



# COOPERATIVE CONNECTIONS

## Mitchell Tech Expansion

Co-ops Support  
New Training Lab

Pages 8-9

Weather Warnings

Pages 12-13

Photo submitted by  
Mitchell Technical College



# Sweet Summertime!



**Jordan Lamb**  
CEO

We hope you and your families enjoyed a safe and extravagant 4th of July! Reflecting on our independence in celebration reminds us all why we are proud to have you as our member owners! A few key items your cooperative has been working on:

**Safety** — as of last year, we deployed all trucks with AEDs for not only our crew's well being, but also for safety of the general public. Our trucks are also equipped with fire extinguishers and first aide kits.

**Construction** — focusing our efforts to bury overhead 'trunk' lines between critical points throughout our membership to underground. This not only hardens our system backbone with better reliability, but also removes risk to the public for overhead line contacts

**Storms** — it has been an anomaly of a year — flirting between El Nino and La Nina typically results in storms (2014 winter, 2019 summer, 2021 winter) that have tested our system. Our crews have responded to multiple lightning strikes, burnt transformers, and burnt wire resulting from these storm patterns.

We appreciate your patience when outages can (likely do) occur. I had the opportunity to 'roll' on an outage with our crew mid June that resulted in finding a faulty transformer. Typical signs are swelling of the unit, oil located on top of or surrounding the unit, as well as off smells relative to 'a fish fry'.

Too bad for us, we did not have any fish along in the trucks to cook at

midnight on a Wednesday, otherwise we would have ate like kings!

You can help our crews, and all of us here at Oahe, by keeping an eye out for abnormal signs on our equipment. Reporting strange noises, oil around devices, sparking or even debris that may be on top or surrounding our equipment can prevent outages to our members, and having boots on the ground out at the locations makes it quicker to prevent and restore power outages.

I thought you might find it interesting to see pictures, from the beginning to the end of the event that happened, along with some storms that have rolled through recently.

We appreciate your patience and commitment to our cooperative. Remember, **our annual meeting is set for Sept. 13th at the Larkspur in Pierre!** We look forward to seeing you all!

What started with a smaller wall cloud near Onida led to a very long night for our crews. The last picture I have in this article not only puts our crews on notice, but also reminds us why we do what we do — even in storms, there can still be some sunshine to be had! Hope you all had a great 4th of July! We appreciate everything you do for our employees — one gentleman in particular, even brought us pepsi, root beer and cookies while restoring the outage north east of Pierre that late evening.

God Bless you all and thank you again for your efforts to help when we have issues arise.



Figure 4: THE BAD EGG — Transformer failed, either due to age or lightning strikes. Oil on top of the unit with swollen casing.



Figure 2: Les Job, Journeyman Lineman, that evening approaches substation to isolate circuits



Figure 1: Wall cloud morning of outage near Onida.

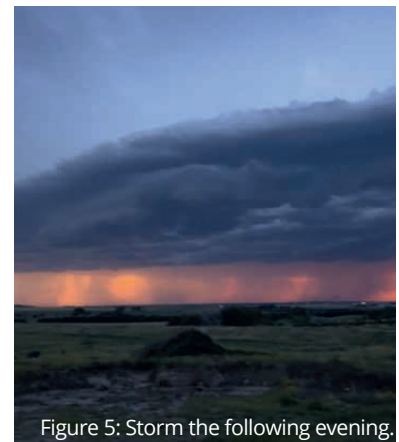


Figure 5: Storm the following evening.

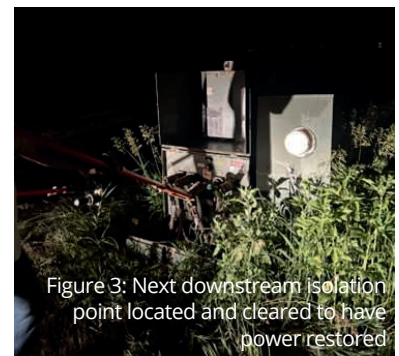


Figure 3: Next downstream isolation point located and cleared to have power restored

## COOPERATIVE CONNECTIONS

### OAHE ELECTRIC

(USPS No. 019-042)

#### Board of Directors:

James Feller – Assistant Secretary  
605.962.6207  
Brandon Haag – President  
605.215.6758  
Ryan Noyes – Treasurer  
605.280.3500  
Ross Sperry – Secretary  
605.280.7770  
Kirk Yackley – Vice President  
605.258.2412

#### Employees:

Tyler Arbach – Journeyman Lineman  
Austin Bergeson – Journeyman Lineman  
Mark Bruning – Line Foreman  
Matt Eldridge – Chief Operations Officer  
Trudie Feldman – Custodian  
Brady Gaer – Journeyman Lineman  
Sidney Geigle – Journeyman Lineman  
Austin Hammer – Business Procurement  
& Development Specialist  
Sam Irvine – Executive Services Specialist  
Megan Jaeger – Membership Director  
Les Job – Journeyman Lineman  
Jordan Lamb – Chief Executive Officer  
Dan Lettau – Journeyman Lineman  
Steve Long – Power Supply Specialist  
Valerie Marso – Chief Financial Officer  
Tory Smith – Journeyman Lineman

OAHE ELECTRIC COOPERATIVE CONNECTIONS is published monthly by Oahe Electric Cooperative, Inc., PO Box 216, 102 S. Canford, Blunt, SD 57522, for its members. Families subscribe to Oahe Electric Cooperative Connections as part of their electric cooperative membership. Oahe Electric Cooperative Connections' purpose is to provide reliable, helpful information to Oahe Electric Cooperative members on matters pertaining to rural electrification and better rural living. Subscription information: Electric cooperative members devote 50 cents from their monthly electric payments for a subscription. Nonmember subscriptions are available for \$12 annually. Periodicals Postage Paid at Blunt, SD 57522 and at additional mailing offices.

