than download speeds, which can be problematic for uses such as video conferencing which have significant download/upload requirements.

Digital Subscriber Line (DSL)

DSL utilizes existing landline telephone infrastructure to deliver high speed internet service via copper telephone line. Moderate speed DSL service can provide speeds of 12 Mbps download/2 Mbps upload.

Fixed Wireless

Wireless internet service providers provide fixed infrastructure on towers, silos and other structures connecting users wirelessly to the internet via radio frequencies. This technology relies on having a clear line of sight between the user and infrastructure. Moderate speed fixed wireless service can provide speeds of 25 Mbps download/2 Mbps upload.

How much bandwidth do you need? It depends on your household, to calculate your potential need: <http://broadbandnow.com/bandwidth-calculator> using this calculator a family of four accessing the internet would have an estimated download speed of 40 Mbps

Satellite

Satellite internet works similar to satellite TV, signals are routed through satellite in Earth orbit to receiver dishes. This technology is not reliant on ground infrastructure delivering moderate speeds of 10 Mbps download/1 Mbps download.

Emerging Technologies

Through the Broadband Survey several respondents indicated that they were utilizing Star Link, which was available on a limited basis through their beta testing program. Star Link utilizes a constellation of small satellites in low Earth orbit. During the Beta testing period, Star Link provides moderate speeds of 80 Mbps download/20 Mbps upload with limited period of no connectivity, the beta testing period is anticipated to last through 2021.



Survey Summary

Specific results are summarized below for each question within the Lincoln County Broadband Survey.

What municipality do you reside in?

Municipality	Number
Town of Merrill	220
Town of Pine River	155
Town of Bradley	150
Town of Harrison	97
Town of Scott	95
City of Merrill	89
Town of Schley	74
Town of Rock Falls	72
Town of Tomahawk	69
Town of King	63
Town of Russell	55
Town of Corning	52
Town of Birch	39
Town of Skanawan	33
Town of Wilson	30
City of Tomahawk	25
Town of Harding	25
Other	13

Please enter the zip code of where your Lincoln County, Wisconsin property is located.

Zip Code	Percentage
54452 (Merrill)	45.3%
54487 (Tomahawk)	27.5%
54435 (Gleason)	12.3%
54442 (Irma)	12%
Other	3%

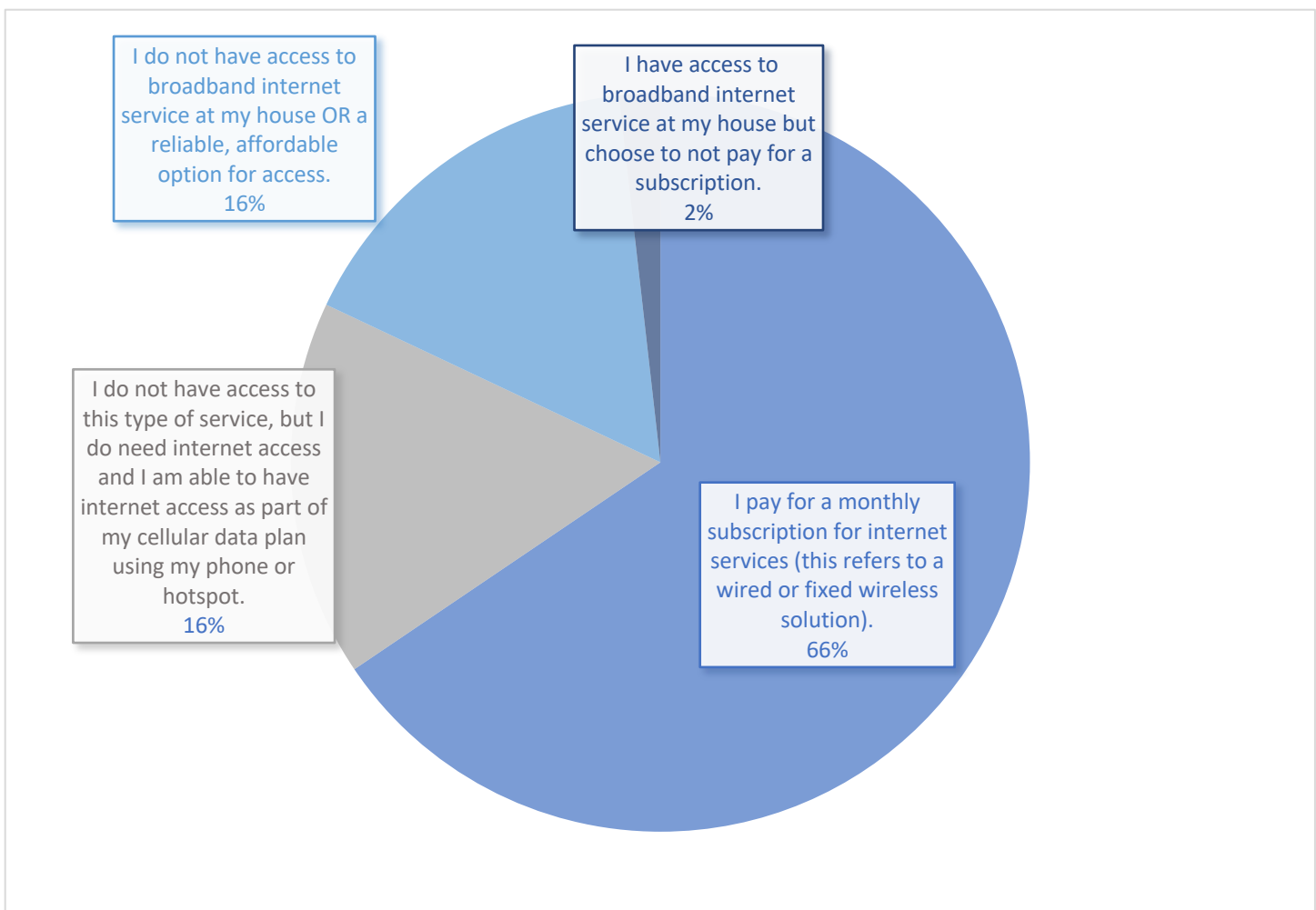


Which of these describes your access to broadband internet at your home?

