

# The Nodak Neighbor

July-August 2012

Official Publication of Nodak Electric Cooperative

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Your Touchstone Energy® Partner



*Cover Story:*

**Devils Lake East Outlet**

Pages 4-5

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Official Publication of the  
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**On the cover:** Construction on the new Devils Lake East Outlet was completed in June. The outlet, which receives its power from Nodak, is an important step toward easing flood concerns in the area. Read full story on pages 4 and 5.

# Helping Minot

A skilled and ambitious assembly of electric cooperative employees accomplished the complete rewiring of Minot's Oak Park in just one day.

The group consisted of roughly 60 electric cooperative employees from 14 co-ops located throughout the state. Wade Haman, journeyman lineman for Nodak's Hillsboro crew, volunteered his skills. Haman's family is from the Minot area, and helping rebuild the park was the neighborly duty.

A majority of the workers were either line workers or electricians. Workers rewired the park's buildings, picnic shelter, band shelter and 59 electric pedestals that are used each winter for the Sertoma Club's Christmas in the Park fundraiser. The park was inundated with 10 feet or more of water in places at the peak of last year's flood on the Souris River. The work done by the cooperatives was completed in one day. The city goal was to get Oak Park revitalized to have at least one major park for children and families to visit this summer. *Source: NDAREC*



Wade Haman  
Journeyman Lineman

# Midstokke promoted to district crew foreman

Scott Midstokke has accepted the position of district crew foreman of the Michigan crew this month after the retirement of Russ Baker.

Russ retired from Nodak as district crew foreman with 34 years of service. Scott started in 1988 with the former Sheyenne Valley Electric Cooperative, and continued his employment with Nodak following the merger in 2000. Congratulations to both Russ and Scott.



Russ Baker



Scott Midstokke



- Nodak Electric member, Summers Manufacturing, featured in *North Dakota Living*!
- Go to [www.nodakelectric.com](http://www.nodakelectric.com) to read this *North Dakota Living* article.

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*Mylo Einarson  
President & CEO*

# Reliability is a top priority

**D**ecades have passed since electric cooperatives brought light to the rural parts of North Dakota. In the mid-1930s, nine out of 10 rural homes in America were without electricity. By 1953, more than 90 percent of U.S. farms had been electrified. That was a long time ago, and as every day goes by, fewer and fewer members remember what it was like when the electric cooperative improved their lives by bringing light to the farm. It meant they no longer had to depend on kerosene lamps and woodstoves to accomplish daily tasks.

In this bygone era, members were grateful that they were able to get service from an electric cooperative and had certain expectations about price and reliability. Today, those expectations are decidedly different. Today's member not only expects the lights to come on when they flip the switch, they expect the power to stay on so electronics, computers and high-tech devices work properly. This expectation we believe is very reasonable.

A high level of reliability is one of the main objectives cooperatives strive for in today's market. Outage minutes are tracked and statistics with acronyms like SAIDI (system average interruption duration index) and ASAI (average service availability index) are used to compare system performance with expectations. When we compare Nodak's ratios to other cooperatives in the U.S., we fare very well in these areas. Last year, our average member saw service disruption for 107 minutes out of a total of 525,600 minutes available in the year. This is less than half of the

average interruption of 230 minutes other cooperative members across the U.S. saw last year.

Looking at it a little differently, our members had power available to them 99.98 percent of the time (ASAI), which places Nodak among the highest performing one quarter of U.S. cooperatives. That statistic in itself is something to hold out as a success story, but when you look at it a little deeper, the significance is apparent.

It's important to first think about what causes disruption in service. Most frequently, outages are caused by things like trees contacting a power line, wildlife getting somewhere they shouldn't be, equipment failure, storms, etc. The co-op's exposure to these kinds of disruptions is proportional to the number of miles of line we have, the age of our system and how well the system is maintained.

At the end of last year, Nodak had 7,932 miles of power line in service. Out of the 814 electric cooperatives in the U.S., Nodak ranked No. 40 in terms of total number of line miles. The median value for all U.S. cooperatives was only 2,602 miles, or roughly one-third as many as

Nodak. With more than three times as much line exposed to the elements as the average cooperative, one could assume that our service interruption would be much higher than average, yet it was less than half.

I don't point this out to boast about Nodak or pat ourselves on the back. I bring it up to show that we take the issue of reliability very seriously and despite the enormity of the task at hand, we do a pretty decent job of keeping the lights on as compared to other electric providers.

