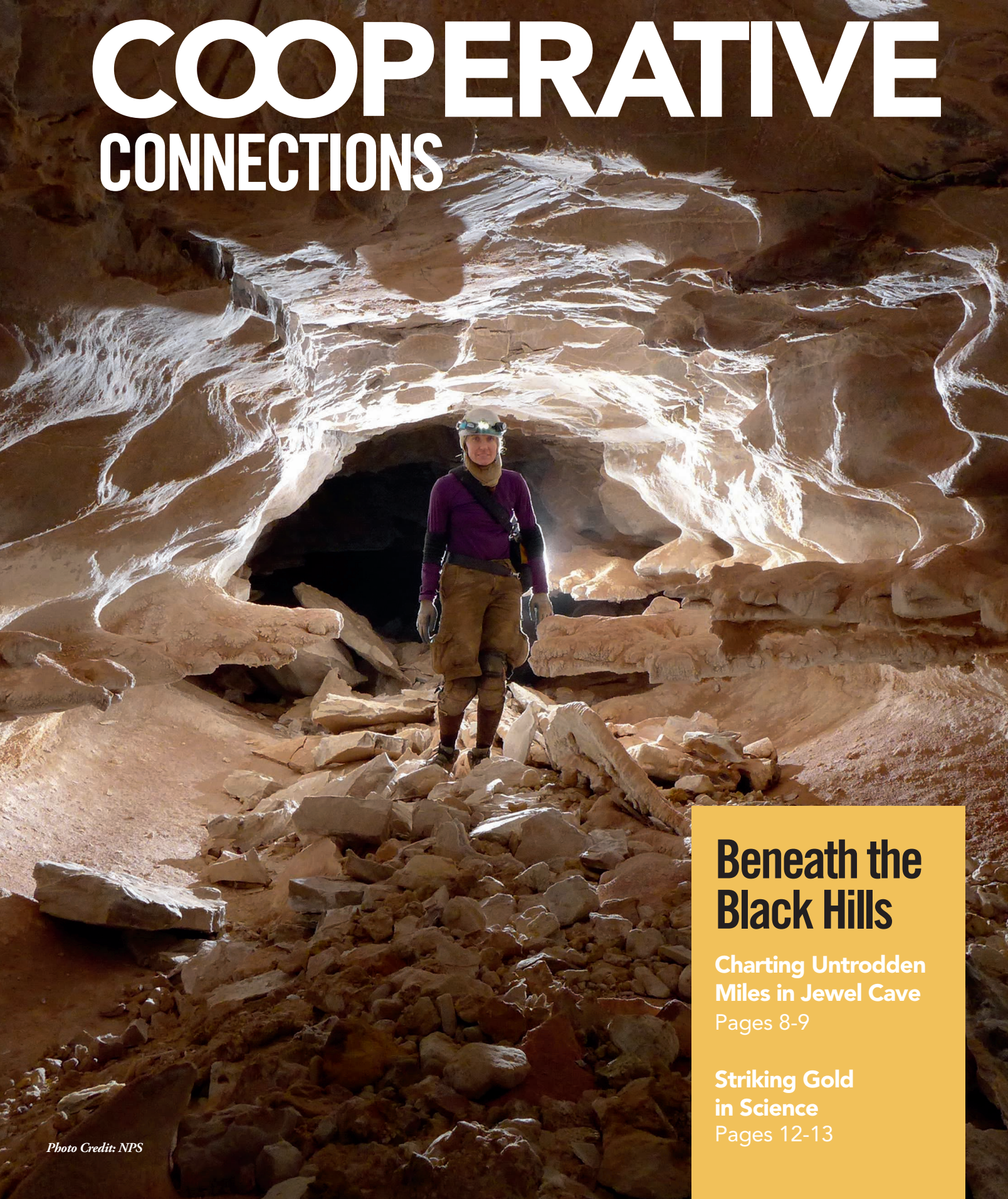


COOPERATIVE CONNECTIONS



Beneath the Black Hills

**Charting Untrodden
Miles in Jewel Cave**

Pages 8-9

**Striking Gold
in Science**

Pages 12-13

2023 Construction Work Plan Review



Tim McCarthy

General Manager/
Chief Executive
Officer

Tim.McCarthy@
siouxvalleyenergy.
com

One of our core strategies is to achieve top quartile reliability performance, which can only be done through an ongoing construction and maintenance program of our electric system. Our employees and contractors have done just that, making good progress with our construction workplan. Through October 2023 we have spent approximately \$18.6 million of the capital budget with the following major items:

- \$6.62 million – Rebuilding old lines and constructing new lines
- \$6.63 million – New transformer and meter purchases
- \$1.44 million – New services
- \$2.56 million – Underground cable replacement
- \$990,000 – Service upgrades
- \$410,000 – Other (miscellaneous hardware replacements of crossarms, broken equipment, switches, etc. along with pole replacements, streetlights, and voltage regulators)

We expect to have constructed approximately 100 miles of line by the end of 2023 (which is 25 miles less than normal). Here is an overview of some of the planned project areas where our lineworkers have been spending considerable time replacing overhead and underground line:

- Minnehaha County, SD – 31.39 miles
- Brookings County, SD – 24.24 miles
- Moody County, SD – 14.09 miles
- Lake County, SD – 25.35 miles

- Pipestone County, MN – 4.19 miles
- Rock County, MN – 5.6 miles
- Kingsbury County, SD – 0.71 mile

Within these counties, specific three-phase projects include:

- 6.5 Mile Project – New overhead line for a new circuit west of Lake Madison.
- 1.7 Mile Project – New underground tie line along Veteran's Parkway.
- 3.9 Mile Project – New overhead tie line to create redundancy between Trent and EROS substations.
- 3.4 Mile Project – Line upgrade west of Chester.
- 4 Mile Project – New overhead tie line north of Holland, MN.
- 5 Mile Project – New line and line upgrade serving the area around Sinai.

In years past, we have worked to construct 125 miles of line per year, but we made the decision to hold off in 2023 given the rate pressures with inflation on materials, higher interest rates, and increased labor costs. We hope to get back to a more aggressive construction plan in the coming years to maintain the high reliability we provide our members today.

Before I sign off for the year, I want to wish both our employees and members Happy Holidays – I hope your holiday season is filled with joy!

Co-op Hosts Yearly Legislative Event

During the month of November, Sioux Valley Energy hosted a South Dakota Electric Cooperative Legislative Luncheon in conjunction with Southeastern Electric Cooperative. Fifteen area legislators attended the event held in Sioux Falls to learn more about issues impacting electric cooperative members.

Pictured to the right: District 13 Representative Sue Peterson (Sioux Falls) talks with Sioux Valley Energy Director, Dr. Leslie Heinemann, SD Rural Electric Association Lead Lobbyist, Darla Pollman Rogers, and Sioux Valley Energy's Vice President of Public Relations, Carrie Vugteveen.



COOPERATIVE CONNECTIONS
SIoux VALLEY ENERGY

(USPS No. 497-440)

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Sioux Valley Energy Cooperative Connections is the monthly publication for the members of Sioux Valley Energy, PO Box 216, Colman, SD 57017. Families subscribe to *Sioux Valley Energy Cooperative Connections* as part of their electric cooperative membership. The purpose of *Sioux Valley Energy Cooperative Connections* is to provide reliable, helpful information to Sioux Valley Energy members on electric cooperative matters and better living.

Subscription information: Sioux Valley Energy members devote 50 cents from their monthly electric payments for a subscription. Non-member subscriptions are available for \$12 annually. Periodicals Postage Paid at Colman, SD 57017 and at additional mailing offices.

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How to contact us: Phone: 1-800-234-1960
 e-mail: sve@siouxvalleyenergy.com
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To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found on-line at http://www.ascr.usda.gov/complaint_filing_cust.html, and at any USDA office, or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed complaint form or letter to USDA by:

- (1) mail: U.S. Department of Agriculture
 Office of the Assistant Secretary for Civil Rights
 1400 Independence Avenue, S.W.
 Washington, D.C. 20250-9410
- (2) fax: (202) 690-7442; or
- (3) email: program.intake@usda.gov

Sioux Valley Energy is an equal opportunity provider and employer.

2024 DISTRICT MEETINGS SET

The Sioux Valley Energy Board of Directors approved the 2024 District Meeting schedule during their September meeting. Three elections will take place in Districts 1, 3, and 8.

Members interested in running for the Board must submit a Director Petition, Conflict of Interest Statement, and Qualification Certification 60 days prior to the meeting date. Petitions must be delivered to a Sioux Valley Energy office location or postmarked by the petition deadline. Sioux Valley Energy encourages members to gather extra member signatures and to deliver or mail completed petitions in advance of the petition deadline to ensure time for member verification.

