



2017 Smart Rural Community Nomination Form

Marquette-Adams Telephone Cooperative, Inc.
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1. Provide the population and size (square miles) of your service area.

Prior to our fiber expansion in 2011, our service area consisted of 192 square miles. Our territory now measures approximately 518 square miles, with an estimated population of 17,600 residents, more than doubling our geographic footprint over a period of six years. To date, we have 1,343 miles of buried fiber-optic cable.

2. Describe the type and capacity of broadband service provided (if broadband is provided over multiple platforms, describe the capacity for each platform), including any specific residential or business offerings. Describe any special or unique challenges your company addressed in providing these services (10 points).

Our broadband network is 100 percent fiber-to-the-premise. We currently offer up to one gigabit per second to both commercial and residential customers with no data usage limits, but are capable of providing faster speeds if necessary. In November 2016, NTCA certified us as a Gigabit Capable Provider. Transitioning to 100 percent fiber was a unique challenge for our cooperative. In 2011, through a federal grant award, we began expanding our fiber infrastructure to new territory in a successful effort to reach rural consumers who had limited high-speed Internet options. Our goal was to connect new subscribers to our state-of-the-art network while simultaneously transitioning our existing copper customers to a fiber infrastructure. Over the next four years, our dual effort involved overcoming financial, organizational, and personnel challenges that required an advanced level of departmental and cooperative-wide synergy. In June of 2016, we reached our goal of becoming a 100 percent fiber network while nearly doubling our membership, making it one of our greatest achievements in our 65 years as a cooperative.

3. Describe major industries or anchor institutions in your area; these may include public utility, commercial, government, education, healthcare and not-for-profit organizations. Describe any special or unique challenges confronting these users and how broadband has enabled users to meet those challenges. These may include economic, demographic, regulatory or other (15 points).

Holiday Shores Campground & Resort is a 205 acre seasonal campground offering over 600 campsites and rental cabins. For 43 years, owners Alice and Frank Ward have managed the business, now employing three generations of family and up to 50 staff members during peak season. As one of 16 campgrounds surrounding Wisconsin Dells, Wisconsin's premier tourist destination, Holiday Shores must remain constantly competitive in its efforts to attract and retain guests. Marquette-Adams' broadband service has been the key to attracting tourists who are seeking a relaxing getaway without sacrificing their ability to connect with the outside world. Overcoming obstacles like dense foliage and graded terrain, we installed a state-of-the-art system of 17 wireless access points throughout the campground, delivering Holiday Shores a meshed wireless network with a connection speed of one gigabit, as well as providing a large user capacity, broad coverage area, and requiring little maintenance. Guests simply connect to the network through a digital kiosk that allows them to purchase usage in timed increments. This hands-off approach has allowed Holiday Shores' staff to focus on providing visitors the best Wisconsin has to offer, while we ensure that everyone stays connected.

Located in the small town of Friendship, Wisconsin, Moundview Memorial Hospital & Clinics is a non-profit, 25-bed critical access hospital that has been meeting the healthcare needs of rural residents since 1959. It is the largest medical center within our service territory, and began subscribing to our

broadband and voice line services in early 2017. A significant challenge Moundview faces is maintaining a constant broadband connection without the risk of service interruption. To assure continuity, we engineered and constructed a redundant fiber network to their facility, guaranteeing a backup connection that will take over seamlessly during a primary network outage.

Moundview Memorial, along with another large medical facility, Divine Savior Healthcare, both have satellite clinics that also subscribe to our broadband. Their ability to extend branches to less populated areas provides rural residents easy access to high-quality healthcare in close proximity to home. These clinics use our broadband for myriad applications including telemedicine, electronic patient record keeping, and communication with other healthcare facilities.

Allied Co-op, a large farmers' cooperative with 12 Wisconsin locations, provides farmers all over the state with products and services including agronomy, feed, grain, LP and refined fuels, auto parts, tires and hardware. Subscribing to Marquette-Adams' services at the main office in Adams has allowed Allied to use advanced precision agricultural technology. For example, our broadband enables them to capture satellite imagery of farm acreage, which is then used to determine nutrient and pest levels to create a layered map of consolidated data. The information can then be used to create unique recipes for fertilizers and seeds.

4. (a) Explain whether broadband played a role in the recruitment, retention, or expansion of commercial, government, or not-for-profit industries in the area (15 points).