Our reliability track record is something we are proud of, but it is an area where we continue to strive for improvement. Service interruptions can be just a nuisance for those of us who have to reset a digital clock now and then, or they can be something very serious for someone with a medical condition or a business with sensitive computer-driven machinery. All these are reasons we work hard to deliver power with a reliability level that meets our members' expectations.

Some interruptions are largely beyond our control, so there's not much we can do but keep our fingers crossed hoping Mother Nature will be kind to us. What we can do is continue to commit resources for maintenance and constantly improve our system to minimize the outages we can do something about. That is something we will do.

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# Power at the pump

## *Nodak, Minnkota help battle rising water at Devils Lake*

In the last two decades, the stories around Devils Lake have become painfully familiar. The family that lost its home. The farmer who lost his land. The communities that have nearly lost hope.

Devils Lake flooding has distressed locals since 1993, swallowing thousands of acres and nearly a billion dollars along the way. The lake has risen roughly 31 feet since the 1990s, and now covers more than 211,300 acres.

The slow-paced disaster requires a quick response. Nodak Electric Cooperative and Minnkota Power Cooperative, our wholesale power provider, were on the front lines this

spring delivering power to a project that aims to help stabilize the area.

Minnkota constructed 10.5 miles of 69-kilovolt (kV) transmission line and a 7,500 kVa (kilovolt-ampere) substation, known as Minco, to power the new Devils Lake East Outlet pumping station. The facilities will allow Nodak to serve the load.

In recent years, rising water near Devils Lake and the adjacent Stump Lake has required numerous changes within Nodak's

transmission system, and caused even more headaches for engineers and crews. But familiarity with the area proved helpful in completing the project in a matter of months.

### Quick to the site

Construction on the outlet was completed in June 2012. Water from the east end of the lake will be pumped underground through a 96-inch steel and concrete pipeline to an outfall station and then into the Tolna Coulee.

The 5.5-mile pipeline will help transfer up to 350 cfs (cubic feet per second) of water to the Sheyenne River, which flows into the Red River and continues into Canada, emptying into Lake Winnipeg.

James Landenberger, project manager at the Bartlett & West engineering firm, has been working on Devils Lake flood mitigation efforts for nearly 15 years. He sees the project as a step in the right direction.

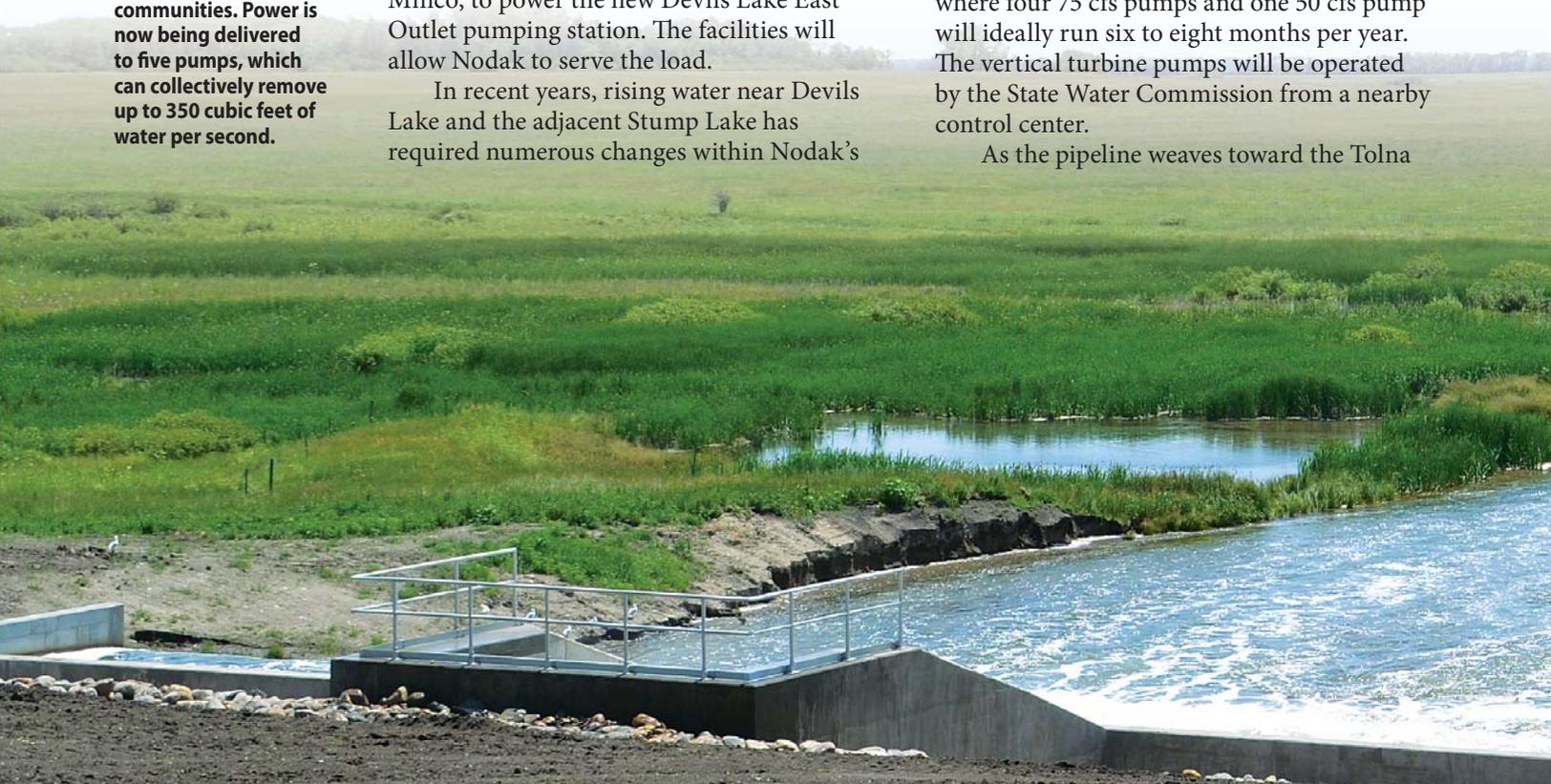
"If this project is successful, we can limit the rise and possibly prevent a catastrophic event from occurring," Landenberger said.