POSTMASTER: Send address changes to Oahe Electric Cooperative Connections, PO Box 216, Blunt, SD 57522-0216; telephone (605) 962-6243; fax (605) 962-6306; e-mail oahe@oaheelectric.com; www.oaheelectric.com

#### Our Mission

Oahe Electric delivers high quality, low-cost electric service to our local member-owners. As a Touchstone Energy® Cooperative, we are committed to meeting the highest standards of customer satisfaction. We do business with accountability, integrity, innovation and commitment to community. As an electric co-op, we are part of America's most trusted network of high quality energy

## Lineman's Lens

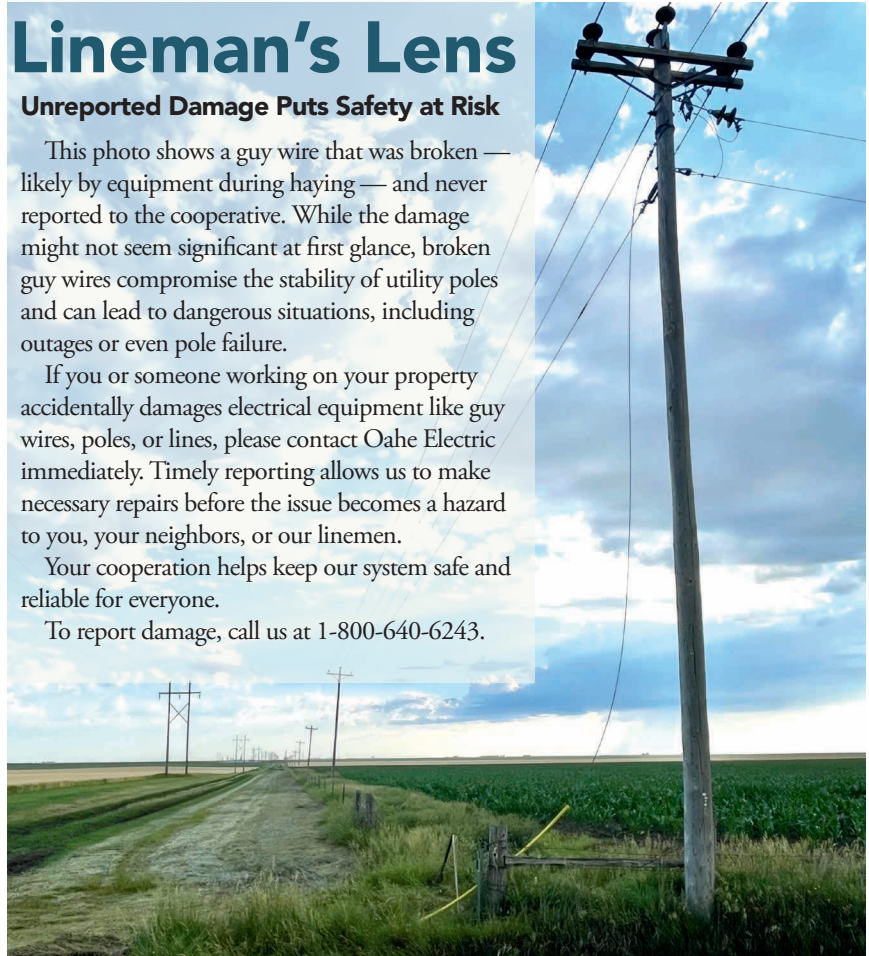
### Unreported Damage Puts Safety at Risk

This photo shows a guy wire that was broken — likely by equipment during haying — and never reported to the cooperative. While the damage might not seem significant at first glance, broken guy wires compromise the stability of utility poles and can lead to dangerous situations, including outages or even pole failure.

If you or someone working on your property accidentally damages electrical equipment like guy wires, poles, or lines, please contact Oahe Electric immediately. Timely reporting allows us to make necessary repairs before the issue becomes a hazard to you, your neighbors, or our linemen.

Your cooperation helps keep our system safe and reliable for everyone.

To report damage, call us at 1-800-640-6243.



## Outages and Life Support Equipment

### What You Need to Know:

If someone in your household relies on life-support equipment—such as a respirator, supplemental oxygen, or heart-assist device—please contact Oahe Electric right away. We maintain a list of members who depend on critical medical equipment so we can prioritize them during power restoration efforts.

While we work hard to provide reliable service, power outages can still occur. For this reason, we strongly encourage households with life-support needs to have a backup power source and a well-prepared emergency plan in place.

To ensure you're included on our life-support priority list, please call our office at 1-800-640-6243 and let us know about your situation.

## Cove Heat Sale

Oahe Electric Cooperative is offering great deals on our remaining Cove Heat inventory!

Call Oahe Electric at 1.800.640.6243 to learn more!



# Staying Alert With Kids in Hot Cars

Source: National Safety Council

Since 1998, more than 1,010 children have died from vehicular heatstroke, an average of 37 per year. Parents and caregivers can act immediately to end these preventable deaths.

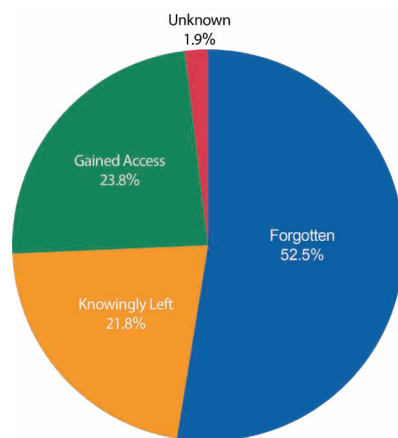
## How Does It Happen?