Nelson & Pade, Inc. is an aquaponics systems manufacturer that has been in operation since 1984. In the early 2000's, the owners considered relocating the business to Marquette County, where they were seasonal residents. However, the level of connectivity essential to their daily operation was not available until Marquette-Adams expanded broadband coverage to the area. Becoming a member of our cooperative in 2014 gave Nelson & Pade the tools to not only move the operation to central Wisconsin, but also to thrive in a rural environment, contributing to local and regional economic growth.

Aquaponics is a form of agriculture that combines recirculating aquaculture (raising fish in tanks) with hydroponics (soilless plant culture). In aquaponics, the nutrient-rich water from raising fish provides a natural fertilizer for plants, and plants in turn assist in the purification of water for re-use by the fish. Not only is the use of aquaponics a sustainable and efficient way to raise fresh fish and produce, it is also free of pesticides, herbicides and growth hormones. And with year-round climate control, production is not limited by season.

Through the use of our broadband, Nelson & Pade's owners have the ability to remotely observe all of the environmental variables in their greenhouse, whether from the fabrication shed next door or their vacation home in Florida. An Internet-based monitoring system measures specific data, including water temperature, pH levels, dissolved oxygen, and air flow, and will automatically alert the staff should the readings show any irregularities.

In partnership with the University of Wisconsin-Stevens Point (UWSP), Nelson & Pade offers the world's first Introduction to Aquaponics course for valid credit, broadcasted primarily online. The Aquaponics Innovation Center, also created in conjunction with UWSP, has six identical research environments with a direct data feed to campus, all dependent on our broadband. Along with educating UWSP students

through distance learning, Nelson & Pade offers a master course via online video conferencing, which has educated prospective clients from over 102 countries on the science of aquaponics.

We are proud that the expansion of our broadband has made it possible for an innovative, environmentally forward company such as Nelson & Pade to make its home in rural Marquette County. It has created 22 full time jobs, and maintains a community connection with other local businesses and area schools through the provision of fresh fish and produce.

(b) Describe other positive local or regional economic or social impact generated by your firm's broadband offerings, and how your efforts contemplate and plan for future growth and sustainability. Include both quantitative and qualitative information (30 points).

As a cooperative in rural Wisconsin, we have a special appreciation for the communities we serve. There is no better setting for families, friends, neighbors and businesses to connect than the local events that are woven into the fabric of our culture. For 65 years we have enthusiastically participated in these events, from parades to pot lucks, and holiday celebrations to village festivals. As the premier broadband provider in Marquette and Adams counties, it was an obvious progression to offer our state-of-the-art broadband service in a wireless capacity at these events, modernizing a lasting tradition.

The method through which we provide complimentary wireless broadband to all event attendees involves the use of a 10 gigabit fiber backbone network feed to a wireless access point that can then be used to broadcast Wi-Fi to additional access points. The number of access points is dependent on the geographic area, which means we can accommodate an event of any size.

To date, we have provided free wireless broadband connectivity at more than 15 events in six communities throughout our serving area. Participating businesses now have the ability to make electronic sales, offer real-time promotions and communicate with their customers online. Guests are also able to share photos and live stream video to promote the event on social media. Positive feedback has encouraged us to not only continue providing broadband at existing events, but also to research new venues to provide wireless service in the future.

Each year, Cooperative staff members travel to high schools in our service territory to participate in a program designed to prepare youth for the reality of adult responsibilities. In the simulated "reality" environment, students must make budgeting decisions regarding monthly expenses such as mortgages, insurance, and of course, telecommunications service. It provides us a perfect opportunity to get to know our future subscribers and educate them about the important role that broadband will play in their everyday lives. Over a five year period, our staff has informed over 1000 students of our cooperative's values and the benefits of our broadband service, keeping us at the forefront of future customers' minds.

(c) Describe the impact of your efforts on the internal culture of your company (10 points).

Since the completion of our transition to 100 percent fiber, our staff has become more involved in the customer education process. They understand the importance of explaining what broadband means for each individual customer, and have become adept at matching that subscriber with the package that best suits their needs. This has involved in-house and specialized training, as well as the modernization of some procedures, materials, and policies. As a cooperative, we take our role as a technology authority

very seriously, and make it our mission to positively represent Marquette-Adams, whether at the office or out in the community.

5. Describe joint or collaborative undertakings with other community stakeholders, and your community leaders' collaborative efforts to promote and stand behind broadband technology. Include a description of these leaders' roles in industry or government (15 points).

In recent months, Marquette-Adams has collaborated closely with another local utility, Adams-Columbia Electric Cooperative. We were approached by their CEO in hopes that we could provide a robust, high-speed Internet connection to their main facility in Friendship, as well as a private network connection to some of their substations throughout central Wisconsin. We developed a cost effective solution to provide not only broadband, voice line, and long distance service at their main office, but also a dedicated network to the substations.