The process starts at the intake structure, where four 75 cfs pumps and one 50 cfs pump will ideally run six to eight months per year. The vertical turbine pumps will be operated by the State Water Commission from a nearby control center.

As the pipeline weaves toward the Tolna



**The newly constructed Devils Lake East Outlet is a major part of the state of North Dakota's strategy to alleviate flooding in the region and protect downstream communities. Power is now being delivered to five pumps, which can collectively remove up to 350 cubic feet of water per second.**



Coulee, its final stop is at an outfall building, which consists of a control structure, rock filter and terminal.

### Finding a solution

Devils Lake is a closed basin lake with a natural overflow elevation of 1,458 feet average sea level. The east outlet, in conjunction with the existing 250 cfs west-end outlet, is part of a long-term approach to handling the water. Together the outlets can remove about 1,200-acre-feet of water per day.

Currently, the lake sits at an elevation of 1,453 feet above sea level. That's roughly 5 feet from naturally spilling into the Tolna Coulee. If that were to happen, the overflow water could add to an existing flood occurring on the Sheyenne River and potentially cause more flood damage for downstream communities.

Jon Kelsch, project manager for the State Water Commission, said help from the weather will be crucial in providing the area relief.

"Our hope is to be able to drop the lake 1 to 2 feet each year with these outlets and evaporation," Kelsch said. "That would give us a little more breathing room from a natural overflow, which could cause a lot of problems and flood a lot more land."

The dry weather this year has eased some immediate concerns.

"The lake has been stable; we're roughly a foot below the high mark from last year," Kelsch said.

### Serving the area

Like many of its members, Nodak has felt the impact of the rising water. Service and

infrastructure moves are an expected part of construction season in the area, according to Steve Breidenbach, Nodak engineering manager.

"We have a line crew stationed in Devils Lake, and they are one of our busiest crews," Breidenbach said. "Not only dealing with the ever-increasing lake shore, but the surrounding areas with sloughs and low areas prove to be comparable problems."

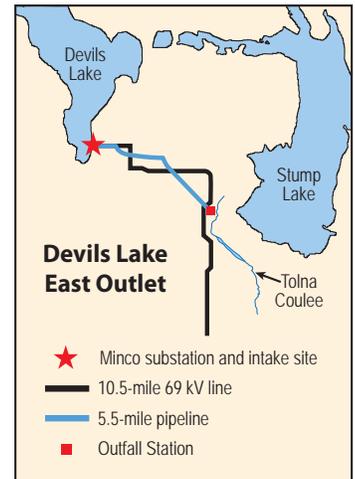
Nodak follows specific elevation guidelines when adding new services near Devils Lake. Most of the new distribution lines and transformers in the area are underground. As the water has risen, several stretches of line have been damaged or deserted.

