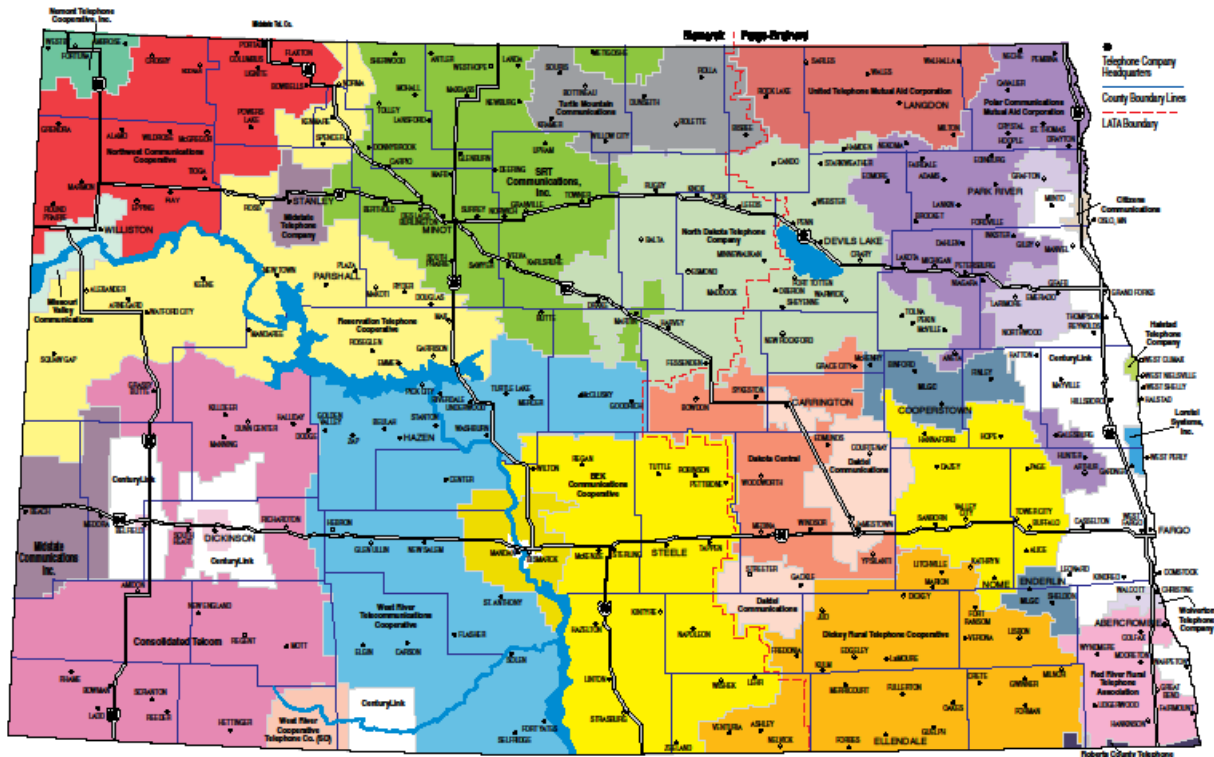


BAND

broadband association of north dakota

BAND North Dakota Telephone Exchange Areas

broadband association of north dakota



UNSERVED BROADBAND LOCATIONS IN NORTH DAKOTA



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NORTH DAKOTA LEGISLATURE

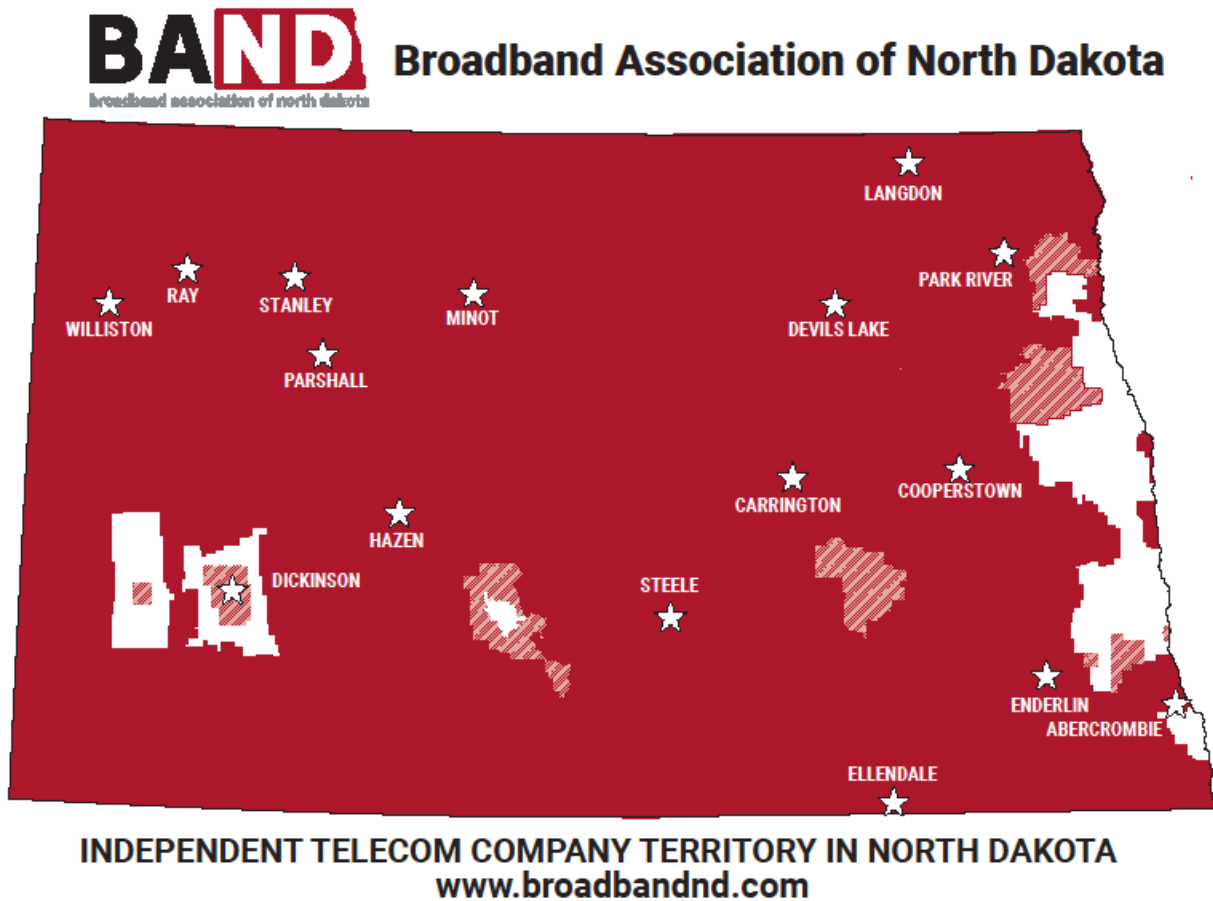
OCTOBER, 2021

**DAVID CROTHERS
BROADBAND ASSOCIATION OF NORTH DAKOTA**

My name is David Crothers with the Broadband Association of North Dakota. Members of the Association provide broadband service to over 124,000 North Dakotans in every county of the State, employ over 1,000 and invest between \$80 and \$100 million

North Dakota is unique among rural States in this nation because of the high percentage of rural residents who have access to high-speed Internet. Where other States have not seen investment in rural areas by broadband companies, North Dakota has been the exception.

The reason for the disparity, in BAND's opinion, is the high percentage of the State's geographic territory served by locally owned companies. They invest in their communities, their subscribers, their employees, and themselves. Those companies believe they will only be as successful as the people they serve. Broadband Association of North Dakota members serve the area in North Dakota shown in red in the map below.