I pay for a monthly subscription for internet services (this refers to a wired or fixed wireless solution).	65.6%
I do not have access to this type of service, but I do need internet access and I am able to have internet access as part of my cellular data plan using my phone or hotspot.	16.5%
I do not have access to broadband internet service at my house OR a reliable, affordable option for access.	16.2%
I have access to broadband internet service at my house but choose to not pay for a subscription.	1.8%

32.7% of survey respondents (445 households) did not have access to a monthly broadband subscription (wired or fixed wireless service)

Percentage of Lincoln County Households with a Monthly Broadband Subscription





If you do NOT subscribe (pay for) or have NO access to broadband internet service, why not?

	Percentage
Service is not available where I live	34.7%
Service is unreliable	17.8%
Service is too slow	17.2%
Internet is too expensive	13.5%
Other	12.1%
I use the internet somewhere else	3.1%
I have no need	0.8%
Concerned about online privacy	0.7%

If you do NOT subscribe (pay for) to broadband internet service, what would it take for you to subscribe to broadband internet service? (more affordable, faster speeds, etc.)

Rationale	Count
Affordable/Cost	197
Faster	176
Consistent/Reliable	107

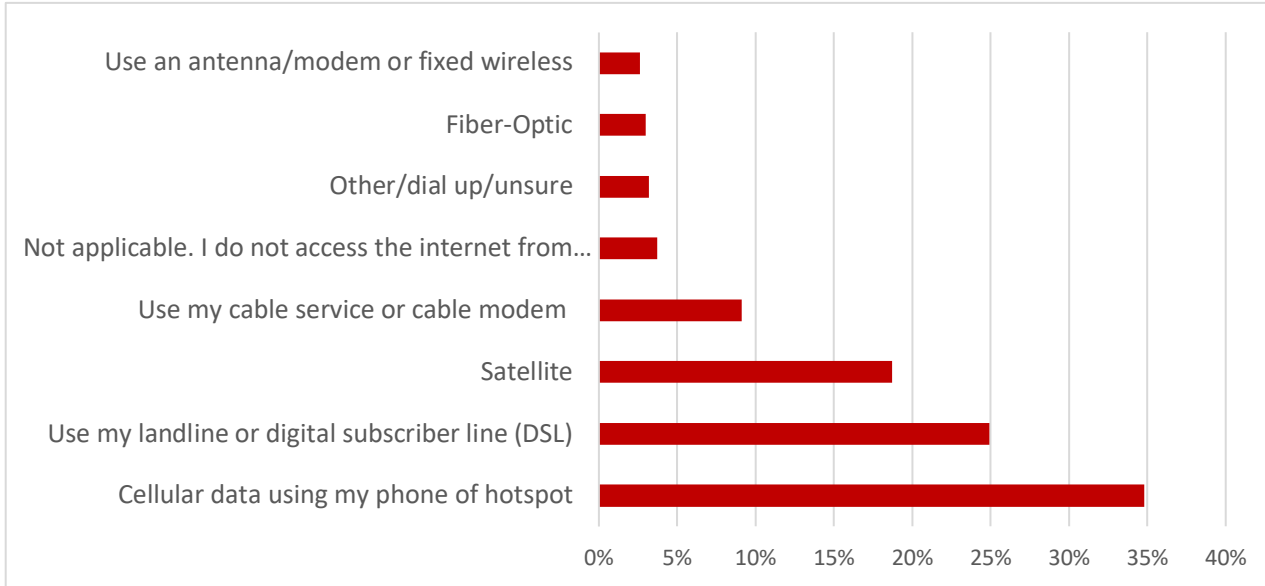
Other than broadband service being unavailable, cost was the number one factor that deterred respondents from subscribing to broadband service

How do you access the internet at home? (choose all that apply)

	Percentage
Cellular data using my phone or hotspot	34.8%
Use my landline or digital subscriber line (DSL)	24.9%
Satellite	18.7%
Use my cable service or cable modem	9.1%
Not applicable. I do not access the internet from home.	3.7%
Other/dial up/unsure	3.2%
Fiber-Optic	3%
Use an antenna/modem or fixed wireless	2.6%



Broadband Technologies Used by Survey Respondents



Who is your current provider for how you receive broadband internet services? (choose all that apply)

	Percentage
Frontier	26.4%
Verizon	13%
Spectrum/Charter	11.6%
Not Applicable. I do not subscribe to a monthly broadband service.	10.3%
Hughes Net	9%
ViaSat	8.3%
AT&T	7.4%
Other	7%
Cellcom	4.9%
Air Runner	1.3%
Net Pros	0.7%
US Cellular	0.13%

The most common "Other" internet service providers were Century Link and Dish Network



Is your monthly broadband internet service billed as part of a bundle (TV, phone, internet, etc.)?