PETITION DEADLINES ARE AS FOLLOWS:

- District 3 – Thursday, December 28, 2023**
- District 1 – Thursday, January 25, 2024**
- District 8 – Friday, January 26, 2024**

Petitions can be obtained at www.siouxvalleyenergy.com or by calling 800-234-1960. The Cooperative Bylaws state the qualifications needed to be a director. Interested members are encouraged to contact Brenda Schelhaas, Executive Assistant. All Board seats elected in 2024 will serve three-year terms.*Denotes election meetings.

Date	District	Director	Location
Thursday, February 22	4	Daniel	Dakota Prairie Playhouse, Madison, SD
Monday, February 26*	3	Heinemann*	William J Janklow Comm. Center Flandreau, SD
Tuesday, February 27	5	Weinacht	Taopi Hall, Colton, SD
Thursday, February 29	10	Roskamp	Edgerton Public School, Edgerton, MN
Monday, March 11	6	Fish & Rogen	Brandon Valley High School, Brandon, SD
Tuesday, March 12	7	DeMent	West Central School, Hartford, SD
Thursday, March 14	9	Johnson	Pipestone Area High School, Pipestone, MN
Thursday, March 21	2	Vostad	Sioux Valley School, Volga, SD
Monday, March 25*	1	DeGreef*	Elkton Community Center, Elkton, SD
Tuesday, March 26*	8	Leuthold*	Generations (Grand Prairie Event Center), Luverne, MN

Give me some space . . .

Space heaters account for a third of heating fires and 80 percent of heating fire deaths per year.



Learn more at: 

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.

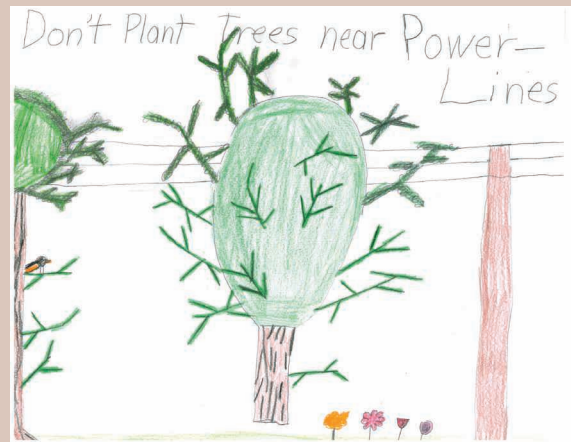
Reduce Radon Gas in Your Home

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 though 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 tbsp. 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 tbsp. rotisserie chicken seasoning
 4 cups chicken stock
 4 cups medium egg noodles
 2 cups chopped rotisserie chicken
 1 tbsp. 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.

Ford Lightning Added to SVE Fleet



Sheila Gross
Energy Services
Specialist

Contact Sheila Gross at sheila.gross@siouxvalleyenergy.com to learn more. Check out our rebates and incentives here:



Purchasing the Ford F-150 Lightning truck gives SVE employees the opportunity to learn more about how EV technologies with four-wheel drive and towing/powering capabilities work in the Upper Midwest and the charging requirements needed for a home. This truck comes with a 19.2 kW charging capability compared to most cars that range from 7 to 11 kW. Our goal is to continue to provide EV education and resources to our members. Here are some insights if you are in the market for an EV.

1) Visit our website at <https://www.siouxvalleyenergy.com/electric-vehicles-ev> to search EV models, charger information, calculate your estimated monthly savings if you make the switch from your gas model to an electric one, learn more about federal tax incentives, and the programs offered by SVE.

2) The most common choice for at-home charging is to install a 240V, 14-50 NEMA outlet and/or a wall-mounted charger. However, 50 amps won't allow you to take advantage of the full capability of larger chargers, like the 19.2 kW Ford F-150 Lightning charger, which requires an

80-amp circuit. Costs for equipment and installation vary depending on what you install and the distance necessary for wiring.

3) Check to see if your electrical panel will need to be upgraded or if there is sufficient space to add the load. We recommend hiring an electrician to install your equipment.