However, there are still areas of the State without broadband, and it is very likely the people who live there will never have it without strong financial assistance to build out the infrastructure necessary to deliver the quality high-speed Internet that most of us in North Dakota take for granted. Those locations...and residents...that don't have broadband are among the most rural with the fewest people per square mile and most expensive to connect.

In North Dakota, the Broadband Association of North Dakota has identified the number of unserved locations below and the estimated cost of building out a quality broadband connection to those families and small businesses.

<u>COUNTY</u>	<u>UNSERVED LOCATIONS</u>	<u>ESTIMATED COST</u>
Barnes	295	\$ 4,277,500
Billings	292	\$ 8,652,186
Burke	233	\$ 1,593,697
Burleigh	15	\$ 365,730
Cass	1,615	\$10,993,000
Divide	44	\$ 1,184,618
Dunn	291	\$ 1,642,179
Grand Forks	663	\$ 9,700,000
Grant	56	\$ 1,512,000
McKenzie	74	\$ 688,413
McLean	192	\$ 1,083,846
Montrail	943	\$ 5,320,982
Morton	31	\$ 278,785
Ransom	37	\$ 536,500
Richland	460	\$ 980,000
Stark	140	\$ 3,819,900
Sioux	44	\$ 1,188,000
Steele	175	\$ 2,783,500
Traill	942	\$10,876,000
Walsh	256	\$ 3,577,344
Williams	562	\$ 7,239,000
TOTAL	<u>7,360</u>	<u>\$78,293,180</u>

One of the many lessons the pandemic taught Americans is that access to broadband is not a luxury, it is a necessity on par with having electricity and clean water. One literally cannot access the economic and educational opportunities the 21st century offers us without having a physical connection to a high-speed Internet network.