But power facilities can be reworked and replaced. Homes, however, are sometimes lost. About 120 homes in Nodak's service area have been abandoned in the last decade.

"We've had whole housing additions lost to rising water," Breidenbach said. "It's tough for our members and it's tough for us."

Recently, the balance between powering the area and protecting its infrastructure has been harder to find.

"We have to safely work with the electrical equipment while trying to provide power as long as possible to our members," Breidenbach said. "When we relocate a service, we want to do so in a manner that provides for a good future plan for the area."



Water travels through a 5.5-mile pipeline to an outfall structure and then into the Tolna Coulee. At the outfall structure, the water is pressurized and filtered before it exits through the final terminal.

# Lightning

## and summer storm safety

**T**he Electrical Safety Foundation International (ESFI) encourages consumers to practice caution and safety during summer storms. Data from the National Weather Service shows that lightning strikes are fatal in approximately 10 percent of strike victims. Another 70 percent of survivors suffer serious, long-term effects.

Outdoors is the most dangerous place to be during a lightning storm. Because lightning can travel sideways for up to 10 miles, blue skies are not a sign of safety. If you hear thunder, take cover. For protection in homes and buildings, consider installing a lightning protection system to intercept lightning strikes and guide the current harmlessly to the ground.

The EFSI recommends following these guidelines to stay safe during electrical storms:

- If possible, go indoors. Once indoors, stay away from windows and doors. Do not use corded telephones except for emergencies.
- Unplug electronic equipment before the storm arrives and avoid contact with electrical equipment or cords during storms.
- Avoid contact with plumbing, including sinks, baths and faucets.
- If outdoors, go to a low point. Lightning hits the tallest object. Get down if you are in an exposed area. Stay away from trees.
- Avoid metal. Don't hold metal items, including bats, golf clubs, fishing rods, tennis rackets or tools. Avoid metal sheds, clotheslines, poles and fences.
- If you feel a tingling sensation or your hair stands on end, lightning may be about to strike. Crouch down and cover your ears. Stay away from water. This includes pools, lakes, puddles and anything damp, such as wet poles or grass.
- Don't stand close to other people. Spread out. And don't forget pets during thunderstorms. Doghouses are not lightning-safe. Dogs that are chained can easily fall victim to a lightning strike.

Beware of flooded areas caused by heavy rain – water and electricity do not mix! Below is safety advice to use following a summer storm:

**Flooded areas** – Be careful when attempting to walk in flooded areas and remember that submerged outlets or electrical cords could energize the water.

**Wet electrical equipment** – Do not use electrical appliances that have been wet. Water can damage motors in electrical appliances such as furnaces, freezers, refrigerators, washing machines and dryers. Electrical parts can pose a shock hazard or overheat and cause a fire. A qualified service repair dealer should recondition electrical equipment that has been wet.

**Portable generators** – Portable electric generators can provide a good source of power, but if improperly installed or operated, can become deadly. Do not connect generators directly to household wiring. Power from generators can backfeed along power lines and electrocute anyone coming in contact with them, including line workers making repairs. A qualified, licensed electrician should install your generator to ensure that it meets local electrical codes. Other portable generator tips include:

- Make sure your generator is properly grounded.
- Keep the generator dry.
- Use extension cords that are rated for the load and are free of cuts, worn insulation and have three-pronged plugs.
- Do not overload the generator.
- Do not operate the generator in enclosed or partially enclosed spaces. Generators can produce high levels of carbon monoxide quickly, which can be deadly.
- Use a ground fault circuit interrupter (GFCI) to help prevent electrocutions and electrical shock.

For more information on summer storm safety, visit the EFSI's website at [www.electrical-safety.org](http://www.electrical-safety.org).

*Source: ESFI and NRECA*



# Power supply, market conditions to limit summer load control

Even with near-record summer temperatures, co-op members who participate in the summer off-peak program should anticipate a typical number of load management hours. Minnkota Power Cooperative, our wholesale power provider, has projected 100 hours of load management, slightly above the five-year average of 96 hours.

Through July 16, there have been 35 hours of control issued, primarily related to high temperatures, high power market prices and a power plant outage.

With no major power plant maintenance scheduled for the rest of the summer, Minnkota has an ample set of power supply resources in place to serve its members at almost all hours.

Before the load management system is used, Minnkota first looks to purchase energy from the regional wholesale energy market. The recent economic downturn has largely reduced the demand for excess electricity, according to Todd Sailer, Minnkota energy supply manager.