Even on mild or cloudy days, temperatures inside vehicles can reach life-threatening levels. Leaving windows slightly open doesn't help. Children should never be left unattended or be able to get inside a vehicle. Three primary circumstances resulting in deaths of children in hot cars are:

- A caregiver forgets a child in a vehicle - 53%
- A child gains access to a vehicle - 24%
- Someone knowingly leaves a child in a vehicle - 22%

NSC advises parents and caregivers to stick to a routine and avoid distractions to reduce the risk of forgetting a child. Place a purse, briefcase or even a left shoe in the back seat to force you to take one last look before walking away. Keep car doors locked so children cannot gain access and teach them that cars are not play areas.

There is no safe amount of time to leave a child in a vehicle, even if you are just running a quick errand.



**nsc**  
National Safety Council

**Child Passenger Safety**  
Child Passenger Safety Council  
VEHICULAR HEATSTROKE PREVENTION



**"Never fly a kite by a power line!"**

## Kasen Tikka, Age 9

Kasen warns readers about the dangers of flying a kite near power lines. Thank you for your picture, Kasen! Kasen's parents are Corey and Marcel Tikka from Lake Norden, S.D.

Kids, send your drawing with an electrical safety tip to your local electric cooperative (address found on Page 3). If your poster is published, you'll receive a prize. All entries must include your name, age, mailing address and the names of your parents. Colored drawings are encouraged.



# Delicious DESSERTS

## STRAWBERRY ANGEL FOOD DESSERT

### Ingredients:

1 angel food cake  
(baked and cut in pieces)  
3.9 oz vanilla pudding  
1 3/4 cups milk  
3 cups sliced strawberries  
1/4 cup sugar  
8 oz. Cool Whip, thawed

### Method

Put the angel food cake in a 9"x13" pan. In a separate bowl, combine vanilla pudding and milk; whisk together until thick; set aside. In another bowl, combine sliced strawberries and sugar; pour over the cake. Spread pudding over strawberries. Top with 8 oz. Cool Whip. Add more strawberries on top. Chill 1 hour before serving.

Gladys Bauer  
Cam Wal Electric

## MONSTER COOKIE BARS

### Ingredients:

1 stick butter  
1 1/2 cups peanut butter  
1 cup sugar  
1 cup brown sugar  
1 tsp. vanilla  
3 eggs  
2 tsps. baking soda  
4 1/2 cups oatmeal  
12 oz. chocolate chips  
12 oz. plain M&Ms

### Method

Mix butter, peanut butter, sugar, brown sugar, vanilla and eggs. Add dry ingredients and mix in chocolate chips and M&Ms. Bake at 350°F for 15 minutes (no longer) in a large jelly roll pan. They may not look done but they are. Enjoy!

Rhonda Tuscherer  
FEM Electric

## BLUEBERRY TORTE

### Ingredients:

1/2 cup butter  
1 cup all-purpose flour  
1 tbsp. sugar  
8 oz. pkg. cream cheese  
1 cup powdered sugar  
8 oz. Cool Whip (reserve part for topping)  
1qt. blueberries (fresh or frozen)  
1 cup water  
1 cup sugar  
3 tbsps. cornstarch

### Method

Cut butter into flour and sugar. Press into a 9"x13" pan and bake at 350°F for 20 minutes. Chill. Beat cream cheese and powdered sugar until light and fluffy. Fold in Cool Whip. Spread over crust. Simmer one cup blueberries and 2/3 cup water for five minutes. Blend sugar and cornstarch; add 1/3 cup water and mix until smooth. Combine with cooked berries and boil until thick and transparent. Cool and add remaining berries. Chill thoroughly and spoon over cream cheese mixture. Chill several hours or overnight. Top with Cool Whip.

Janet Lefers  
Douglas Electric

Please send your favorite recipes to your local electric cooperative (address found on Page 3). Each recipe printed will be entered into a drawing for a prize in December 2025. All entries must include your name, mailing address, phone number and cooperative name.

# Your Voice. Your Vote. Your Cooperative.



**Valerie Marso**

Chief Financial Officer

## Sixth Seat Opens the Door for More Member Involvement on Board

Last year at the Annual Meeting of Members, members voted in favor of a bylaw amendment that expands your Board of Directors from five to six seats. This change reflects the cooperative's continued growth and commitment to ensuring that your voice—as a member-owner—is heard and represented.

## What This Means for You

With this change, your board now consists of six elected representatives, each serving a three-year term. Currently, one seat is up for re-election, and another is newly added and therefore vacant. That means two director positions are up for election this year.

A map of the director zones is provided on the next page to help you identify the areas that each director represents.

## Director Responsibilities: More Than Just a Seat at the Table

Being a director is a serious commitment that brings both responsibilities and rewards. Our directors are the bridge between the cooperative's management and its member-owners—you.

Here's what you can expect if you're considering running:

- **Monthly Meetings:** Regular meetings are held at Oahe Electric Headquarters in Blunt, SD.
- **Special & Annual Meetings:** Attendance at additional sessions may be required throughout the year.
- **Ongoing Education:** Directors may attend seminars and training that cover essential topics such as cooperative financing, electric rate structures, legal compliance, and power supply planning.
- **Member Advocacy:** Directors play a critical role in communicating member needs, concerns, and feedback to Oahe Electric's leadership.
- **Policy & Decision Making:** Board members help shape the future of the cooperative by setting policies and making strategic decisions that reflect the cooperative's mission and values.

By serving on the Board of Directors, you become part of a legacy of leadership built on honesty, consistency, and a deep sense of responsibility to the cooperative and your fellow members.

