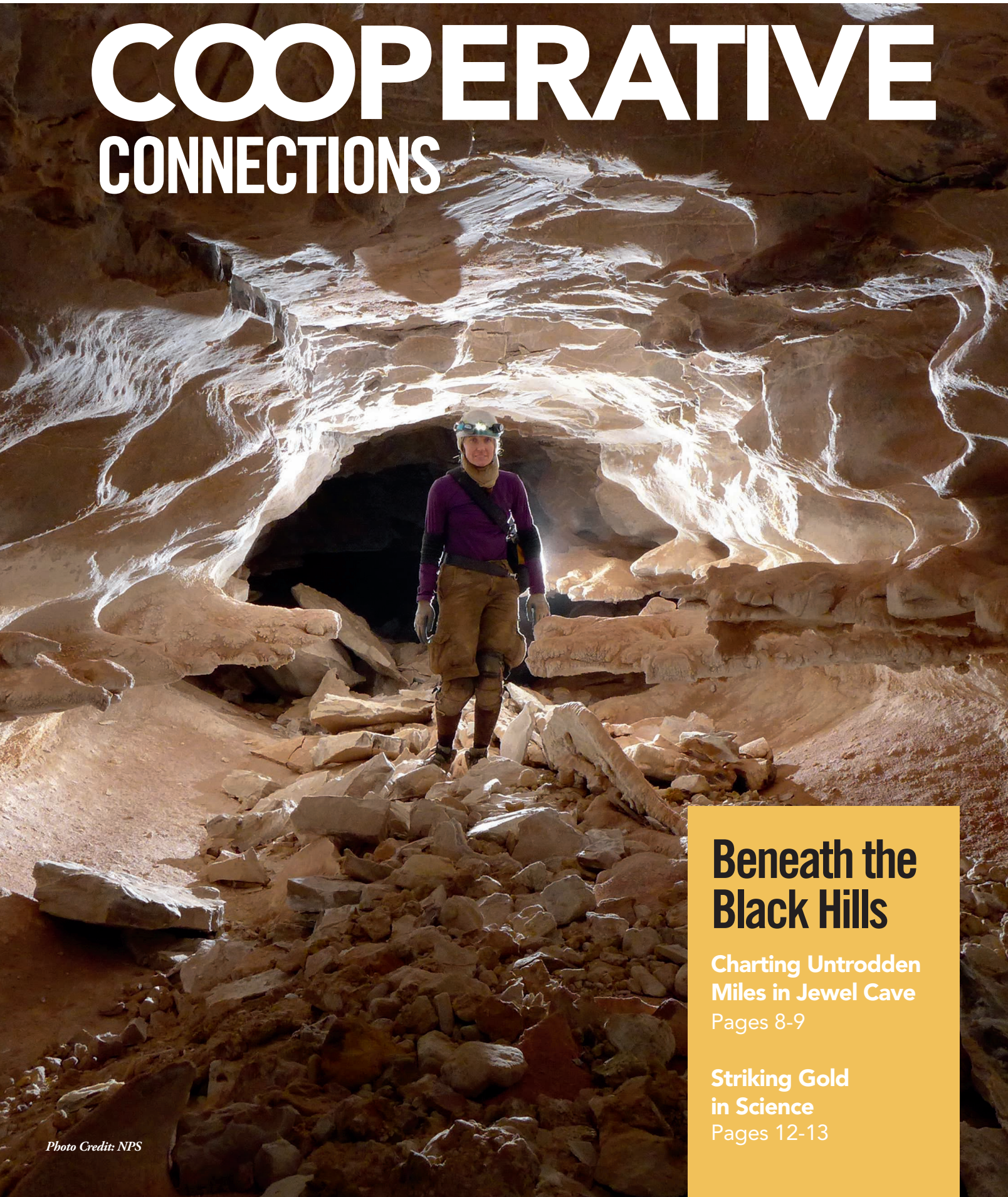


COOPERATIVE CONNECTIONS



Beneath the Black Hills

**Charting Untrodden
Miles in Jewel Cave**

Pages 8-9

**Striking Gold
in Science**

Pages 12-13

2024 Interim Rate Change Announced



Char Hager
General Manager

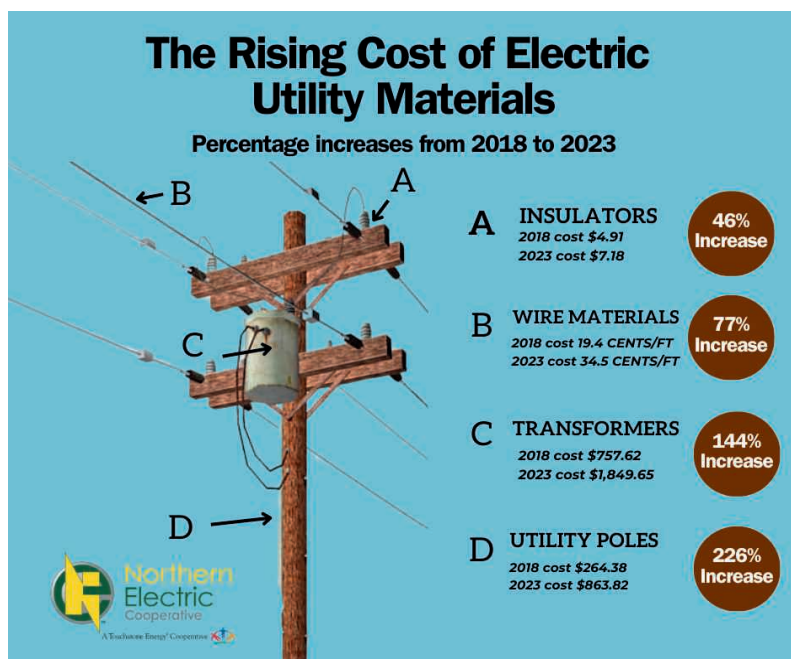
As discussed at the 2023 Annual Meeting and in the November 2023 issue of the *Cooperative Connections*, Northern Electric has been anticipating a rate change in 2024. The last rate increase for the cooperative was in January 2018.