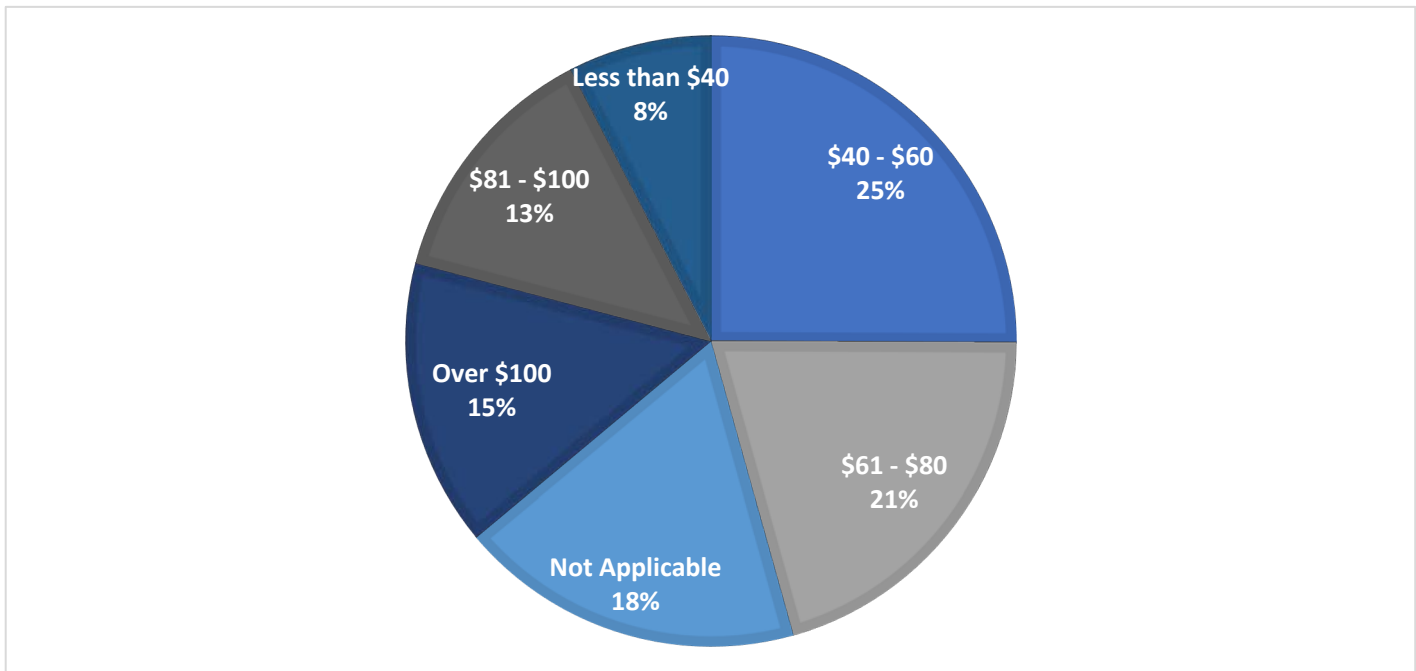
	Percentage
No	60.7%
Yes	38.3%
I don't know	1%

What is your monthly cost (not bundled cost) for only your broadband internet service? If your monthly cost increases based on use, please estimate your AVERAGE monthly cost

	Percentage
\$40 - \$60	25.1%
\$61 - \$80	20.6%
Not Applicable. I do not currently subscribe to a monthly broadband internet service.	18.3%
Over \$100	15.2%
\$81 - \$100	13.3%
Less than \$40	7.6%

Internet in Lincoln County is costly, over 28% of respondents paid more than \$80 per month to access the internet

Monthly Internet Cost





It is valuable to know the speed of your broadband services at your home or home-based business. If you are taking this survey on a computer at a location other than your home, not using your own broadband services, or completing this survey on your smartphone, please do NOT answer this question. What is the speed of your broadband connection?

	Count
Less than 10 Mbps download/1 Mbps upload	252
Less than 25 Mbps download/3 Mbps upload	193
Greater than 25 Mbps download/3 Mbps	48
Greater than 50 Mbps download/5 Mbps	81

Of the 574 complete responses to this question, 78% of respondents, or 445 households, did not have internet service meeting the FCC minimums standard for broadband service of 25 Mbps download, 3 Mbps upload

If you currently subscribe to broadband internet services, how satisfied are you with the service?

	Percentage
Not Applicable. I do not subscribe to broadband internet service.	24.5%
Moderately satisfied	18.7%
Extremely dissatisfied	18.2%
Moderately dissatisfied	13.7%
Slightly dissatisfied	9.9%
Slightly satisfied	8.6%
Extremely satisfied	4%
Neither satisfied nor dissatisfied	2.8%

41.4% of survey respondents indicated that they were dissatisfied with their internet service

If you are NOT satisfied (dissatisfied) with your broadband internet services, why? (select all that apply)

	Percentage
Service is too slow	29.8%
Service is inconsistent	25.1%
Service is too expensive	22.1%
Not applicable. I do not subscribe to broadband internet service.	15.3%
Other	7.7%



Including yourself, how many people in your home use (or would use if service were available) your home broadband internet services daily?

	Count
Children up to age 12	565
Teens – Ages 13 to 18	428
Adults – Ages 19 to 25	234
Adults – Ages 26 to 45	863
Adults – Ages 46 to 65	1188
Adults – Over 65	587

The average respondent household was comprised of 0.42 children under 12, 0.64 teens ages 13 to 18, 0.34 adults ages 26 to 45, 1.7 adults ages 46 to 65, and 0.9 adults over 65

Please indicate how frequently you use (or would use if service were available) your home broadband internet services to engage in each of the following uses:

Job search, apply for or advertise a job	Percentage
Never	43.6%
Sometimes	39.1%
Frequently	17.3%

The 1,362 survey responses represent internet access for over 3965 individuals.