## Thinking of Running? What to Know:

Petitions to nominate candidates are now available at the Oahe Electric headquarters. To be eligible, you must meet the



## ARTICLE IV • DIRECTORS

**Section 2. Director Zones.** For the purpose of election and qualification of Directors, the area comprising Oahe Cooperative, Inc.'s territory shall be divided into two zones from which Directors of the Cooperative shall be elected as follows:



Jim Feller,  
Director,  
District 1



Vacant  
District 2

1. Zone 1 shall consist of Sully County and Hughes County, less and except the area described in Zone 2, and any adjacent territory to which service is extended and which is not in any other zone and shall be entitled to three Directors.
2. Zone 2 shall consist of the area south of the north Hughes County line and west of 296th Ave. extended to the Missouri River and any adjacent territory to which service is extended and which is not in any other zone and shall be entitled to three Directors.)

qualifications outlined in the cooperative bylaws on page 11 and follow the proper nominating procedures. All completed petitions must be submitted by July 30, 2025.

If you have questions about eligibility or the petition process, don't hesitate to reach out. Stop by the office or give us a call—we're here to help.

Your cooperative thrives when members like you get involved. Whether you're considering a seat on the board or simply exercising your right to vote, your participation is vital to Oahe Electric's success.



# Collecting Cacti

## No Bark, Some Bite

Jacob Boyko

jacob.boyko@sdrea.coop

What's a companion that doesn't bark, doesn't chase cars and doesn't dig holes in your yard?

According to West River Electric Association member Richard Kruger, the answer is cacti.

For nearly 40 years, Richard has collected different varieties of cacti, from the barrel-shaped ferocactus to the stove pipe cactus that resemble the iconic saguaro cactus of the American Southwest.

"I remember as a kid, my dad had a few cacti and he always managed to keep them alive and take care of them," the retired aircraft plant worker and marine veteran said. "I always thought, cacti are so easy to take care of – they don't require a lot of time."

With that, Richard reignited the tradition of cacti collecting.

At this home near Tacoma, Washington, where Richard and his wife, Donna, lived prior to 2021, Richard amassed an impressive collection of cacti from around the world.

"We had a front porch – kind of like a four seasons room – and I was able to bring all of my cactuses and put them in there," he said. "It got to be kind of a hassle, because I had so many cactuses it was like an afternoon project transporting them."

Preparing to move to South Dakota, Richard unfortunately had to downsize his collection. But now, in the Rushmore state, he's begun collecting again, starting with the local species.

"There are six different varieties of cacti native to South Dakota, and just in the Rapid City area alone I've managed to find in the fields nearby all six varieties."

Even though raising cacti is generally straightforward, Richard says it's important to do proper research before any purchasing.

"If you're going to buy a cactus that's from Argentina, for instance, you will need to know what the climate is like there."

For South Dakota's native varieties, which include the Missouri Foxtail, Grassland Pricklypear and Prairie Pricklypear, among others, the cacti go dormant in the winter – no more afternoons for Richard and Donna spent hauling pots of cacti inside.

One important tip: resist the urge to water.

"The biggest challenge is people being overzealous about watering," Richard explained. "You can kill a cactus real quick. The roots ... will begin to rot first, and then it goes up through and next thing you know, you've got a cactus that's turning jelly."

He continued, "I found it's so much better to just kind of ignore (the cactus) and put a check mark on your calendar when you need to water."

Currently, Richard has about 25 cactuses in his collection, spread throughout his yard, patio and basement. His goal for his collection:

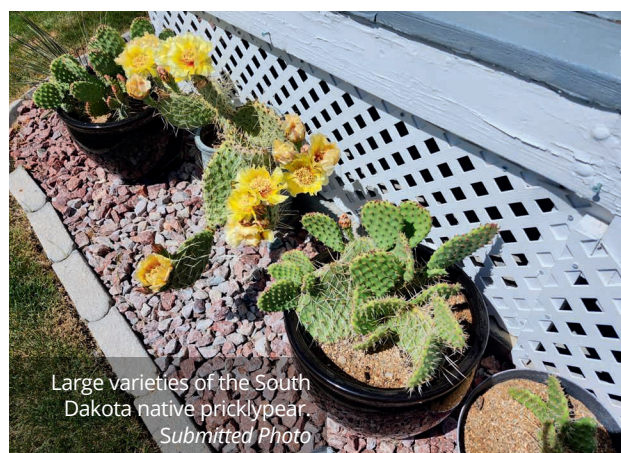
"Just to take care of them and enjoy them."



Richard Kruger with his collection of Prairie Pricklypears.  
*Submitted Photo*



The Missouri Foxtail is common along the Missouri River and in western S.D.  
*Submitted Photo*



Large varieties of the South Dakota native pricklypear.  
*Submitted Photo*





A render showing Mitchell Technical College's new Power Line Underground Lab. MTC says students will practice underground utility work in this new facility, away from other courses' labs to reduce crowding. Submitted Photo

# FUNDING FUTURES

## Rural Electric Cooperatives Support New Training Facility

Jacob Boyko

jacob.boyko@sdrea.coop

Mitchell Technical College is well known among the region's rural electric cooperatives for its industry-leading lineworker training programs.

Now, that program is about to get even better, as MTC begins construction on a new, state-of-the-art underground cable equipment training facility.

The Power Line Underground Lab will allow students to learn how to trench, bore, and connect cables in an environment away from other labs and courses.

Additionally, being indoors and having a dirt floor, instructors have the added benefit of being able to plan courses without worry regarding outside weather and frozen ground during winter.

"The new facility allows us to be able to use our underground curriculum and teach it all throughout the school year, instead of just the beginning and the end when the ground is thawed out," MTC's president, Theresa Kriese said about the space.

"They get more equipment time because we're not trying to



Construction of MTC's Power Line Underground Lab began this spring. MTC expects students beginning in the fall semester of 2026. Submitted Photo

share a lab where we're also planting poles."

Kriese hopes spreading out the curriculum over the semester will allow MTC's instructors to dive deeper into certain course topics with their students, making them overall better candidates for employment when they enter the workforce.

"We're seeing the energy industry making another transformation where underground is really gaining a larger presence than it had in the past", Kriese added, noting the Federal Emergency Management Agency's push to replace downed overhead lines with resilient underground cables after storms.