Your cooperative is tremendously proud to have held a steady rate for these past six years. However, during this time we have experienced significant cost increases for materials and equipment as well as major delays in their delivery due to supply chain issues. Increased interest rates and wholesale power costs have also contributed to the need for a rate change.

Our power supplier, East River Electric has also faced these cost increases and will implement a rate change for the wholesale power they supply to us effective January 1, 2024.

The Northern Electric board does not take any kind of rate change lightly. After careful analysis and consideration, the Northern Electric Board of Directors approved an increase in the electric heat rate of \$.003 per kWh. This will bring the heat rate to \$.05 per kWh. The board also approved an interim rate increase of \$.003 per kWh for all other rates. Both increases in rates will take effect on January 1, 2024. The interim rates will remain in effect until the full cost-of-service study is completed by Power System Engineering. While the study is not yet complete, it does indicate the need for a permanent increase in rates for 2024. Once the final study is completed the results will be reviewed by the board. At that time, the board will set the new rates for 2024, and more information will be provided to the membership.

Northern Electric is always focusing on ways to cut costs and get the best value for our members. If you have any questions, please contact the office.



COOPERATIVE CONNECTIONS

NORTHERN ELECTRIC

(USPS 396-040)

Board President: Nolan Wipf

Board of Directors

Todd Hettich - Vice President
Ron Kaaz - Secretary
Josh Larson - Treasurer
Fran Esser
B.J. Hansen
Kirk Schaunaman
Scott Sperry
Mike Traxinger

CEO/General Manager: Char Hager
info@northernelectric.coop

Chief Financial Officer: Lorisa Rudolph

Operations Manager: Jerry Weber

Manager of Member Services: Russel Ulmer

Manager of Information Technology: Derek Gorecki

Communications Director: Kelly Brandlee
kbrandlee@northernelectric.coop

Executive Secretary: Amy Golden

Northern Electric Cooperative Connections is the monthly publication for the members of Northern Electric Cooperative, PO Box 457, Bath, SD 57427. Families subscribe to Cooperative Connections as part of their electric cooperative membership. The purpose of Northern Electric Cooperative Connections is to provide reliable, helpful information to electric cooperative members on electric cooperative matters and better rural living.

Subscription information: Northern Electric Cooperative members devote 50 cents from their monthly electric payments for a subscription. Non-member subscriptions are available for \$12 annually. Periodicals postage paid at Bath, SD 57427.

Postmaster: Please send address changes to Northern Electric Cooperative Connections, PO Box 457, Bath, SD 57427; telephone (605) 225-0310; fax (605) 225-1684

This institution is an equal opportunity provider and employer.

www.northernelectric.coop



**Northern Electric
Cooperative**
A Touchstone Energy Cooperative

Northern Electric Cooperative's regular board meeting was held November 20, 2023, at the headquarters in Bath with all directors present or via teleconference. As the first order of business, the board approved the October 19, 2023, minutes, and October expenditures. The Board then reviewed and accepted monthly reports by management.

East River Director Kirk Schaunaman reported on actions taken by the East River Board at the November 2, 2023 meeting. The next East River Board Meeting will be December 7, 2023 in Madison.

RESCO Director Todd Hettich reported on the RESCO Fall Board of Directors meeting on October 30-31, 2023, in Bloomington, MN. Director Ronald Kaaz reported on the South Dakota Wind Energy Association meeting on November 3, 2023.

MANAGER'S REPORT

General Manager Char Hager's report included the following items:

- Report on Rural Electric Development (REED) Board Meeting held on October 30, 2023.
- Report on East River MAC meeting held on October 31, 2023.
- Report on the Building Resilience Infrastructure and Communities Program (BRIC).

- Informed the board of the 2023 ACSI Survey for Northern Electric will begin December 4, 2023.

BOARD REPORT

The board considered and/or acted upon the following:

- Approved the date and time of the next regular board meeting for 8:30 A.M. on Thursday, December 21, 2023.
- Approved Work Order Inventories #23-10 for \$145,031.85 and #23-10MC for \$79,721.58 to be submitted to the Rural Utilities Service (RUS) for reimbursement from loan funds for construction already completed.
- Approved the 2023 Audit Services for the year ending December 31, 2023.
- Nominated Nolan Wipf as a candidate to represent Northern Electric on the SDREA Board of Directors.
- Selected a delegate and alternate for the 2024 SDREA Annual Meeting.
- The board reviewed and approved various rate tariffs for 2024. See page two for additional details.
- Formed a building committee to evaluate headquarter building options.

Talk to your director or co-op manager if you have questions on these matters.

FINANCIAL REPORT

| | October-23 | October-22 |
|-----------------------------|----------------|----------------|
| kWh Sales | 23,040,043 kWh | 22,666,561 kWh |
| Electric Revenues | \$2,328,687 | \$2,201,204 |
| Total Cost of Service | \$2,314,732 | \$2,121,376 |
| Operating Margins..... | -\$13,955 | -\$79,828 |
| Year to Date Margins | \$296,802 | \$835,303 |

RESIDENTIAL AVERAGE MONTHLY USAGE AND BILL

| | | | |
|-------------------|----------------|----------------|----------------|
| OCTOBER-2023..... | 1,849 kWh..... | \$211.04 | 0.1141 per kWh |
| OCTOBER 2022..... | 1,871 kWh..... | \$207.46 | 0.1109 per kWh |

Wholesale power cost, taxes, interest, and depreciation account for **85.8%** of NEC's total cost of service.

January is National Radon Action Month

Radon is a Natural Danger

About one in 15 homes in the U.S. has radon levels at or above the the EPA action level, according to the National Cancer Institute. You can't see or smell radon, and scientists estimate 20,000 lung cancer deaths in the U.S. each year are attributed to it.

Radon is produced from a natural breakdown of uranium in soil, rock and water. It enters homes, offices, schools and other buildings through cracks in floors and walls, construction joints or gaps around service pipes, electrical wires and sump pits. The Environmental Protection Agency reports elevated levels of radon gas have been measured in every state and estimates nearly one out of every 15 homes in America has elevated radon levels.

People who breathe in these radioactive particles, swallow water with high radon levels or are exposed to radon for a long period of time are susceptible to lung damage and lung cancer. Smokers who are exposed to elevated levels of radon gas have a 10 times higher risk of developing lung cancer, according to the Centers for Disease Prevention and Control.