There is a very good reason those areas of North Dakota and the people who live there do not have access to broadband: it is stunningly expensive to bring it to them. It costs between \$18,000 and \$25,000 per mile to lay the fiber optic cable that is necessary for them to have the network they need today and will last into the future. There is simply no business case for private industry to spend tens of thousands of dollars to build out an Internet connection to rural locations...and people...and then charge them \$60 a month. For private industry, it isn't a question of whether serving those rural residents will be profitable, it is simply a money losing proposition from the start. Those companies will never recover their investment, much less ever see a return on it.

The question, of course, is "where does the money come from?" to build out to these low-density, high-cost areas. Places where just not very many people live. States have taken a variety of approaches.

Until the American Rescue Plan Act passed by Congress was adopted, States were appropriating monies out of their general revenues to State agencies to administer cost-share programs for private companies. Both Minnesota and South Dakota have done this for at least the last 5 years. The same approach was used by 37 other States. North Dakota has never adopted similar programs.

There have also been a variety of Federal programs administered by the U.S. Department of Agriculture, Federal Communications Commission or National Telecommunications and Information Administration. For whatever reasons, the unserved areas in North Dakota are ineligible or the technologies funded do not offer a reliable connection to customers. For them, being able to get Internet depends on the weather or trees around their location or having to share wireless capacity with their neighbors.

There is no one in the nation who doesn't think every person in America shouldn't have an Internet connection. The debate has always been whether to do it on the "cheap" with less reliable delivery methods like fixed wireless and satellite or whether to fund a quality network that is more expensive but will meet the future needs of rural North Dakotans and be in existence for half of a century.

The U.S. Treasury Department has written rules for States receiving ARPA pandemic money. Those specifically addressing broadband are found in a publication called "Guidance for the Coronavirus Capital Projects Fund. There is a copy of the guidelines attached.

The guidelines specifically include three permissible uses for the \$113,276,228 that North Dakota will receive from the Capital Projects Fund portion of ARPA. They are:

1) Broadband Infrastructure Projects

- Requires eligible projects to be designed to provide symmetrical download and upload speeds of 100 Mbps.
- Treasury encourages the State of North Dakota to focus on projects that will achieve last mile connections.
- North Dakota is encouraged to fiber-optic infrastructure.
- North Dakota is encouraged to direct dollars to households and businesses that do not have a wireline connection today that reliably delivers 100 Mbps download speeds and 20 Mbps upload speeds.

2) Digital Connectivity Technology Projects

- Permits the State to purchase and install devices and equipment to facilitate broadband access where affordability has been identified as a barrier to broadband adoption and use.

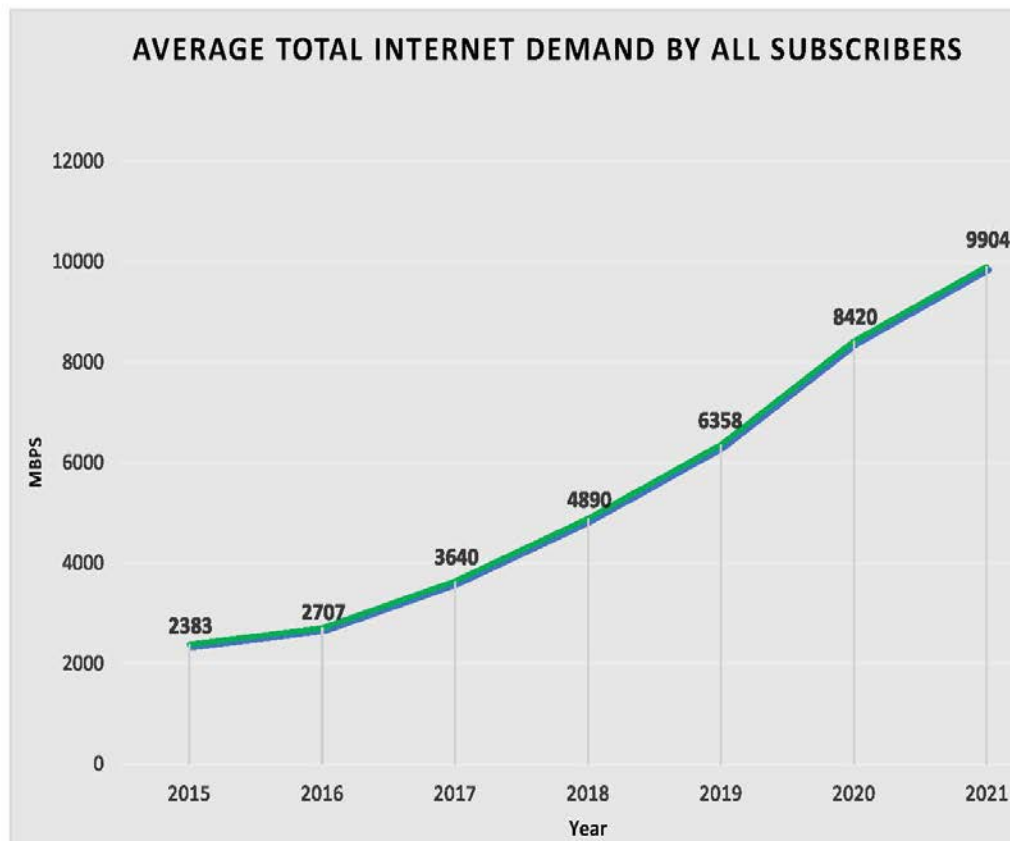
3) Multi-Purpose Community Facility Projects