Access resources for the management of my farm/business	Percentage
Never	51.8%
Sometimes	19.8%
Frequently	28.4%

Pay bills	Percentage
Never	4.5%
Sometimes	21.9%
Frequently	73.4%

Beyond the economic impact of business development and telecommuting, the internet is an important resource for daily activities, 56.4% of respondents would use the internet to look for a job, nearly half would go online for buying or selling a home, 95.3% to pay bills and 98% for shopping

Shop (Amazon, eBay, etc.)	Percentage
Never	1.9%
Sometimes	21.7%
Frequently	76.3%

Looking for OR selling a home	Percentage
Never	50.8%
Sometimes	39.6%
Frequently	9.6%



Access medical information/services	Percentage
Never	3.8%
Sometimes	39.7%
Frequently	44.1%

Telecommuting (work from home for your employer)	Percentage
Never	32.6%
Sometimes	21.5%
Frequently	46%

Home-based business	Percentage
Never	60.2%
Sometimes	18.9%
Frequently	21%

Gaming/video games/streaming movies and entertainment	Percentage
Never	8.9%
Sometimes	32.6%
Frequently	58.5%

School/Education/Homework/Coursework	Percentage
Never	27.6%
Sometimes	29.2%
Frequently	43.3%

Stay connected to family and/or friends	Percentage
Never	1.3%
Sometimes	22.8%
Frequently	75.9%

Other	Percentage
Never	24.6%
Sometimes	23%
Frequently	52.3%

There is a mental and physical health component to high-speed internet access, respondents would most frequently use broadband to stay connected to friends and family, purchase goods, and access telehealth services

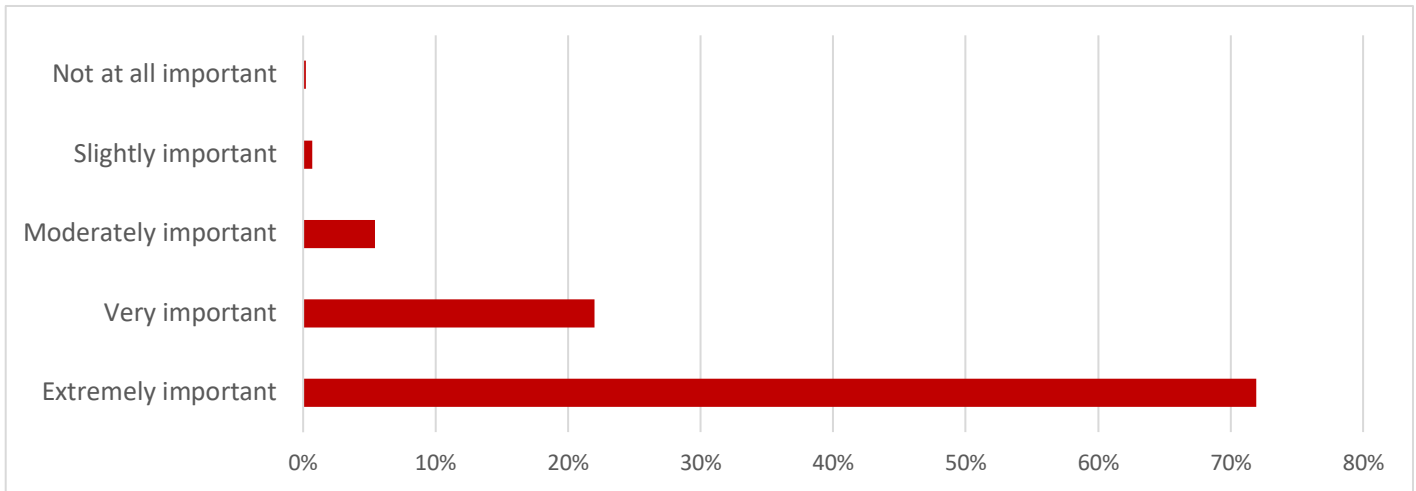


How important is high-speed broadband internet service to your home?

	Percentage
Extremely important	71.9%
Very important	22%
Moderately important	5.4%
Slightly important	0.7%
Not at all important	0.2%

94% of survey respondents indicated that access to broadband was either extremely or very important to their household

Importance of Broadband Access



How much per month would you be willing to pay for more than adequate broadband internet service? As a point of reference, the Federal minimum speed standards for adequate broadband internet services are 25 Mbps download and 3 Mbps upload. What would you pay for service better than the minimum speeds mentioned?

	Percentage
\$40 - \$60	34%
\$61 - \$80	28.7%
\$81 - \$100	16.3%
\$101 - \$125	7.1%
Over \$125	3.1%
I would not be willing to pay extra for increased broadband speed.	9.4%



Is there a minimum download/upload speed that you need to complete all your internet related tasks? Is there a download/upload speed that ideally you would want? (check all that apply)

NOTE: For any live TV streaming services like YouTube TV, Sling TV, Hulu, etc., a minimum of 10-25 Mbps download would be needed depending on how many devices are accessing high-definition content. If you were using multiple devices, 25-50 Mbps downloads or more would be potentially necessary. For streaming video services from Amazon Prime Video, Netflix, Disney +, etc., similar speeds would be necessary, and more if you want multiple devices using this same network for those services or others. It is important as well to consider the number of people in your household and all the devices which may be used in the house simultaneously.

The majority of survey respondents indicated that they needed at least 15 Mbps download/3 Mbps upload speeds, while they would like symmetrical 1,000 Mbps service

15 Mbps download/3 Mbps upload	Count
Need	376
Want	81

25 Mbps download/5 Mbps upload	Count
Need	440
Want	207

50 Mbps download/10 Mbps upload	Count
Need	301
Want	387

100 Mbps download (symmetrical download/upload)	Count
Need	112
Want	355

250 Mbps download (symmetrical download/upload)	Count
Need	42
Want	259

500 Mbps download (symmetrical download/upload)	Count
Need	29
Want	217

Bandwidth needs vary depending on use, streaming Netflix? 3 – 25 Mbps may be sufficient, however, HBO Max needs a minimum of 12 Mbps, a video conference with one individual uses significantly less bandwidth than a video conference with multiple participant videos. Each online use and connected device take bandwidth.



>1,000 Mbps download (symmetrical download/upload)	Count
Need	22
Want	206

Would you be willing to pay an installation fee (one-time) to have high-speed broadband internet services at speeds? A one-time installation fee, for example, could pay for the cost to run a fiber optic line (high speed data transmission line) to your home from the street. Or it could pay to install a utility pole with broadband internet equipment which would provide wireless high-speed broadband internet services to your rural location.