"We're finding that if we can have our students trained in both (overhead and underground), it opens some opportunities for them, because they may not be able to climb that pole their entire life," she continued. "It gives some flexibility to the employer, because I can hire somebody that can climb but they can also do that underground connection. So wherever I need them, I can have them work in my employment area."

Central Electric Cooperative General Manager Ken Schlimgen agrees, adding that with more and more electric co-ops working to replace their aging overhead infrastructure with underground line, MTC's new underground focus will help alleviate future workforce challenges.

"When we support Mitchell Tech programs, it's an investment into our most important asset: our workforce," Schlimgen said. "Workforce challenges will continue for decades, and having a competent, qualified team of lineworkers to serve our members and keep the lights on is vital to our success."

Central Electric is just one electric co-op providing financial support for the expansion.

At the time of writing, more than 20 electric co-ops in South Dakota have pledged over \$460,000 to MTC in support of the facility.

"Power line personnel are the backbone of our cooperative family, keeping the lights on for our members and being leaders in our communities," said Steve Barnett, general manager for the South Dakota Rural Electric Association.

"Mitchell Technical College is a workforce pipeline for this profession and is vital to cooperatives across our region."

Kriesie said staff and student excitement is growing ahead of the facility's expected 2026 completion and expressed appreciation to electric

co-ops for their support.

"Mitchell Tech is making a statement and a commitment to the energy industry that we are your partner in developing and training employees for you," Kriesie said.

"Without the partnership of the electric cooperatives, we really

wouldn't be able to make this expansion."

The project is slated to celebrate its grand opening in the Fall of 2026, when students and Mitchell Tech faculty will begin using the facility to train tomorrow's electric cooperative workforce.



MTC's current plan for the Power Line Underground Lab shows a 34,000 square foot facility, made up of a 23,500 square foot underground lab, a 7,755 square foot vehicle and equipment storage area and a 1,000 square foot classroom.

*Submitted Photo*



Theresa Kriesie  
President  
MTC



Steve Barnett  
General Manager  
SDREA



Ken Schlimgen  
General Manager  
Central Electric



# YOUTH TOUR 2025





## Co-op Youth Head to Washington, D.C.

Thirty-six teens representing 21 South Dakota electric cooperatives traveled to the Washington, D.C., area June 15–21 for the 2025 South Dakota Youth Tour.

The program traces its roots to a 1957 speech by Lyndon B. Johnson, who urged electric cooperatives to send young people to the nation's capital so they “can actually see what the flag stands for and represents.” Since South Dakota sent its first group in 1963, more than 1,300 students have represented the Rushmore State on this once-in-a-lifetime trip.

The 2025 group visited many of the D.C. most historic and impactful sites, including Ford's Theater—the site of President Abraham Lincoln's assassination in 1865. Their visit, which took place on Juneteenth, added a layer of reflection on the nation's path toward emancipation and equality. The group continued to explore themes of patriotism and national history throughout the week, viewing the Star-Spangled Banner at the Smithsonian's National Museum of American History, the Declaration of Independence at the National Archives, and the Bureau of Engraving and Printing

where a significant amount of the nation's money is printed.

Students also met with South Dakota's congressional leaders, including U.S. Senators John Thune and Mike Rounds, and had the chance to connect with Youth Tour participants from 44 other states. Together, they toured many of the nation's most treasured landmarks, including the U.S. Supreme Court, the Smithsonian National Museum of the American Indian, and more.

At the Gaylord National Resort & Convention Center, students concluded their trip with NRECA-led events, where they heard an inspiring message about perseverance and leadership from Youth Day keynote speaker Mike Schlappi, a four-time Paralympic medalist in U.S.A. men's wheelchair basketball.

“The Youth Tour was a once in a lifetime experience,” said Abby VanderLinden with Lake Region. “There are so many opportunities you get to partake in that you experience on a regular family trip. My favorite part was the holocaust museum and being able to talk to two ladies that survived. It was the most eye-opening museum and it changed my perspective on life.”

## Bylaws Governing Director Elections

**Section 4. Qualifications.** No person shall be eligible to become or remain a Director or to hold any position of trust in the Cooperative who:

1. It is not a member and a bona fide resident of the area served by the Cooperative; or
2. Is in any way employed by or financially interested in a competing enterprise, a business selling electric energy or supplies to the Cooperative, or a business primarily engaged in selling electrical or plumbing appliances, fixtures or supplies to the members of the Cooperative; or
3. Is an employee of the Cooperative, or who has, within five years of the proposed election or appointment, been an employee of the Cooperative.

The determination of residency, as required by this section, shall be determined by application of objective criteria to be set forth in

policy adopted by the Board of Directors.

**Section 5. Nominations.** Any Fifteen (15) or more members acting together may make nominations by petition received at the principal office of the Cooperative not less than forty-five (45) days prior to the meeting and the Secretary shall post such nominations at the principal office of the Cooperative. The Secretary shall mail with the notice of the meeting, or separately, but at least 10 days before the date of the meeting, a statement of the number of Directors to be elected and the names and addresses of the candidates nominated by petition. There shall be no nominations from the floor unless no petition has been filed for a vacancy. In that event only, nomination shall be taken from the floor for that vacancy, and nominations shall not be closed until at least one minute has passed during which no additional nomination has been made. No member may nominate more than one candidate.