It may take years before health problems appear. Your chances of getting lung cancer from radon depend mostly on:

- How much radon is in your home
- Where you spend most of your time (the main living and sleeping areas)
- The amount of time you spend in your home
- Whether you are a smoker or have ever smoked

Test Your Home

Old homes, new homes, homes with basements and homes without basements can have radon problems. Testing is the only way to determine how much radon is present.

Consider hiring a professional tester. Short-term (2-90 day) and long-term (more than 90-day) test kits are available, with the long-term kit producing more accurate results. The EPA website can help you find a radon test kit or measurement and mitigation professional near you. Do-it-yourself test kits also are available at many local hardware stores.

No level of radon exposure is considered completely safe, however the EPA only recommends reducing radon levels in your home if your long-term exposure averages four picocuries

per liter (pCi/L) or higher. A pCi is a measure of the rate of radioactive decay of radon gas. This decay causes radioactive particles that can get trapped in your lungs when you breathe.

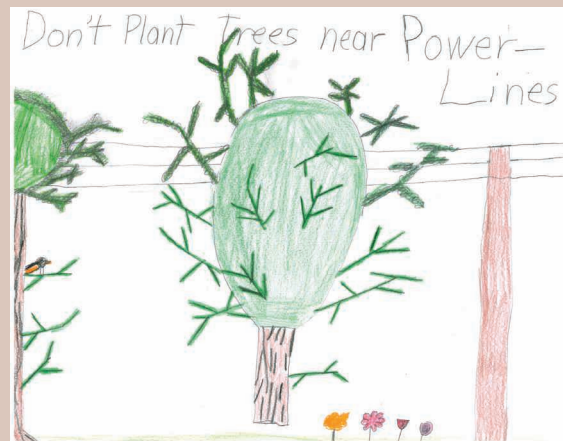
Reduce Radon Gas in Your Home

The American Cancer Society says a variety of methods can be used to reduce radon gas levels in your home, including sealing cracks in floors and walls and increasing ventilation through sub-slab depressurization using pipes and fans.

The EPA recommends using a state or nationally certified contractor, because lowering high radon levels often requires technical expertise and special skills. Two agencies have set the standard for participants seeking certification:

- The American Association of Radon Scientists and Technologists
- National Radon Safety Board

Always test again after the work is finished and then every two years. The U.S. Environmental Protection Agency has designated January as National Radon Action Month, a time when health agencies across the country urge all Americans to have their homes tested for radon.



Don't Plant Trees Near Power Lines

Annette Tschetter, Age 9

Annette Tschetter instructs readers to not plant trees near power lines. Annette is the daughter of Ryan and Elaine Tschetter from Revillo, S.D., members of Whetstone Valley Electric.

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.

SOUPS & STEWS

PUMPKIN APPLE SOUP

Ingredients:

3 tbsps. butter
1 cup finely chopped onion
2 tps. pumpkin pie spice
1 tsp. ground ginger
1 can (15 ounces) pumpkin
1 cup chunky applesauce
3 1/2 cups chicken broth
3/4 cup heavy cream

Method

Melt butter in large saucepan on medium heat. Add onion; cook and stir 5 minutes or until softened. Stir in pumpkin pie spice and ginger.

Stir in pumpkin, applesauce and broth until well blended and smooth. Bring to boil, stirring occasionally. Reduce heat to low; simmer 5 minutes. Remove from heat. (If a smoother soup is desired, place mixture in batches in blender container; cover and blend until smooth.) Stir in cream. Heat gently before serving, if necessary.

McCormick.com

CREAMY CHICKEN NOODLE STEW

Ingredients:

1/3 cup butter, cubed
1 med. carrot, shredded
1 celery rib, finely chopped
1/3 cup all-purpose flour
1 carton (32 oz) chicken broth
1 cup whole milk
1 cup uncooked kluski noodles or other egg noodles
2 cups cubed cooked chicken
1 1/2 cups shredded cheddar cheese
1/4 tsp. salt
1/4 tsp. pepper

Method

In a large saucepan, heat butter over medium high heat; saute carrot and celery until tender, 3 to 5 minutes. Stir in flour until blended; gradually add the broth and milk. Bring to a boil, stirring constantly. Cook and stir until thickened, 1-2 minutes. Stir in the noodles. Reduce heat; simmer uncovered, until noodles are al dente, 8-10 minutes, stirring occasionally. Add the chicken, salt and pepper. Cook and stir until the chicken is heated through. Stir in the cheese until melted. Serve.

**Susan Mitzner
Balaton, Minn.**

CHICKEN NOODLE SOUP WITH ROTISSERIE CHICKEN

Ingredients:

1 tbsps. vegetable oil
1 1/2 cups chopped carrots, (about 1/2-inch)
1 1/2 cups chopped celery, (about 1/2-inch)
1 cup chopped white onion, (about 1/2-inch)
1 tbsps. rotisserie chicken seasoning
4 cups chicken stock
4 cups medium egg noodles
2 cups chopped rotisserie chicken
1 tbsps. parsley flakes

Method

Heat vegetable oil in large saucepan on medium-high heat. Add carrots, celery and onion; cook and stir 8 to 10 minutes until softened and lightly browned. Stir in Seasoning. Cook 1 minute.

Add stock and egg noodles. Bring to boil. Reduce heat; simmer 8 to 10 minutes until noodles are just tender.

Gently stir in chicken and salt. Simmer 2 minutes longer. Remove from heat. Stir in parsley to serve.

McCormick.com

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 2023. All entries must include your name, mailing address, phone number and cooperative name.



Cheese Masters

Northern Electric Cooperative member Kasemeister Creamery builds a value added cheese company.

Kelly Brandlee

kbrandlee@northernelectric.coop

The word Kasemeister in German means “cheese master.” Becoming a great cheese master does not just happen overnight. It has taken many years of research and learning to develop the desired taste and flavors for which Kasemeister Creamery is famous. Owned and operated by Spink Colony near Frankfort,

Kasemeister Creamery has become locally renowned for its rich cheese flavors.