“The price of power on the market is the biggest factor that determines whether Minnkota implements load control,” Sailer said. “When electricity on the market is affordably priced, the additional power we need is purchased and no load control measures are used. But when market prices are above our target price, we control our off-peak loads.”

Sailer warned that major events, like unplanned power plant outages

or extreme weather conditions, could require additional control hours.

“Our projections are based on the reliable performance of our generation fleet and relatively normal weather conditions,” Sailer said.

Last summer, electric loads in the region were strong as high temperatures regularly covered the area in July and August. Wholesale power prices were moderate throughout the summer so power could be purchased at reasonable rates when the need arose. As a result, only 67 hours of load control were necessary in summer 2011.

The off-peak program is voluntary for consumers who allow Minnkota to interrupt (turn off) certain appliances, such as water heaters, in exchange for a discount in retail electricity pricing. The program is also used by commercial members who have the option to use large

backup generators during peak demand periods. Some agricultural members participate by having power to their irrigation systems interrupted.

The summer and winter programs are popular with about 50,000 consumers participating. When necessary, nearly 80 megawatts (MW) in the summer and 350 MW in the winter can be interrupted from Minnkota’s control center in Grand Forks.

Now in its 15<sup>th</sup> year, the summer load management program, like the successful winter load management program that has been in place since 1977, has helped keep wholesale power costs low for Minnkota cooperatives. Using load management when economically priced power is not available on the market allows consumers to continue receiving a great energy value for their dollar.

## E-billing *Easy online account access!*

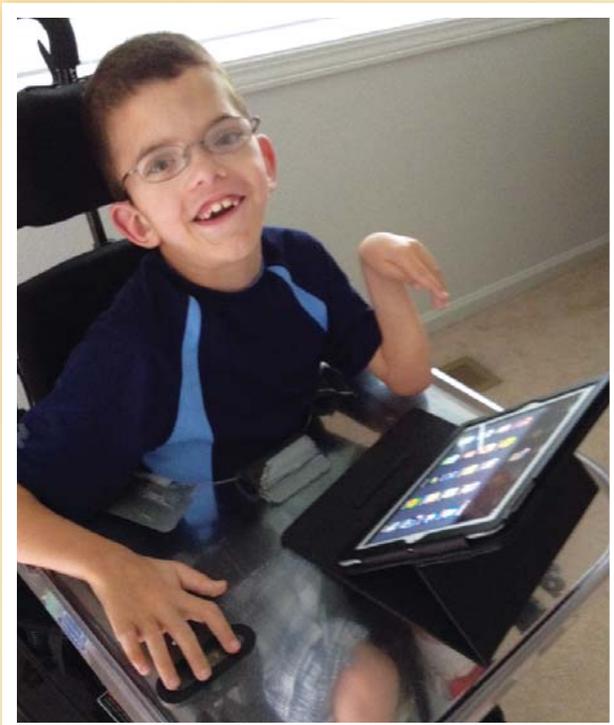
If you’re interested in learning more information about E-billing, visit our website at [nodakelectric.com](http://nodakelectric.com). Click on “Programs and Services,” and then select “E-bill.” After reading all about what E-billing has to offer and you are interested in using the E-bill option, just follow the next few steps:

- Have your Nodak account number ready
- Select highlighted option “Click here to enter E-billing”
- Select “If you are a new user”
- Fill out the appropriate information, name, account number, etc., and select “Submit”

It’s that easy and you’re on your way to accessing your account. If you have any questions, please feel free to call our offices at 701-746-4461 (toll-free 1-800-732-4373) or e-mail us at [nodak@nodakelectric.com](mailto:nodak@nodakelectric.com).



## *Operation Round Up*® A few cents makes a big difference



Michael Clark, a fourth grader at Carl Ben Eielson Elementary School, Grand Forks Air Force Base, is one of many recipients of Nodak's donations from Operation Round Up. Michael has been diagnosed with spastic quadriplegic cerebral palsy, hypertrophic obstructive cardiomyopathy and Noonan Syndrome. With the help of Operation Round Up, Michael was able to purchase an iPad, a protective case, screen protector and iTunes gift cards to purchase apps.

His iPad has given him the opportunity to work at the same pace as his peers, despite his disabilities. He is able to create voice-to-text transcriptions to complete class assignments and take electronic spelling tests through the use of his iPad. Michael has access to many apps that are an interactive way for him to practice the academic concepts that he is learning.

Participation in Operation Round Up is strictly voluntary

Members may sign up by going to our website  
at [www.nodakelectric.com](http://www.nodakelectric.com)  
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