	Percentage
Maybe – depends on cost, etc.	64.2%
Yes	29.2%
No	6.7%

How much would you be willing to pay for a one-time installation fee to have high-speed broadband internet service to your home?

	Percentage
Up to \$100	50.5%
\$101 - \$250	23.6%
I would not be willing to pay a one-time installation fee	11.8%
\$251 - \$500	9.8%
\$501 - \$750	1.8%
\$751 - \$1,000	1.4%

Almost 30% of respondents would be willing to pay for infrastructure improvement to bring broadband to their rural area, another 64.2% would also be willing to do so, depending on cost

Please indicate if someone in your household telecommutes or has a home-based business:

	Percentage
Current Home-Based Business	28.7%
Future Home-Based Business	24.5%
Currently Telecommuting	43.1%
Future Telecommuting	51.3%

71.8% of respondents had a home-based business and/or were telecommuting

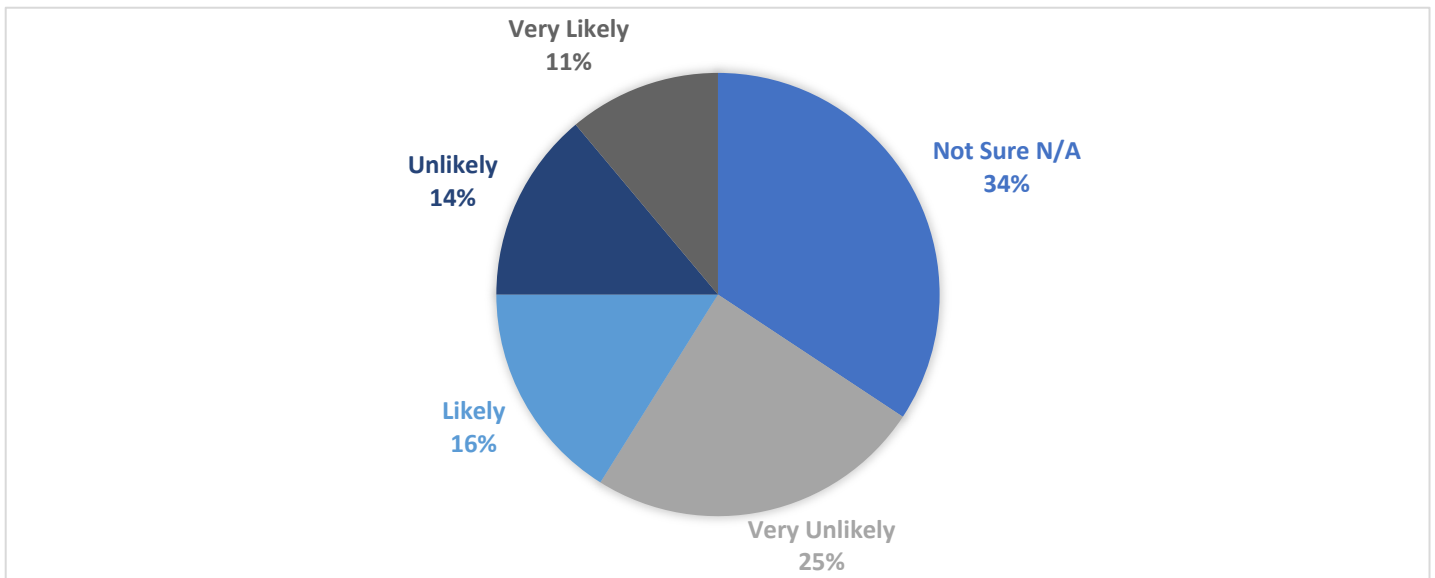


Would you be likely to start, move, or grow a business (including a home-based business) in Lincoln County if you had access to adequate, reliable and affordable broadband internet services?

	Percentage
Not Sure N/A	34.3%
Very Unlikely	24.6%
Likely	16.1%
Unlikely	13.9%
Very Likely	11.1%

Over 27% of respondents indicated that they were likely to start, move or grow a business if they had access to adequate, reliable and affordable broadband

Likelihood of Starting a Business with Access to High-Speed Internet



If you are involved in Agriculture, how valuable is having broadband internet services for your agriculture business?

	Percentage
N/A Not Involved in Agriculture	81.8%
Very Valuable	5.8%
Extremely Valuable	5.6%
Moderately Valuable	5.2%
Not at all Valuable	1.6%



If you are involved with Agriculture, please check all the boxes below that best describe how you use broadband internet services:

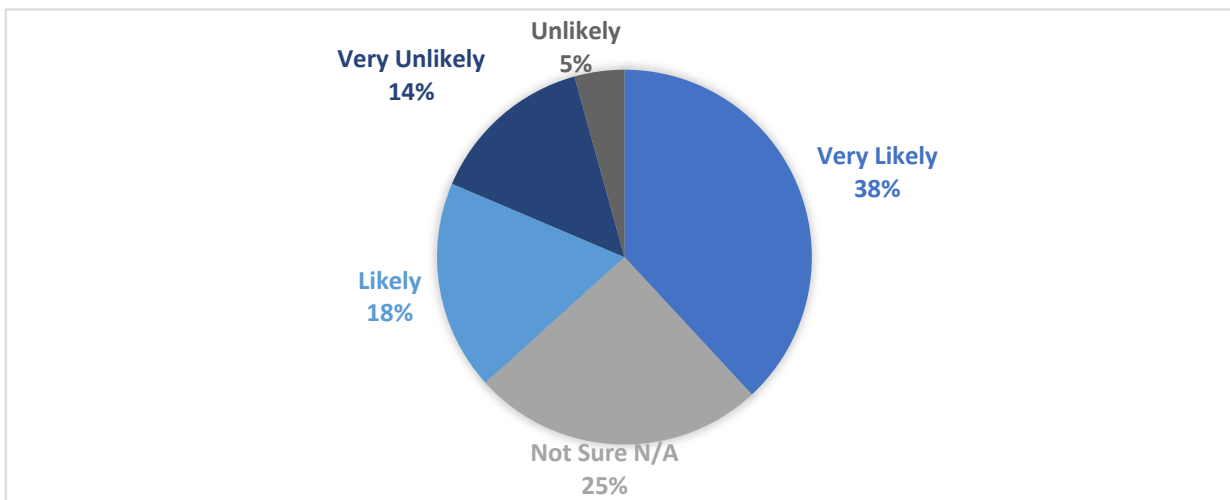
	Percentage
Not Involved in Agriculture	49.5%
Information	11.2%
Buying Products	11%
Agriculture News and Events	8.1%
Local Markets	7.9%
New Agriculture Technology	5.8%
GPS and Precision Ag	3.7%
Global Markets	2%
Other	0.8%