The Kasemeister Creamery cheese plant and store was completed in 2018. While Kasemeister Creamery started not long ago, its roots in the dairy industry date back to the Hutterite Colony’s dairy farm as early as 1945. The decision to expand to cheese-making occurred as an opportunity arose to cut out the middleman and further capture

a profit. While building a cheese plant has risks, it has been a good business decision, allowing the colony to directly connect with the end consumer and create a dedicated customer base.

Kasemeister Creamery employs five full-time and 12 part-time employees from Spink Colony. From taking orders to making cheese, cleaning, packaging, and delivery; all the employees pitch in and help with whatever is needed to keep the company moving forward. Jeremy Wipf has not always been a cheese maker. He’s also been an electrician’s assistant and worked with pigs on the Spink Colony hog farm. When

the colony started constructing its new cheese plant, Jeremy stepped into another new role, Kasemeister Creamery Manager.

“In 2018, Kasemeister Creamery utilized every other load of milk from the colony’s 100-cow dairy farm,” says Wipf. “Today, the cheese plant uses 90% of the dairy’s milk, with the remaining 10 % going to the Lake Norden cheese plant,” he continues.

In five short years, Kasemeister Creamery has grown its business to supply cheese to 150 retail stores from Rapid City to Aberdeen, Fargo to Sioux Falls, and everywhere in between. The growth of Kasemeister has been very grassroots, driven by cold calls and in-person conversations with managers and business owners about Kasemeister Creamery’s cheese products. “While delivering cheese and driving the different routes, the guys will stop in and talk to stores that look promising for selling our product,” says Wipf.

The cows making all that cheese consist of a three-way Holstein, Swedish Red, and Montbeliarde cross. While Holsteins are common in dairy herds across the state, you would be hard-pressed to find many other Swedish Red or Montbeliarde herds here. However, both breeds are gaining popularity in the United States for crossbreeding with Holsteins because of their high ranking in fertility, longevity, calving ease, resistance to mastitis, and higher butterfat and protein content, which are great for making cheese.

“In five short years, Kasemeister Creamery has grown its business to supply cheese to 150 retail stores from Rapid City to Aberdeen, Fargo, to Sioux Falls, and everywhere in between. The growth of Kasemeister has been very grassroots.”

Looking towards the future.

For several years, Spink Colony has focused its herd on breeding for A2/A2 genetics. Milk from cows with the A2 proteins allows some people with dairy sensitivities to digest dairy products more easily.

The development of this A2/A2 dominant herd could lead to another market opportunity in the future.

In addition to improving herd genetics, training people and continuing to improve their product is a focus of the farm. Kasemeister employees travel to cheese conventions and attend cheese-making seminars and food safety classes to hone their skills. “Food safety is an important part of producing a safe and quality product,” says Wipf. The creamery undergoes yearly inspections from the state as they pour over records and inspect equipment and facilities.

Over time, dairymen on the farm have shared their knowledge of dairying with the next generation. The colony hopes to add a tradition of sharing its cheese-making expertise with future generations at Spink Colony.



Cheeses made at the creamery include eight different kinds, each with several other specialty flavors available. Kasemeister even has a build-your-own gift box option. Customers can purchase cheese to pair with local wines, meats, and even the colony’s jams and honey.



Jewel Cave's walls glisten with a coating of calcite crystals coating that give this cave its unique name. *Image credit: NPS*

BENEATH THE BLACK HILLS

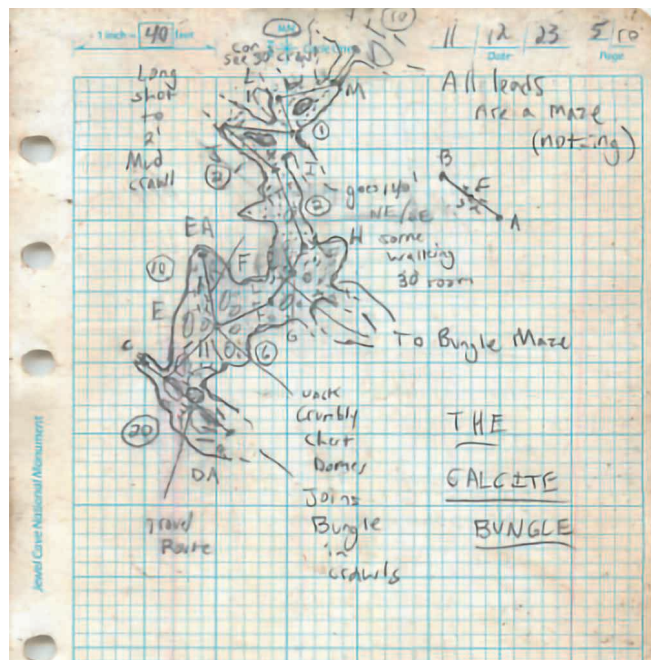
Charting Untrodden Miles in Jewel Cave

Frank Turner

frank.turner@sdrea.coop

In the depths of the Black Hills lies an immense domain of underground caves renowned for their untouched beauty, enticing tourists with the opportunity for stunning photography and expert-led tours. Digging a little deeper, however, reveals that many of these unsuspecting attractions are actually home to a vast network of rooms and passages where no human has ever set foot before. Jewel Cave National Monument, located west of Custer and celebrated for its unique, crystal calcite coating, is one such subterranean cavern that continues to be a frontier of exploration.

Jewel Cave has thousands of miles of unexplored passages, crawlways and chasms that await discovery, making it one of the largest cave systems in the world. The immensity of Jewel Cave and others like it in the Black Hills has inspired multiple



A field sketch from the four-day Veterans Day weekend expedition. *Image credit: NPS*

generations of ambitious cave explorers who have devoted years of their lives to mapping out new areas of these underground expanses.

Despite their efforts, only a small fraction of Jewel Cave has

been navigated and mapped, leading to new cave discoveries being recorded even now.

Recently, a group of National Park Service volunteer cave explorers, led by volunteer Chris Pelczarski, expanded the known limits of Jewel Cave in an expedition over Veterans Day weekend of this year.

In total, their journey lasted four days. Bringing only what they could carry, the small group of cavers wriggled through miles of passages without natural sunlight or ready supplies to ultimately be the first to step into what was previously untrodden terrain.