4) Contact Energy Services at 800-234-1960 for more information and to check the size of the transformer that serves you. We can provide a list of electricians in the area that do EV wiring. We also offer a rebate for the purchase of a new electric vehicle if you participate in an off-peak charging rate option. You can choose from a whole-home time of use rate or a submetered plug-in rate. If you are planning to build a new home, we also offer a rebate to make your garage EV-ready.



REGISTER TO WIN

Register by **December 31, 2023**, to win one of several electric prizes!

Name: _____

Address: _____

City, State, ZIP: _____

Account #: _____

Phone #: _____

Email: _____

Mail this form to: Sioux Valley Energy, PO Box 216, Colman, SD 57017

ENTER TODAY TO WIN!

We're giving away five great prizes as part of this month's Energy Makeover Contest!

Visit us at: www.siouxvalleyenergy.com

SIoux VALLEY ENERGY



BRINGING LIGHT

Co-op Participates in Parades of Light in Four Area Communities and Lights at the Lodge

Santa's elves in the form of Sioux Valley Energy employees and their families distributed candy canes and hot chocolate packets along holiday of lights parade routes in November and December.

The Co-op's parade entry, which featured a powerline illuminated by LED lights, an inflatable Santa snowglobe, and other decorations made its way down the streets of Brandon, Colman, Hartford, and Madison for those communities' festive celebrations.

And, the Cooperative helped spread holiday cheer in Pipestone at the fourth annual Lights at the Lodge event at Hiawatha Pagaent Park. The lights are on display through January 1, 2024.

TOP: Sioux Valley Energy's lighted entry was seen at several area Parade of Lights recently, including the Dec. 3 parade in Hartford (pictured). **RIGHT:** Sioux Valley Energy helped with set up for Pipestone's Lights at the Lodge and also decorated one of the event's trees.



SVE's Jay Buchholz, Brandon Lane, Josh Entzel and their families walked in the Brandon parade.



SVE's Amanda Hoffman, Paul Anderson, Amy Voelker, and Jay Buchholz, participated in Hartford's parade.



SVE's Josh Bjorklund and family participated in the Madison parade.



SVE's Holly Kruger, Melissa Hennings, Tim Durst, Garth Park, Matt Determan, and Jesse Brown helped decorate for Lights at the Lodge.



SVE's Kara LeBrun, Dana Foster, and Ross Dixon and family were at Colman's Looney Lights Parade.



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

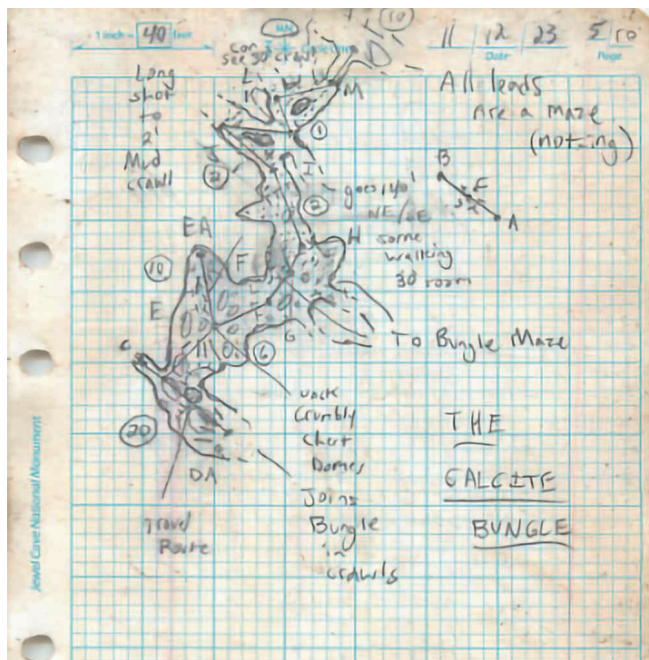
Charting Untrodden Miles in Jewel Cave

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*



LIGHTS ON

Operations Department Plays Critical Role at Cooperative

One of the most visible groups of employees at Sioux Valley Energy is our Operations Department. You see these individuals in the big bucket and digger trucks working on maintaining the Co-op's power lines. They're also the ones you'll see rolling out of bed in the early hours of the morning and late hours of the night to respond to an outage call.

This group comprises about one-third of Sioux Valley Energy's 110-person workforce. The Operations Department consists of a vice president of engineering and operations, system engineer, two operations managers, eight lead journey lineworkers, 22 journey lineworkers, one apprentice line worker, two mechanics, an engineering technician, and a GIS specialist. This is in addition to the contractor relations team that works with outside contractor crews. The operations crews work out of the Cooperative's main offices at Colman, Brandon, and Pipestone, MN, and outposts at Hartford, Madison, and Volga.