- Construct or improve buildings designed to jointly and directly enable work, education and health monitoring.
- Examples are: Community schools, libraries and community health centers.
- Public must be able to access computers with high-speed internet service.

The U.S. Treasury rules issued in September specifically direct States to short-term solutions such as inferior speeds and technologies. The rules state the money should only be used only on projects that are "scalable" to provide 100 Mbps "symmetrical" download and upload speeds. What that means is the Federal government wants to fund networks that can add capacity and speed in the future as customer use of bandwidth increases.

Customer usage and increased capacity demand on the network are very real issues that illustrate the need for all North Dakotans to have access to a high-quality broadband connection. Let me give you one example from one rural North Dakota company and how much more bandwidth its customers are using every single year.

Year	2015	2016	2017	2018	2019	2020	2021
Mbps	2383	2707	3640	4890	6358	8420	9904



The company has literally seen customer usage grow 100 percent every year for the last 5 years. Other North Dakota rural companies have seen similar growth and demand. It is the result of more people taking advantage of telework options; educational opportunities increasingly moving online; medical providers directing patients, especially the elderly and those seeking mental health counseling, to video appointments for their care, and entertainment options. Additionally, those in the agriculture community need a fiber connection to transport the tremendous amount of data generated by farmers and precision agriculture. 5G will never be available in areas that do not have fiber optic transport.

Only a fiber optic network has the ability to accomplish what the Federal government demands. Those companies with a fiber optic network meet the increased need for speed and capacity by users by changing the electronics on either end of the fiber. Wireless delivery...either fixed wireless or satellite...will always be limited to the amount of spectrum the provider has been allocated or an unlicensed portion that is subject to interference.

The Broadband Association of North Dakota recommends the Legislature appropriate \$60 million to the State's Information Technology Department and direct the agency to establish and administer a competitive bidding program to build a future-proof, state-of-the-art backbone, and distribution network to the high-cost areas of the State that provides residents in those areas have access to at least 100 Mbps symmetrical broadband service. The agency has the knowledge, expertise, and access to the best practices from other States that have adopted similar programs.

It is also the Association's recommendation that funds should not be expended in areas with less than 100 Mbps symmetrical capability, but the State Information Technology Department determines that market conditions will eventually lead private providers to provide that level of service in the area within the next three years.

Finally, the Association believes that \$60 million will not be sufficient to fully deploy the necessary infrastructure to all North Dakotans. Most States creating "broadband funds" to urge private providers to bring broadband to unserved areas have created "grant/match" programs with the State agency using a formula that usually begins at a 50/50 formula. As noted earlier, some of the rural areas in North Dakota are so expensive to serve and the opportunity to earn a return that companies will not commit to building out to areas with less than a 75 or 80 percentage "grant" portion of the award. A more realistic number is likely in the \$80 million to \$100 million range. However, adoption of the \$60 million figure will likely allow for the build-out to many high-cost areas with the consequence of the agency running out of money before all identified locations can be served.

The Association believes that everything North Dakota wants to be in the future depends on having a state-of-the-art, high-speed fiber optic network that will last for decades. The Association also believes the time...and opportunity...to do it is here. The Federal American Rescue Plan monies quite likely are a once in a lifetime opportunity that specifically envision ubiquitous broadband access for all Americans and ask legislatures to make that dream come true.