To achieve their goal, the volunteers tackled the 3-D maze that defines the Jewel Cave network, hiking and climbing steep underground terrain. Despite the challenge, Pelczarski said the ending discovery made the whole journey worthwhile. When discovering something new, the challenge pales in comparison.

“The experience of pushing the edge of something is very unique,” said Pelczarski. “When entering a new space, it weighs on you that it’s the first time that a human has ever interacted with that space. As explorers, we have an incredible amount of responsibility because we are the ones who share that story with others and set the tone of that space.”

In total, the explorers discovered and charted just over one mile of new passages during their Veterans Day expedition, uncovering new passages and even a distinctive split in the rock their group named ‘Fruit by the Foot,’ due to the volunteer group garnering a “fruitful yield” of discovery from the rock formation.

The broader work of these cavers has led to several breakthroughs over the years, including the discovery of Jewel Cave’s first cave lake, Hourglass Lake.

“In 2015, our explorers got to a point where the lowest part of the cave dipped into the Madison Aquifer. It was Jewel Cave’s first cave lake,” said Michael Wiles, Chief of Resource Management at Jewel Cave National Monument. “Since that initial discovery, 12 more lakes have been

found within Jewel Cave.”

With the possibility of discovery around every corner, Wiles regards volunteer explorers like Pelczarski as torchbearers in a continuing legacy created by the many cave explorers that came before them, including South Dakota caving legends Herb and Jan Conn and Wiles himself.

“Herb and Jan are icons in the Black Hills area and throughout the world because they were the first to document and map the cave back in 1959,” said Wiles. “They fell in love with the cave and it really captured their imagination.”

Together, Herb and Jan discovered the first 70 miles of Jewel Cave. Building from Herb and Jan’s initial discoveries, Wiles, with the help of volunteers like Pelczarski,

has been involved in the mapping of an additional 150 miles of cave since the Conns retired.

To date, 218.8 miles of Jewel Cave have been discovered. However, Wiles explained that barometric airflow studies indicate that the cave could be up to 14,000 miles long, and only 3% of the cave’s estimated total length has been mapped and discovered.

“Jewel Cave, for practical purposes, isn’t going to end,” said Wiles. “We know that the cave is hundreds if not thousands of miles long and that, alone, is exciting.”

With only a fraction of the total cave discovered, it’s evident that several years of cave discoveries lie ahead.



Volunteer cave explorer Dan Austin sketching a passage of Jewel Cave. Using coordinates to draw a survey line in the book, Austin draws the cave walls around the line to represent the cave walls around him, adding additional notes as needed. *Image credit: NPS*



Diann Brenner is excited to spend more time with grandkids and family during retirement.

BRENNER RETIRES

Northern Electric Redfield Customer Service Representative Diann Brenner Retires After 18 Years.

Kelly Brandlee

kbrandlee@northernelectric.coop

Diann Brenner is a familiar face at Northern Electric. Her smiling face, upbeat personality, and friendly voice has greeted customers stopping by the Redfield office or calling in for 18 years. Diann will retire in January to spend more time with her grandkids and family.

In 1976, Diann married her husband, Ed. In the early years, Diann was a stay-at-home mom to her two daughters while helping Ed milk their Holstein herd for several years. In 1994, the Brennens moved to Redfield, where they have lived since. Diann worked various jobs until she happened upon an opening at Northern Electric. Diann grew

up in Spink County and knew the electric co-op would be a great place to work. Through encouragement from a friend to apply, Diann started her career working in customer service at the Redfield office.

Diann has a variety of roles at Northern Electric, including helping the accounting team, answering phones, purchasing supplies, and answering member's questions. An unofficial duty includes bringing in goodies for co-workers at the Redfield office, whom she lovingly calls "my guys."

Diann has many fond memories of her time at Northern Electric,

but her favorite memories include the people. "I have enjoyed working with co-workers and members. The best part is working with people in my community who I know and getting to know those who I did not know."

Many things have changed during her time at Northern Electric, including the phone system. "When I was six months into this job, we had a huge ice storm that knocked down poles for miles and miles. All of the East River sub stations were off as well. It was exactly two weeks when the last members were restored. We received help from many crews from other coops. If you were in Spink County, you called the Redfield office, and I answered. We had an after hours service (SRS) back then, but their system was also overwhelmed with calls. We had hundreds of phone calls for outages during that time; it was up to me to take those calls and keep members updated on the outage," said Diann. Times have changed, and the phone system has become much more efficient. Diann is thankful for that.

Diann has enjoyed her time at the Cooperative and working with her co-workers. "We have a great team of young professionals, and it has been wonderful seeing them grow through different phases of their lives," says Diann. She has watched many co-workers join the Coop as single people enter the real world, meet their spouses, and start a family. That has been fun for Diann to experience and be a part of.

Diann leaves with a bit of advice for young professionals. "A Cooperative is a great place to work; it has great people and excellent benefits for a growing family." She continues, "We spend more time with our co-workers than our families in some cases. Enjoy your co-workers, invest time in getting to know them, and make the best of your time at work."



APPLY FOR 2024 SCHOLARSHIPS

Students Can Apply Now For \$1,000 and \$500 Co-op Scholarships

Students of Northern Electric Cooperative members who are currently enrolled in a post-secondary school - or plan to enroll in the fall of 2024 can now apply for two co-op-sponsored scholarships.

Bismarck-based Basin Electric Power Cooperative, which generates electricity for Northern Electric Cooperative, is awarding a \$1,000 scholarship to a student within the Northern Electric service territory. Northern Electric is also awarding a \$500 scholarship to a student of a co-op member. Students can apply for both scholarships by filling out one Basin Electric 2024 scholarship application which can be found on the Northern Electric website at northernelectric.coop/scholarships. Applications can also be picked up at a Northern Electric office.

In 2023, Ethan Boekelheide of Northville was awarded the \$1,000 Basin Electric scholarship and

Abbilyn Kaan of Aberdeen was the recipient of the \$500 Northern Electric scholarship.

The scholarship application includes information about the student's academic record, work experience, an applicant appraisal from an advisor or supervisor, and a one-page essay on the topic: *'What challenges face rural electric cooperatives in the coming years and how do you think challenges should be addressed?'*

The entire application must be completed and turned into the Northern Electric Cooperative office in Bath by the **February 16, 2024** deadline.