These crews maintain more than 6,175 miles of line across seven counties in two states. This is roughly the same distance as taking an 86-hour road trip from Sioux Falls, SD, to Pittsburg, PA, then heading to Los Angeles,

CA, via Nashville, TN, and up to Portland, OR, before returning to Sioux Falls.

Sometimes working conditions are less than ideal for the operations crews, especially when responding to weather-related outages which can occur any time of the day or night and may be accompanied by wind, snow, ice, rain, or extreme temperatures.

"Sioux Valley Energy has strived to build a robust and reliable system over its long history, but even the strongest systems lose some battles with Mother Nature at times," said Chris Graff, SVE's System Engineer. "There is never any hesitation from our operations crews to head out in these moments and battle those conditions to restore service to our members as quickly and safely as possible."

On a daily basis, the crews are seeing to the maintenance and construction of the system, working on both energized and de-energized lines to ensure the Cooperative's lines are functioning correctly to provide reliable electrical service to the Cooperative's nearly 30,000 members.

Above: Crews replace a pole broken by a car accident.



Left: SVE System Engineer Chris Graff reviews a project with the Madison-based crew. **Above left:** Lineworkers install underground conductor. **Above:** Crews frame a pole.



A majority of SVE's line crew, including the mechanics, poses for a group photo. Four lineworkers are not pictured.

During the fall line patrol, a line worker aims a grease gun at overhead equipment to apply lubrication to a switch on a three phase line. The grease guns are similar to a paint ball gun, but we utilize balls that contain grease/lube. It allows us to maintain our overhead equipment while energized, thus avoiding a maintenance outage.



RECIPES NEEDED FOR

The Country Cookin'

cookbook

Your recipe could be featured in the 40th volume of East River Electric's Country Cookin' cookbook!

Help us create another great cookbook by submitting your favorite recipes

Submit recipes via email to

ajhanssen@eastriver.coop

or contact your local cooperative for more information.



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

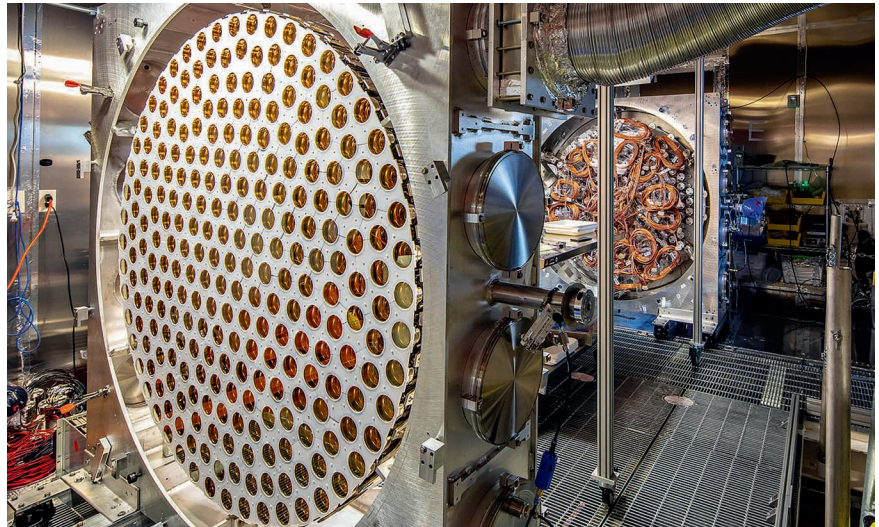
repurpose the mine into a bastion of scientific research.