## Your Co-op's Thank-You Notes

*Oahe Electric,*

*Thank you for the gift of money! I'm sure it will come in handy at SDSU where I will major in electrical engineering.*

*-Jesse [Eldridge]*

*Oahe Electric,*

*Thank you for the door prize I won at the Ag Women's Day in Onida. I can use the gloves in the garden and I love cookbooks.*

*Thanks again,*

*Mar Jessen  
Holabird, SD*

*Oahe Electric,*

*Thank you for your kindness and support.*

*Sincerely,  
Ely Heuertz*

*Dear Oahe Electric Scholarship Committee,*

*Thank you for selecting me as a recipient of the Oahe Electric Scholarship in the amount of \$1,000. It is an honor to be selected for this prestigious scholarship. Your support for SC students furthering their education is appreciated. Due to wonderful scholarship sponsors like you, our college education is less of a financial burden. Thank you again for selecting me as a recipient.*

*Sincerely,  
Colton Brady*

# WEATHER WARNINGS

## Getting Ready for Severe Summer Storms

**Jacob Boyko**

[jacob.boyko@sdrea.coop](mailto:jacob.boyko@sdrea.coop)

Midwest summers have a certain notoriety for their extreme summer weather events.

South Dakota is no exception. Between May 2015 and June 2025, the National Oceanic and Atmospheric Administration (NOAA) reported more than 200 tornadic events in South Dakota.

### The Recipe for Severe Weather

According to Peter Rogers, warning coordination meteorologist for the National Weather Service (NWS) Office in Sioux Falls, there are four foundational components for the specific type of thunderstorms that produce tornadoes called supercells.

The first component is moisture – it's needed to form clouds. The second component, lift, refers to an upward motion of the air. In places without mountains like eastern South Dakota and western Minnesota, that occurs when a cold or warm front moves into the area and the laws of physics force warm air upward.

The third component, instability, is the

difference between the two air masses.

"If you have pockets of air that are hotter than the air around them, they'll continue to rise," Rogers explained. "And the instability is the extent to how far those parcels will rise."

The final component, wind shear, is how the wind speed and direction changes with altitude.

"Here, at the surface, we're normally only concerned about what the wind speed is doing at the surface," Rogers explained.

"But as meteorologists, we want to know what's happening at 5, 10, 15 ... feet and so on. The more changes you have with wind speed and direction ... with height increases your chances of going from just your garden-variety thunderstorm to a severe thunderstorm that's more capable of producing strong winds and tornadoes."

Over the last 10 years, South Dakota has seen tornadoes mostly ranking EF-0, EF-1 and EF-2 on the Enhanced Fujita scale.

The scale, named for its developer, meteorologist Ted Fujita, ranks tornadoes on a scale from 0 to 5 based on recorded wind speed and the damage observed that can be attributed to the tornado, with an

Storm clouds gather near Nunda, S.D.

*Photo by Jacob Boyko*

EF-5 being the most severe.

An EF-0 tornado will leave behind damage indicators showing wind speeds between 65 and 85 mph, while an EF-1 tornado will show damage indicating wind speeds between 86 and 110 mph, an EF-2 111-135 mph, an EF-3 136-165 mph, an EF-4 166-200 mph and an EF-5 being anything over 200 mph.

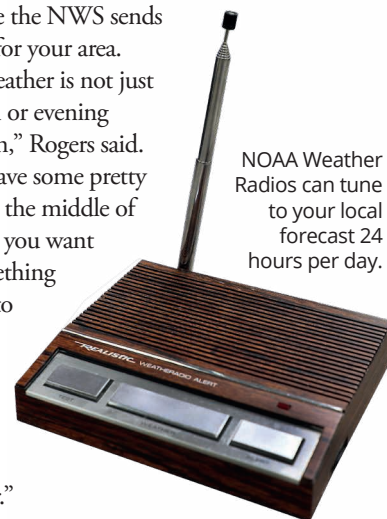
But weak and strong tornadoes alike can be deadly without proper action.

Working at the National Weather Service, it's part of Roger's job to get severe weather alerts out to the public.

Weather radios are particularly helpful in severe weather scenarios, he explained, because you can set them to alert you any time the NWS sends out an alert for your area.

"Severe weather is not just an afternoon or evening phenomenon," Rogers said. "We often have some pretty big events in the middle of the night, so you want to have something that's going to wake you up in the middle of the night so you can get to shelter."

NOAA Weather  
Radios can tune  
to your local  
forecast 24  
hours per day.





As any Midwest resident knows, there's far more summertime severe weather than just tornadoes.

Derechoes, which decimated much of eastern South Dakota and Western Minnesota in 2022, produces a wall of strong, fast gusts of wind that can be just as dangerous as a tornado.

According to the NWS, for a storm to be classified as a derecho, it must extend 250 miles with gusts of at least 58 mph and produce several gusts of at least 75 mph.

In western South Dakota, the Black Hills help create the optimal conditions needed for severe hail.

"What you need is a really strong thunderstorm that has a really strong updraft," explained Kelly Serr, warning coordination meteorologist for the National Weather Service Office in Aberdeen.

"When that updraft is really strong, it reaches the very coldest levels of the atmosphere where tiny droplets of rain start to freeze."

The stronger the draft, the longer the frozen rain drop will remain in the atmosphere. And the longer it's stuck in the updraft, the more water it collects, growing in size until finally the hail stone is too heavy to be suspended by the updraft anymore, and it plummets to the ground.

In western and central South Dakota, that process is exacerbated by the Black Hills, which help force the air up even higher and create fast-developing thunderstorms.

During severe weather events like thunderstorms, tornadoes and hail, the NWS encourages those in the pathway of the storm to seek shelter in a basement or a room without windows away from outside walls, as hail and other debris can shatter windows.

"Something we always tell people is to pay attention to the forecast," Serr said. "Know before you go: 'Are we expecting severe storms?' And then have a safety plan in place for wherever you are."

## Looking Back at Summer Storms

### Delmont Tornado – May 5, 2015

At about 10:45 a.m. on Mother's Day, an EF-2 tornado struck Delmont. The tornado's path began in Charles Mix County, making its way north into Douglas County where it reached Delmont and damaged numerous homes, including Delmont's famous Onion House, and destroyed the Zion Lutheran Church and fire station. The NWS reported a peak wind speed of 130 mph, with the tornado covering 17.3 miles and reaching a width of 400 yards.