A committee of cooperative employees will evaluate the applications and award both the \$1,000 and \$500 scholarships from the pool of applicants. Scholarships will be directly paid to the institution where the recipient is enrolled in the fall of 2024.

How to Apply

• SCHOLARSHIP ELIGIBILITY

Applicants must be U.S. citizens under the age of 25, and natural or adopted children of Northern Electric Cooperative consumers/ members. Any applicant must be a student who is enrolled, or planning to enroll, in a full-time graduate or undergraduate course of study at an accredited two-year or four-year college, university, or vocational/technical school.

• THE SELECTION PROCESS

All applications are critically evaluated by a committee of cooperative employees using a combination of several criteria including: a written essay, participation in school and community activities, grade-point average, SAT/ACT scores, a statement by the student explaining his/her educational and career goals, financial need, and a written recommendation from a third party. The winning \$1,000 entry will be sent to Basin Electric for scholarship distribution. The committee will also select the winning entry for the \$500 Northern Electric scholarship.

• APPLICATION

Applications are available from local high school guidance counselors, on the Northern Electric Cooperative website at northernelectric.coop/scholarships or directly from the Northern Electric office in Bath.

COMPLETED APPLICATIONS MUST BE RETURNED BY FEBRUARY 16, 2024 TO:

Northern Electric Cooperative
Attention: Scholarship
PO Box 457
Bath, SD 57427

For more information contact Kelly Brandlee at: **605-225-0310**



The Sanford Underground Research Facility partners with more than 2,000 scientists from more than 200 global institutions and universities, enabling groundbreaking research across multiple disciplines.

STRIKING GOLD IN SCIENCE

Unearthing Research at the Sanford Underground Research Facility

Frank Turner

frank.turner@sdrea.coop

Years ago, the Homestake Mine in Lead, South Dakota, lured prospectors with the promise of riches during the gold rush era. Yet today, the site where miners once delved for gold now hosts scientists pursuing their own discoveries, not for gold, but for discoveries in particle physics and dark matter at the Sanford Underground Research Facility.

The mine's transformation into a

state-of-the-art research facility really began in 1970 when Raymond Davis Jr. began what is now known today as the Homestake experiment, a research project that would forever change the entire landscape of western South Dakota. Seeing beyond the precious metal, Davis envisioned the Homestake Mine as the perfect location to conduct research on the illusive neutrino particle. Conducting neutrino research underground was a crucial component of the project because the deep

environment of the mine shielded his experiments from cosmic rays, allowing for more accurate detection of neutrinos. While the Homestake Mine was still in operation, Davis worked among the bustle of mining activities to conduct research, which led to groundbreaking discovery in neutrino research and ultimately to a Nobel Prize in 2002.

As Davis concluded his groundbreaking neutrino research, a chapter was closing for the Homestake Mine. According to the facility's website, Homestake was North America's largest and deepest gold mine at the time of its closing, producing approximately 41 million ounces of gold in its 126-year lifetime. When the mine was decommissioned in 2002, it threatened to not only leave a vast cavern in the earth but also a significant void in the local economy. Davis's success, however, prompted South Dakota's leadership to step in at a critical moment and

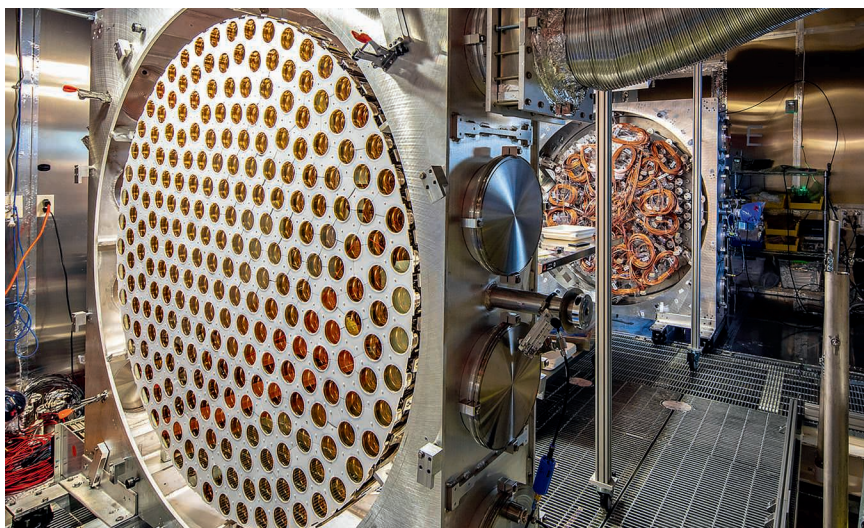
repurpose the mine into a bastion of scientific research.

Mike Ray, Media Relations Manager at Sanford Underground Research Facility, reflected on the state's response to the mine's closure. "Those in leadership at the time saw that this mine was closing and the terrible economic impact that the closure was going to have on the northern hills and this community, but they saw a light at the end of the tunnel," he said.

The light at the end of the tunnel became the Sanford Underground Research Facility. To advance one of South Dakota's most ambitious projects, the state secured a \$70 million donation from philanthropist T. Denny Sanford and a land donation from Barrick Gold Corporation, the mine's owner. The state then established the South Dakota Science and Technology Authority, which contributed an additional \$40 million to realize the project. These donations paved the way forward to begin construction on a space for some of the most advanced science projects ever made.

The herculean effort, Ray explained, was not only to mitigate the negative economic impact of the mine's closure but to create something even more impactful for South Dakota and its residents. Today, the Sanford Underground Research Facility collaborators include over 2,000 scientists from over 200 institutions and universities worldwide. It is expected to garner an estimated \$2 billion net economic impact in South Dakota by 2029.