Of the respondents, 248 were involved in agriculture and 62.5% of them indicated that having broadband internet was very or extremely valuable to their agricultural enterprise

How likely would you be to telecommute from your Lincoln County address (if supported by your employer) if you had access to adequate, reliable, and affordable broadband internet services?

	Percentage
Very Likely	38.1%
Not Sure N/A	25.2%
Likely	18.1%
Very Unlikely	14.3%
Unlikely	4.3%

Likelihood of Telecommuting from Lincoln County with Access to High-Speed Internet





If you do not use broadband internet services for your home/farm business operation, why not? (check all that apply)

	Percentage
Not a business owner	52%
Service not available	28%
Too expensive	8.2%
Other	6.1%
I do not need it for my business	2.7%
Do not see any use for it	2.2%
No computer	0.8%

In what ways has the recent “safer-at-home” orders due to COVID-19 (Coronavirus), impacted the lives of the people living in your household? (choose all that apply)

	Count
No impact on my life or that of my family	350
Children struggled with home schooling due to poor or no access to broadband internet services	338
Adults telecommuting successfully with online access	337
Individual(s) unable to telecommute due to poor or no access to broadband internet service	330
Children home schools with successful online learning	228
Individual(s) lost work hours/pay from layoffs, cutbacks, and/or furloughs	222
Financially unable to pay all bills	89
Individual(s) lost their business	17

Any additional comments?

The top three comment subjects are summarized below, in order of the number of responses along the respective theme.

	Count
Difficulty working or learning remotely	126
Frustration with incumbent internet service providers	71
Inability to access telehealth services	15

Lack of broadband access can cause significant life changes, five respondents relocated due to a lack of high-speed internet access and three lost employment

Lincoln County Broadband Survey

**Help us expand broadband access in our community,
by completing the survey today!**

**[https://go.wisc.
edu/59rt4s](https://go.wisc.edu/59rt4s)**



For more information on how
survey data will benefit
Lincoln County, please visit:
<https://lincoln.extension.wisc.edu>



Extension
UNIVERSITY OF WISCONSIN-MADISON
LINCOLN COUNTY

**BROADBAND IS A
NECESSITY.
MANY LINCOLN
COUNTY RESIDENTS
DON'T HAVE
ADEQUATE ACCESS.**

**Please help Lincoln County
develop a comprehensive
understanding of existing
broadband infrastructure
and access by completing
the survey today!**

**If you can't access the
survey online, please
contact Lincoln County-
Extension at:
715-539-1072**





Lincoln County Broadband Access Survey

COVID-19 (Coronavirus) has changed the world we live in dramatically. Earlier this year, Safer-at-Home orders caused most of us to think differently, act differently, learn differently, conduct our daily lives differently, and work differently. One resource/service that has been in the spotlight as many of us have stayed at home, is **broadband internet access**.

Whatever your situation is related to broadband internet access, we know there are challenges and opportunities for improvement. Without reliable and affordable broadband internet, our communities will fall behind in attracting and retaining residents and providing quality jobs, and our kids will lack access to opportunities that other areas are building upon.

Lincoln County Government and Lincoln County-UW Madison Extension have been looking at options and potential solutions to our broadband challenges and are proactively moving forward on many fronts. To understand the needs, **we must have sound data about our situation as it exists now, and where we need improvements**.

The two main questions we need to address are what really exists in Lincoln County for access to broadband internet and how is the quality of that resource. That information is essential to moving forward with better options and new solutions. This data will be valuable as we apply for **grants**, look for other **partners and financial resources**, and develop plans to **attract existing and new broadband internet service providers to Lincoln County**.

Lincoln County, with the help of the **University of Wisconsin-Madison, Division of Extension**, is conducting this survey to collect data on the availability, use, and demand for broadband internet services. Results from this survey will help support efforts to expand and improve access and quality of broadband internet services in Lincoln County.

To have the most useful information, we are requesting your complete address. We promise we will not share your address publicly but will use it as a way of mapping the internet services for the County. Survey results will be reviewed and reported in a way that **protects your individual anonymity**. If you have questions about the survey, please visit our website at <https://lincoln.extension.wisc.edu/> contact us by email at melinda.osterberg@wisc.edu or by phone at 715-252-9459.

The survey will take approximately 15 minutes. **Please complete the survey by December 28, 2020**. We appreciate your time and the information you are sharing. **You can help make this change!**

*This survey was initially developed by Barry Hottmann,
Iowa County Community Development Educator with the University of Wisconsin-Madison.*

Understanding Broadband Terminology:

Broadband internet service is a form of high-speed internet access.

Wireless Broadband Internet Service: is exactly what the name implies: it is your high-speed internet access without cables or wires. The versatility of wireless internet has consumers demanding the service at an increasing rate.