### Derechos – May 12, July 5, 2022

In the afternoon, a wall of straight line wind known as a derecho moved northeastward through eastern S.D. and Western M.N., with wind speeds reaching over 100 mph. The storm brought with it numerous tornadoes, including an EF-2 tornado with wind speeds up to 120 mph in Castlewood. According to the NWS, the derecho was the "most extreme example on record in terms of the measured significant wind gusts." The National Centers for Environmental Information categorized the storm a billion-dollar disaster event. Less than two months after the May event, a derecho moving southeastward produced wind gusts reaching 99 mph in Howard and 96 mph in Huron. In Sioux Falls, the sky turned green – a rare phenomenon caused by refraction, or the bending of light when passing through and being warped by the water and ice contained within the storm system.

### Black Hills Hail – June, 2, 2019

In the morning, a supercell thunderstorm moved through Rapid City, Hermosa and Fairburn, producing golf ball-sized hail that damaged vehicles, homes and crops.

### Tripp Tornado – May 8, 1965

The strongest tornado ever recorded in S.D. was in Tripp County. The storm produced snow over the Black Hills, with Lead reporting 36 inches of snow. The Tornado touched down east of Wewela, with a maximum observed width of 1,760 yards, and moved northwest 30 miles. The tornado was classified an F-5.

**Source: Event Summaries, Weather.gov**

### Pierre Hail – July 18, 2023

An afternoon warm front heading east across central S.D. developed into a supercell. Around 6:20 p.m. in Pierre, there were reports of softball-sized and larger hail, with one setting a Hughes County record at 5 inches in diameter.

### Dupree Tornado – June 16, 2010

In the afternoon and evening hours, a thunderstorm over Dupree produced damaging winds, torrential rainfall and flooding, and at least 16 tornadoes, with multiple tornadoes being simultaneous. The storm damaged roofs, mobile homes and grain bins. The damage observed indicated an EF-2 tornado.

### Vivian Hail – July 23, 2010

A S.D. and U.S. hailstone record was set in Vivian after an evening thunderstorm formed a supercell moving southeastward. The NWS reported numerous hailstones exceeding 6 inch diameters as well as a record-setting 8 inch diameter, 18.625 circumference and 1 pound, 15 ounce hailstone. NWS estimates the hail stone fell at about 100 mph.

### Sioux Falls Tornado – Sept. 11, 2019

In the late evening hours of Sept. 10 into the early morning hours of Sept. 11, severe thunderstorms moved across southeast S.D. into M.N. and I.A., bringing 80 to 100 mph straight line winds and three brief EF-2 tornadoes in Sioux Falls. The Avera Health Complex, several commercial spaces, and a neighborhood were damaged.

### Jerauld Tornadoes – June 18, 2014

In the evening, a thunderstorm over Jerauld County produced an EF-4 tornado that traveled over 11 miles from Lane to Alpena. The tornado measured 880 yards at its widest. The same storm produced several more tornadoes, including an EF-2 that ravaged Wessington Springs.

### Bowdle Tornado – May 22, 2010

A supercell in north central S.D. produced multiple tornadoes, including an EF-4 and golf ball-sized hail near Bowdle. NWS reported nearly 100 downed utility poles.



A West Central Electric Cooperative drone flies over distribution lines so employees can inspect.  
*Photo by Jessie Tucker*

# TAKING FLIGHT

## Electric Co-ops Utilize Drones

**Jacob Boyko**

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Across South Dakota, electric cooperatives are turning to unmanned aerial vehicles to improve safety, speed up outage responses and enhance day-to-day operations.

Better known as drones, these high-tech, lunchbox-sized robots offer co-ops a birds-eye view of infrastructure – no risky climb or airplane flight necessary.

“Our main goal is to use them (drones) during storm situations,” explained Jessie Tucker, manager of member services at West Central Electric Cooperative and an advocate for electric co-ops’ drone integrations.

“Typically, we have to charter a plane from Pierre, and they will pick up an employee from West Central and we have to fly the lines when we have severe damage. What we’re hoping to be able to do is get

the drone in the air and patrol the line to see what we have for damages and how extensive everything is.”

Tucker is a certified remote pilot, having passed the Federal Aviation Administration’s Part 107 exam on the rules and regulations for operating unmanned aircraft vehicles. While hobby drone operators don’t need a license for recreational use, federal law requires commercial operators be licensed, meaning all electric co-op drone operators have studied for and passed the rigorous exam.

“It was surprisingly tough,” said Moreau-Grand Electric’s JJ Martin, who is also a licensed remote pilot. “There’s a lot of stuff in there and understandably so. Flying a drone is like playing a video game – it’s pretty easy. But when it comes to all of the safety, like knowing how to read a map, knowing what airspace you’re in, what all of the codes mean, there’s a lot to it.” Martin, who is the member services

director, champions drones for the convenience they bring to the co-op’s communication efforts. He says using the drone for aerial photography and videography helps him get “out of the way” of busy lineworkers and gives him a vantage point that highlights the beauty of the landscape.

There are also benefits for the co-op’s substation workers, Martin continued. Hovering the drone over the equipment allows some inspections to be made more quickly and without cutting power.

“We’re able to just fly the drone over the top, zoom in and take pictures,” Martin explained. “The resolution is so high you can zoom in quite a ways and inspect a little bit without putting anybody in harm’s way or shutting power off for anybody.”

Back at West Central Electric, lineworkers use a thermal energy camera on a drone to fly over towns and other infrastructure to find “hot spots,” or bad



connections on power lines where a component is beginning to fail.

"We check out substations at least once a year, usually on the coldest days or one of the heaviest loaded days," Tucker explained, noting each year they typically find at least several hot spots.