Beyond its economic contributions, the lab holds potential for groundbreaking discoveries across various disciplines, including projects researching biology, geology, engineering or particle physics. Notably, the lab is currently home to LUX-ZEPLIN, the world's most sensitive dark matter detector and DUNE, the Deep



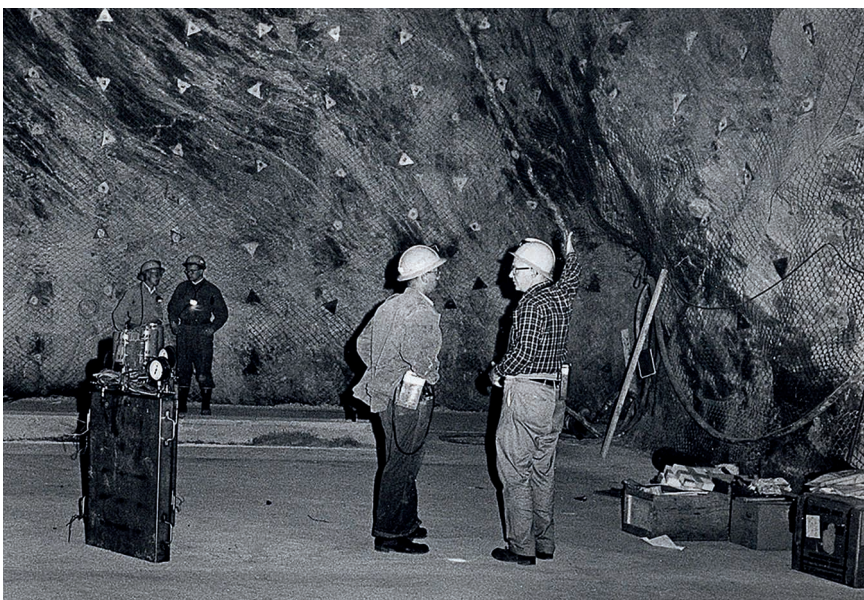
An array of the LUX-ZEPLIN, the world's most sensitive dark matter detector.
Photo Credit: Matthew Kapust, Sanford Underground Research Facility.

Underground Neutrino Experiment, among several other significant projects. While LUX-ZEPLIN and DUNE are distinct projects, both seek to provide fundamental insights into our current understanding of the laws of physics.

"There are so many examples of how fundamental research can take decades to lead to innovation," Ray said. "The beauty of this is that we don't always know where this research will

take us, but if we don't do this kind of exploration, we will never know the applications of these far-reaching projects."

Regardless of the outcome, the Sanford Underground Research Facility will continue to not only preserve the historic legacy of South Dakota's Homestake Mine, but also place South Dakota at the forefront of discovery and innovation for years to come.



A historic view of the Davis Cavern that hosted Ray Davis's Nobel Prize-winning solar neutrino experiment. The cavern has since been expanded and its walls have been coated with shotcrete, a type of spray-on concrete, to accommodate research on dark matter.
Photo Credit: Anna Davis, Sanford Underground Research Facility.



Shown in front of the True Dakotan building on Main Street in Wessington Springs are newspaper/print shop staff (left to right) Delia Atkinson, Office Manger; Kristi Hine, Editor/Publisher; Cathy Perry, Proofreader; shop dog Lincoln. Among the oldest buildings in Jerauld County, the building has always been a newspaper and/or print shop. Constructed in 1915, the True Dakotan recently underwent a complete renovation after a fire in June 2020.

SMALL TOWN NEWSPAPERS

Connecting Communities

Shannon Marvel

shannon.marvel@sdrea.coop

Rural, small-town newspapers are an important cohesive element that keep communities together.

Many of South Dakota's community newspapers have faced economic difficulties, yet their dedication to their mission is what drives them to find innovative ways to persist.

According to South Dakota NewsMedia Association's Executive Director David Bordewyk, a combination of factors have made it difficult for small, community newspapers to thrive

as they once did in decades past.

"There's a lot of advertising that used to be in traditional media that has moved into a digital realm such as Google, Facebook and other platforms. That's been a huge disruption. Then there's the whole thing about the internet and how people consume information," Bordewyk said.

The pandemic had a major impact on the newspaper business and accelerated online advertising.

Inflation has also increased production and postal service costs considerably, which has made it tough for small, rural newspapers to balance their books and maintain profits.

"Almost all of our community newspapers rely on a postal service to deliver the newspaper to subscribers. And we've seen a 40 percent rise in postal rates over the last three years," Bordewyk said.

How do newspapers deal with that?

Some newspapers have done a good job of capturing that digital market, Bordewyk said. Others have really gotten aggressive at increasing their prices, with some having to increase subscription rates from \$40 to \$80 per year.

Regardless, there's value in a community newspaper.

Who else is going to consistently cover city council and county commission meetings, or local school activities and sports? Kristi Hine knows that value well.

Hine is the publisher and editor of the True Dakotan, a weekly newspaper that covers local happenings in Jerauld County, based in Wessington Springs.

"Newspapers play such an important role to keep communities together," Hine said.

"We cover everything from local government to high school sports to features. I just did a feature about these women who did a Christmas village exhibit at the county courthouse. It's peeling back the layers and truly telling the community's story. Without the local newspaper, there's no one to tell that story. Larger outlets may come cover a story if you have a tornado or your sports team is doing really well, but it's the community newspaper that'll be listening in on what the city council is going to say at their meeting," Hine said.

Community newspapers, in that sense, really are the eyes and ears for the community. The important goal of the community newspaper is to connect the community, Hine said. "Especially in this world when it's so easy to be on different sides of the spectrum. Community newspapers are the fabric that holds communities together, no matter what side of the aisle their readers land on," she said. "Especially in this world when it's so easy to be on different sides of the spectrum. Community newspapers are the fabric that keeps communities together, no matter what aisle their readers land on," she said.

Hine bought the True Dakotan eight years ago in March of 2015. Originally from Phoenix, Arizona, the newspaperwoman

has found herself enthralled with the small Jerauld County community.

Over the last eight years, Hine said she's seen more changes in the newspaper industry than her predecessor saw in the last 40 years.

"There's been a great deal of change," Hine said.

She's gotten more creative with advertising, using social media as a tool to promote local businesses. If a business is hosting an event or wants to promote a special sale, the business will do a Facebook live with Hine.

The True Dakotan also offers an online E-Edition and weekly newsletter, though the original print product is still the largest circulation.

Advertising and marketing aside, it all comes down to local news content.

"That's the driving force as we enter this evolution of newspapers. We're at the crux," Hine said.