Wireless Broadband Network: A term you may recognize in association with wireless broadband internet service includes wireless broadband network. A wireless network is a single broadband internet arrangement established for **your home or office**. It requires several pieces of equipment and requires you to subscribe (pay for) to the broadband services on a continual (usually monthly) basis. You cannot utilize your wireless broadband network and equipment without an ongoing broadband service. Together, the wireless devices and the broadband internet service make up your wireless broadband network.

Wireless Broadband Mobile: Wireless internet connectivity in cell phones is growing in popularity as well. Cell phones, and other devices featuring windows mobile applications, are now all being designed with advanced wireless technology. This allows them the ability to connect to a wireless broadband internet service within a broadband network, or to the internet via their own cellular phone network.

For the purposes of this survey, we want to know about your access/availability to a wired or wireless broadband internet service as part of a broadband network in your home. If you are utilizing a cell phone or other mobile broadband device (hotspots, etc.), we do NOT consider that to be subscribing (paying for every month) to broadband internet services.

This survey is for property you may own in LINCOLN COUNTY, Wisconsin. If you received more than one survey invitation in the mail, it means you own more than one tax parcel in Lincoln County. If this is the case, feel free to fill out the survey for each tax parcel (to the best of your abilities) as it pertains to broadband internet accessibility at that address location.



Please list your complete street address of your Lincoln County, Wisconsin property (accuracy of this information is important).

Please list the city or town where your Lincoln County, Wisconsin property is located.

Please enter the zip code of where your Lincoln County, Wisconsin property is located.

ACCESS TO BROADBAND INTERNET SERVICE

Which of these best describes your access to broadband internet at your home?

- I pay for a monthly subscription for internet services (this refers to a wired or fixed wireless solution).
 - I have access to broadband internet service at my house but choose to not pay for a subscription.
 - I do not have access to this type of service, but I do need internet access and I am able to have internet access as part of my cellular data plan using my phone or hotspot. (3)
 - I do not have access to broadband internet service at my house OR a reliable, affordable option for access.
-

If **you do NOT subscribe** (pay for) or have **NO access** to broadband internet service, why not?
(select all that apply)

- Service is not available where I live
- Service is too slow
- Concerned about online privacy
- I have no need
- Service is inconsistent or unreliable
- I use the internet somewhere else
- Service is too expensive
- Not Applicable, I subscribe to broadband internet service
- Other: _____

If **you do NOT subscribe** (pay for) to broadband internet service, what would it take for you to subscribe to broadband internet service? (more affordable, faster speeds, etc.)

Type and Cost of Broadband Internet Services

How do you access the internet at home? (choose all that apply)

- Cellular data plan using my phone or hotspot (Verizon, US Cellular, etc.)
 - Fiber-optic (Spectrum Enterprise, etc.)
 - Use my landline or digital subscriber line (DSL) (Frontier, etc.)
 - Use my cable service or cable modem (Charter, Spectrum, etc.)
 - Use an antenna/modem or fixed wireless (AirRunner, Net Pros, etc.)
 - Satellite (Hughes Net, Viasat, etc.)
 - Dial-up
 - Unsure
 - Other _____
 - Not Applicable. I do not access the internet from home.
-

Who is your current provider for how you receive broadband internet services (choose all that apply)?

Spectrum/Charter

Frontier

AirRunner

Net Pros

Hughes Net

Viasat

Verizon

At&T

US Cellular

King Street Wireless

Cellcom

Other _____

Not Applicable. I do not subscribe to a monthly broadband internet service



Is your monthly broadband internet service billed as part of a bundle (TV, phone, internet, etc.)?

- Yes
 - No
 - I do not know
 - N/A
-

What is your monthly cost (**not bundled cost**) for only your broadband internet service? If your monthly cost increases based on use, please estimate your AVERAGE monthly cost.

- Less than \$40
 - \$40 - \$60
 - \$61 - \$80
 - \$81 - \$100
 - Over \$100
 - Not Applicable. I do not subscribe to a monthly broadband internet service.
-

It is valuable to know the speed of your broadband services at your home or home-based business. If you are taking this survey on a computer at a location other than your home, not using your own broadband services, or completing this survey on your smartphone, please do NOT answer this question.

What is the speed of your broadband connection? If possible, we would like you to check your speed. Please go to your internet browser and type in www.speedtest.net. If you click on the hyperlink, please open the webpage in a new tab or previous survey answers will be lost. Then click on Begin Test. **Please note the download and upload speeds (the numbers will be followed by Mbps)**. Place the appropriate number in the corresponding boxes below.

- Download Speed _____
- Upload Speed _____
- Server (found under the speed information)

If you currently subscribe to broadband internet services, how satisfied are you with the service?

- Extremely Satisfied
- Moderately satisfied
- Slightly satisfied
- Neither satisfied nor dissatisfied
- Slightly dissatisfied
- Moderately dissatisfied
- Extremely dissatisfied
- Not Applicable. I do not subscribe to broadband internet service.

If you **are NOT satisfied (dissatisfied)** with your broadband internet services, why? (select all that apply)

- Service is too expensive
- Service is inconsistent
- Service is too slow
- Other: _____
- Not applicable. I do not subscribe to broadband internet service.

Use of Broadband Internet Services

Including yourself, **how many** people in your home use (or would use if service were available) your home broadband internet services daily?

- Children up to age 12 _____
 - Teens - Ages 13 to 18 _____
 - Adults - Ages 19 to 25 _____
 - Adults - Ages 26 to 45 _____
 - Adults - Ages 46 to 65 _____
 - Adults over 65 _____
-

Please indicate how frequently you use (or would use if service were available) your home broadband internet services to engage in each of the following uses:

	Never	Sometimes	Frequently
Job search, apply for, or advertise a job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access resources for the management of my farm / business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pay bills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shop (Amazon, ebay, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looking for OR selling a home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access medical information / services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telecommuting (work from home for your employer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home-based business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gaming / video games / streaming movies and TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
School / Education / Homework / Coursework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stay connected to family and/or friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please identify the digital devices that you currently OR would like to access the internet with from your home broadband internet network (or would access if service were available)? (check all that apply)

- Streaming device (Roku, Apple TV, Amazon Fire TV, etc.)
- Desktop or laptop computer
- Tablet / E-reader (Kindle, iPad, etc.)
- Smart TV
- Smartphone
- Gaming System (Xbox, Play Station, Nintendo, etc.)
- Household Security Devices (Nest, Ring, etc.)
- Other _____

Value of Broadband Internet Service

How important is high-speed broadband internet service to your home?