An interesting facet of this collaboration with Adams-Columbia was their goal to also have dedicated fiber networks at additional substations outside of our territory. We agreed to act as a consultant by facilitating agreements between Adams-Columbia and three other local telecommunications providers in the interest of ensuring a reliable connection to these facilities. These dedicated fiber networks will provide greater security and a reliable connection, allowing for more effective equipment monitoring.

6. Provide additional information that would be useful in determining whether your community is a Smart Rural Community (5 points).

We provide not only superior broadband, but also voice line service, long distance, IPTV, Video on Demand, and 4K Ultra High Definition programming. Our cooperative roots run deep in the community, and spread to four municipalities and volunteer fire departments, as well as five schools. We are also proud to provide our entire suite of services to the region's largest employer, Brakebush Brothers Inc., the official chicken supplier of the Green Bay Packers.

Marquette-Adams Telephone Cooperative remains dedicated to providing our membership with the best available technology, service, and support while still focusing on future growth of not only our cooperative, but also the communities we serve. Thank you for considering our application.

Nelson Pade®

The Most Trusted Name in Aquaponics®

Dear NTCA Smart Rural Community Committee,

June 22, 2017

My name is Rebecca Nelson, co-founder and co-owner of Nelson & Pade Inc., a growing company located in Montello, WI. Our company helps people get started and become successful in aquaponic food production, which is an integrated system for raising fish and vegetables. On a daily basis, we communicate with people around the world about aquaponics. To date, we have had people from 102 countries attend our Aquaponics Master Class and we have shipped our Clear Flow Aquaponic Systems to customers in 27 countries.

Thanks to fiber broadband service from Marquette-Adams, our company has a global reach while being located in a small, rural community.

Marquette-Adams broadband helps us manage our controlled environment facility as well as create distance learning opportunities. The high-speed Internet connection allows us to monitor our greenhouse environment with streaming data and live video, from anywhere in the world. Our company utilizes a VOIP phone system and embraces video conferencing to tie our team members and customers together for live communication. We have offered remote video training programs and real-time video tours. The fiber broadband from Marquette-Adams makes all of these things possible.

A unique aspect of our business is our partnership with the University of Wisconsin-Stevens Point. In the UWSP Aquaponics Innovation Center located on our business campus, there are six identical research environments set up for UWSP students with a direct feed to campus thanks to Marquette-Adams Internet service. Thanks to our partnership with UWSP, it now offers the first ever Introduction to Aquaponics course for valid college credit.

Without Marquette-Adams' broadband, we would not have the tools to perform the necessary functions of our business. We are proud to be members of the Cooperative, and enjoy being a part of something that has such a positive impact on not only the businesses in the area but also the community.

Thank you,

Rebecca Nelson



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Dear Award Committee,

I'm Alice Ward, and my husband Frank and I own Holiday Shores Campground & Resort in Wisconsin Dells, Wisconsin. We are excited to share our experience with Marquette-Adams Telephone Cooperative in hopes that you'll recognize their commitment to preserving local business and tourism.

We became cooperative members in 2014, through our subscription to voice line, high speed Internet and television services in the main staff buildings on our property. We knew it would be important to provide high speed Internet to our guests as well, but faced issues like uneven and wooded terrain in a rural area where we didn't have many provider or service options.

Marquette-Adams developed a unique solution to our problem involving the use of wireless access points throughout the campground, making it possible for our guests to use wireless high speed Internet anywhere on the grounds. With over 600 campsites on 200 acres, it is amazing to us that our visitors have online access at any time, from anywhere. Our guests love staying connected when they are on vacation, and it brings more business to the resort. The service attracts professional guests who wish to enjoy their stay while remaining available to work if necessary.

Marquette-Adams built this innovative wireless network by installing wireless access points throughout the resort, using buildings, trees and poles. They went above and beyond to find the best locations for the access points, even moving them when foliage obstructed the signal. Their technicians also installed our surveillance camera system and connected the devices to their broadband service so our employees can view resort activity from their phones and computers.

One of the best things about being a member of Marquette-Adams Telephone Cooperative is their local technical support. Their technicians are always available when we have questions, and can arrive in what seems like a moment's notice if we need assistance. It's reassuring to have such reliable local service from a cooperative that truly cares about the success of our business. They are very deserving of this award.

Sincerely,



Alice Ward

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