To the northeast in Day County, the Reporter and Farmer newspaper is being led by Amanda (Fanger) Dulitz, a young reporter-turned-publisher, who recently purchased operation last year.

"Community newspapers are the lifeblood of a community. The strength of a community is reflected in the strength of their community newspaper. We're the bulletin board of the community. We're the cheerleaders of the community. We keep people connected," Dulitz said.

Dulitz found her passion for rural newspapers in South Dakota as soon as she picked up the reporter pad in 2007 after graduating from high school.

She worked at the Onida Watchman for a short time before heading east to Webster, where she took on the role as a news reporter for the Reporter and Farmer. Fast forward a couple decades and now Dulitz is the owner of the Reporter and Farmer.

She noted that costs were pretty stable at the newspaper for awhile, but seemed to sharply increase as soon as she signed the dotted line giving her ownership of the

operation.

"I'll probably have to take a look at my rates and lock in my rates for the next year. Everything is just going up, and it impacts the bottom line overall and you've got to do what you've got to do," she lamented.

But without the support of subscribers and advertisers, and really the entire community as a whole, the newspaper couldn't fulfill its purpose of keeping everyone on the same page and in the know.

The relationship between a community newspaper and the community itself is something Dulitz compares to a team of horses.

"The newspaper keeps everybody in an area knowing what's going on and pulling in the same direction. One horse can only pull so much, but if you put them together they can pull double.

That community unity – the newspaper – is what yokes people together and gets people pulling together," Dulitz said.

She understands that without the community support, there'd be no newspaper.

"We've got some of those readers when the paper gets back from the press on



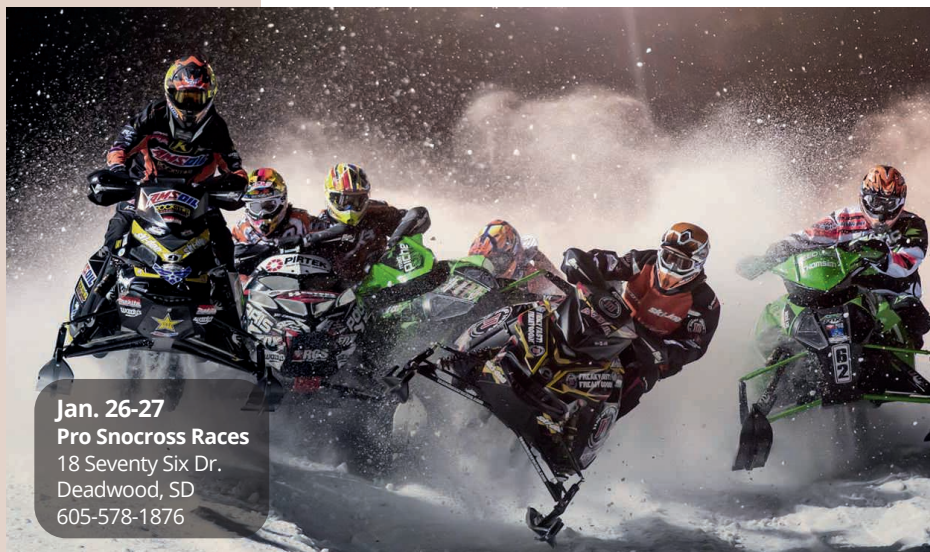
Kristi Hine, editor/publisher, True Dakotan and Delia Atkinson, office manager

Friday – they're standing there waiting for the paper to be dropped off. They're the first ones in the door letting us know about some breaking news event that we haven't heard about yet," she said.

"Constantly, readers and advertisers let us know what we're doing right and what we're doing wrong. We need that. We need that mutual push and pull. We recognize that our readers and advertisers are key to our business and we appreciate it."



From left is Publisher Amanda (Fanger) Dulitz, circulation manager Pat Sass, graphic designer Megan Garry, writer Kevin Winter, sales representative Kirstin Ure (front), print tech Jessica Washenberger and proofreader Linda Holberg.



Jan. 26-27
Pro Snocross Races
18 Seventy Six Dr.
Deadwood, SD
605-578-1876

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.

JAN. 5
Granite Sports Fantastic Friday
3 p.m.
Hill City, SD

JAN. 6
Live on Stage
High Country Guest Ranch
Hill City, SD

JAN. 10
45th Annual Ranchers Workshop
9 a.m.
Sinte Gleska University Multi-Purpose Center
Mission, SD

JAN. 12
Granite Sports Fantastic Friday
3 p.m.
Hill City, SD

JAN. 13
Knights of Columbus Bowling Tournament
1 p.m.
Meadowood Lanes
Rapid City, SD

JAN. 20
Live on Stage
High Country Guest Ranch
Hill City, SD

JAN. 23
A Trip to Chile (Reservations Required)
6:30 p.m.
Mangiamo
Hill City, SD

JAN. 25
A Trip to Chile (Reservations Required)
5:30 p.m.
Mangiamo
Hill City, SD

JAN. 26
Granite Sports Fantastic Friday
3 p.m.
Hill City, SD

JAN. 26-27
Reliance Area Community Development 29th Annual Dinner Theater
6 p.m.
Reliance Legion Hall
Reliance, SD

FEB. 3
Live On Stage
High Country Guest Ranch
Hill City, SD

FEB. 3
Lake Hendricks Fishing Derby
11a.m.
City Boat Landing
Hendricks, MN

FEB. 10
Polar Bear Chili Cook-Off
11a.m.
Main Street
Hill City, SD

FEB. 10
Tour de Chocolate
Main Street
Hill City, SD

FEB. 17
Live On Stage
High Country Guest Ranch
Hill City, SD

FEB. 18-20
MASC presents Disaster! the Musical
Vesta Community Center
Vesta, MN

FEB. 20
A Trip to Portugal
6:30 p.m.
Mangiamo
Hill City, SD

FEB. 22
The Starlets: Pop Female Trio
Aberdeen Community Concert Association
7 p.m.
Johnson Fine Arts Center NSU
Aberdeen, SD

FEB. 23-24
Women in Blue Jeans Conference
Highland Conference Center
Mitchell, SD

Note: Please make sure to call ahead to verify the event is still being held.