- Extremely important
- Very important
- Moderately important
- Slightly important
- Not at all important

How much per month would you be willing to pay for more than adequate broadband internet service? As a point of reference, the Federal minimum speed standards for adequate broadband internet services is 25 Mbps download and 3 Mbps upload. **What would you pay for service better than the minimum speeds mentioned?**

- \$40 - \$60
- \$61 - \$80
- \$81 - \$100
- \$101 - \$125
- Over \$125
- I would not be willing to pay extra for increased broadband speed.

Is there a minimum download/upload speed that you need to complete all your internet related tasks? Is there a download/upload speed that ideally you would want? (check all that apply)

NOTE: For any live TV streaming services like YouTube TV, Sling TV, Hulu, etc., a minimum of 10-25 Mbps download would be needed depending on how many devices are accessing high-definition content. If you were using multiple devices, 25-50 Mbps downloads or more would be potentially necessary. For streaming video services from Amazon Prime Video, Netflix, Disney +, etc., similar speeds would be necessary, and more if you want multiple devices using this same network for those services or others. It is important as well to consider the number of people in your household and all the devices which may be used in the house simultaneously.

	Need	Want
15 Mbps download / 3 Mbps upload	<input type="checkbox"/>	<input type="checkbox"/>
25 Mbps download / 5 Mbps upload	<input type="checkbox"/>	<input type="checkbox"/>
50 Mbps download / 10 Mbps upload	<input type="checkbox"/>	<input type="checkbox"/>
75 Mbps download / 15 Mbps upload	<input type="checkbox"/>	<input type="checkbox"/>
100 Mbps (symmetrical download/upload)	<input type="checkbox"/>	<input type="checkbox"/>
250 Mbps (symmetrical download/upload)	<input type="checkbox"/>	<input type="checkbox"/>
500 Mbps (symmetrical download/upload)	<input type="checkbox"/>	<input type="checkbox"/>
>1,000 Mbps (symmetrical download/upload)	<input type="checkbox"/>	<input type="checkbox"/>

Would you be willing to pay an installation fee (one-time) to have high-speed broadband internet services at speeds? A **one-time installation fee**, for example, could pay for the cost to run a fiber optic line (high speed data transmission line) to your home from the street. Or, it could pay

to install a utility pole with broadband internet equipment which would provide wireless high-speed broadband internet services to your rural location.

- Yes
 - Maybe - depends on cost, etc.
 - No
-

How much would you be willing to pay for a one-time installation fee to have high-speed broadband internet services to your home?

- Up to \$100
- \$101 - \$250
- \$251 - \$500
- \$501 - \$750
- \$751 - \$1,000
- More than \$1,000
- I would not be willing to pay a one-time installation fee

Business and Telecommuting Use of Broadband Internet Services

Please indicate if someone in your household telecommutes or has a home-based business:

	Yes	No
Current Home Based Business	<input type="radio"/>	<input type="radio"/>
Future Home Based Business	<input type="radio"/>	<input type="radio"/>
Currently Telecommuting	<input type="radio"/>	<input type="radio"/>
Future Telecommuting	<input type="radio"/>	<input type="radio"/>

Would you be likely to start, move, or grow a business (including a home-based business) in Lincoln County if you had access to adequate, reliable and affordable broadband internet services?

- Very Unlikely
 - Unlikely
 - Not Sure N/A
 - Likely
 - Very Likely
-

If you are involved in Agriculture, how valuable is having broadband internet services for your agriculture business?

- Extremely Valuable
 - Very Valuable
 - Moderately Valuable
 - Not at all Valuable
 - N/A Not Involved in Agriculture
-

If you are involved with Agriculture, please **check all the boxes below** that best describe how you use broadband internet services:

- Local Markets
 - Global Markets
 - Buying Products
 - Information
 - Agriculture New & Events
 - New Agriculture Technology
 - GPS and Precision Ag
 - Other: _____
 - Not Involved in Agriculture
-

How likely would you be to telecommute from your Lincoln County address (if supported by your employer) if you had access to adequate, reliable, and affordable broadband internet services?

- Very Unlikely
- Unlikely
- Not Sure N/A
- Likely
- Very Likely

If you do not use broadband internet services for your home/farm business operation, why not? (check all that apply)

- Do not see any use for it
- Service not available
- Not a business owner
- I do not need it for my business
- Too expensive
- No computer
- Other: _____

Additional Information As we look to find unique solutions to our broadband challenges in the rural landscape, we need your assistance. Please provide the following information so that we can develop an accurate summary of Lincoln County's broadband environment.

In what ways has the recent “safer-at-home” orders due to COVID-19 (Coronavirus), impacted the lives of the people living in your household? (choose all that apply)

- Individual(s) lost their job (if so, how many lost their jobs in your house)
- Children home schooling with successful online learning
- Children struggled with home schooling due to poor or no access to broadband internet services
- Individual(s) lost their business
- Individual(s) lost work hours/pay from layoffs, cutbacks, and/or furloughs
- Adult(s) telecommuting (work from home) successfully with online access
- Individual(s) unable to telecommute (work from home) due to poor or no access to broadband internet services
- Financially unable to pay all bills (rent, mortgage, groceries, car payment, etc.)
- No impact on my life or that of my family

Any additional comments?