Basin Electric Power Cooperative, the member-owned generation and transmission utility powering South Dakota's electric co-ops, uses its fleet of drones to build fully three-dimensional renders of land sites and infrastructure.

According to Robert Kohler, a certified federal surveyor, licensed remote pilot, and geomatics supervisor at Basin Electric, the utility accomplishes this using drones equipped with cameras and LiDAR scanners.

LiDAR, which stands for light detection and ranging, is a focused array of laser pulses. The mounted sensor emits the lasers and the light travels until it meets a solid object. The lasers are then reflected by the object back into the LiDAR sensor, with the system measuring the length of time it took for the laser to return and using that to calculate the distance between the sensor and the object.

Kohler says the sensor he uses collects 400 data points per square meter at 190 feet of elevation while traveling 11 feet per second. Each of those points – billions of them, Kohler pointed out – are recorded and precisely mapped to a location on an XYZ coordinate plane.

"Imagine you have a flash light and you're walking along the ground. Anything the light touches, it illuminates," Kohler explained. "You can create a three-



Moreau-Grand Electric Cooperative linemen in north central South Dakota.  
Photo by JJ Martin

dimensional map and some of the features of those maps would be the conductors of the transmission line, the structure itself, the vegetation and plants growing along the sideline of the transmission corridor, or even a vehicle or person."

Back at the office, Kohler's computer processes the data – file sizes often reaching into the hundreds of gigabytes – into a fully three-dimensional model.

Basin Electric's fleet doesn't stop at aerial drones. When working beneath the surface of a body of water, hydro drones like the utility's TriDrone pontoon craft measure the surface at the bottom of a water body using sonar to capture points beneath the surface that LiDAR can't see.

Despite the noted conveniences, Kohler cautioned that using drones for high-intensity data-driven tasks isn't as hands-off as it seems. Sometimes it's a more practical option – sometimes it's not.

"I've got four to six hours of pre-flight

planning to just program the software and drone for the specific area that I want it to map out," he explained. "Then I have potentially eight to 40 hours of processing time to reduce the data into what I need. In that regard, there's a lot of extra time involved."

Kohler also said important small measurements need to be double-checked by workers since the drone sensor's measurements are sometimes affected by a margin of error that varies with the craft's proximity to the site.

Even so, many electric cooperatives agree the advancements in unmanned aircrafts vehicles and sensing technologies offer an exciting path forward for utilities.

"Everytime I use it (the drone), I'm getting such a cool angle and I can travel such distances," Moreau-Grand Electric's Martin said. "I'm able to stay out of the guys' way. I'm safe, they're safe."



A TriDrone uses sonar to map terrain beneath the water's surface.  
Photo by Robert Kohler

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Photo courtesy of Travel South Dakota

**AUG. 27-SEPT. 1**  
**South Dakota State Fair**  
Huron, SD

To have your event listed on this page, send complete information, including date, event, place and contact to your local electric cooperative. Include your name, address and daytime telephone number. Information must be submitted at least eight weeks prior to your event. Please call ahead to confirm date, time and location of event.

**UNTIL AUG. 10**  
**Annual Red Cloud Indian Art Show**  
Painting, photography,  
beadwork, quillwork  
Red Cloud Indian School  
100 Mission Dr.  
Pine Ridge, SD 57770  
(605) 867-8257

**JULY 26**  
**South Dakota Chislic Festival**  
10 a.m.-9 p.m.  
Freeman, SD  
[www.sdchislicfestival.com](http://www.sdchislicfestival.com)

**JULY 26**  
**Richmond Lake Association's  
Annual Pontoon Poker Run**  
Aberdeen, SD  
605-225-0609

**JULY 26**  
**Fort Sisseton Lantern Tour**  
11907 434th Ave.  
Lake City, SD  
605-225-0609

**JULY 31**  
**SPURS Grand Classic  
Horse Show**  
9 a.m.-4 p.m.  
SPURS Therapeutic Riding Center  
1006 130th St.  
Aberdeen, SD  
605-226-1099

**AUG. 1-2**  
**Armour Prairie Festival**  
Armour, SD

**AUG. 1-3**  
**Fort Sisseton Escape Room**  
11907 434th Ave.  
Lake City, SD  
605-225-0609

**AUG. 1-10**  
**85th Sturgis Motorcycle Rally**  
Sturgis, SD

**AUG. 7-10**  
**South Dakota Senior Games**  
Huron, SD  
605-295-2039  
[southdakotaseniorgames.org](http://southdakotaseniorgames.org)

**AUG. 9**  
**Day of Honor**  
End of WWII 80th Anniversary  
10 a.m.  
Battleship South Dakota Memorial  
12th Street & Kiwanis Avenue  
Sioux Falls, SD

**AUG. 9**  
**Raise 'Em Rank Bull Riding  
and Breakaway Roping**  
Geddes, SD  
605-680-2763

**AUG. 9**  
**Day Cty Demolition Derby**  
Day Cty Fairgrounds  
6:30 p.m.  
Webster, SD  
605-680-2763

**AUG. 14-17**  
**Watertown Senior Games**  
Watertown, SD  
605-949-0028

**AUG. 16**  
**Black Hills Super 6  
Mountain Bike Race**  
Big Hills Trails  
[bhsuper6.com](http://bhsuper6.com)

**AUG. 16**  
**Extreme Bull Riding Tour**  
7:30 a.m.  
Yankton, SD  
605-760-2153

**AUG. 21-24**  
**Steam Threshing Jamboree**  
Prairie Village  
Madison, SD

**AUG. 23**  
**McCrossan Boys Ranch Xtreme  
Event Challenge Rodeo**  
4 p.m. Gates Open, 6 p.m. Rodeo  
Sioux Falls, SD

**Note:** We publish contact information as provided. If no phone number is given, none will be listed. Please call ahead to verify the event is still being held.