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



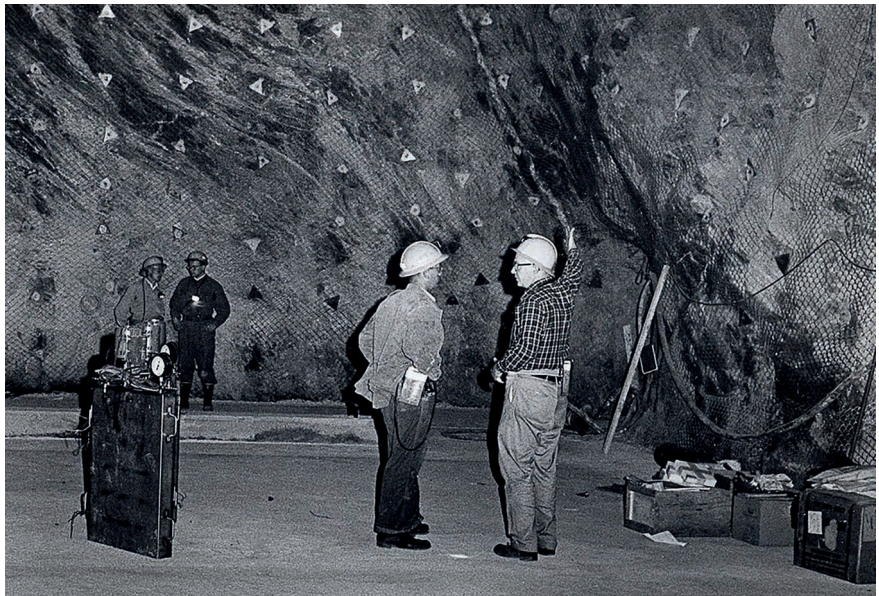
An array of the LUX-ZEPLIN, the world's most sensitive dark matter detector.
Photo Credit: Matthew Kapust, Sanford Underground Research Facility.

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.

SCHOLARSHIPS OFFERED

Application deadline is January 12

To be eligible you must...

- Be a graduating high school senior or a first-time attendee.
- Plan to be a full-time student in an accredited university or technical college.
- Be a child or dependent of a Sioux Valley Energy member.
- Have a 3.0 or higher cumulative GPA for a four-year college or university scholarship and a minimum of a 2.5 or higher for a technical college scholarship. Submit your ACT/SAT scores (if applicable).
- Provide a written recommendation from a teacher, administrator, or counselor.
- One winner per family/per year.

Application details... Applications will be judged on the basis of grades, ACT or SAT test scores, work experience, school activities, volunteer/community service, and essay questions. Scholarship funds must be used to pay expenses directly related to your continuing education. Application forms are available from your school counselor, from any Sioux Valley Energy Service Center (in Colman, Pipestone, Brandon, and Hartford), on the web at <https://www.siouxvalleyenergy.com/youth-scholarship-programs> or by calling 1-800-234-1960.

Deadline... The deadline for this year's application is 4 p.m. on Friday, January 12, 2024. Applications and supporting materials (*postmarked no later than January 12, 2024*) may be sent to: Sioux Valley Energy/Scholarship Contest, PO Box 216, Colman, SD 57017.



SCHOLAR OF THE WEEK

John Mortrude, a student at Dell Rapids High School, has been chosen as a Touchstone Energy® Cooperative 'Scholar of the Week' for the week of December 17 through December 23.



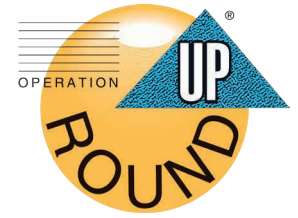
Mortrude was recognized with a scholarship by Sioux Valley Energy and will be featured on Dakota News Now for his accomplishments. He is the son of Wayne Mortrude and Kim Mortrude of Dell Rapids, SD.

Touchstone Energy Cooperatives, like Sioux Valley Energy, have joined together with *Dakota News Now* to recognize the achievements of high school seniors throughout the region. Recipients are highly motivated high school seniors who excel in the classroom and community. This program was founded on the four pillars of Touchstone Energy: Integrity, Accountability, Innovation, and a Commitment to Community.

"John's academic, extra-curricular, and community service record is outstanding. He is a very talented young person who has shown leadership throughout his high school career. John is a great example of the type of young leader that deserves to be recognized with the Scholar of the Week award," said Tim McCarthy, Sioux Valley Energy General Manager/CEO.

Mortrude is involved in the National Honor Society, Quiz Bowl, Boys State, wrestling, baseball, and football along with a number of other organizations. He has volunteered for several non-profits including Habitat for Humanity, The Banquet, St. Francis House, and Teens Against Tobacco Use.

\$146,650 Awarded in 2023



More than \$146,000 was awarded to over 80 non-profit organizations, communities, and schools in 2023 through the Cooperative's Operation Round Up program (ORU). The ORU program started in the year 2000 at Sioux Valley Energy. Since its inception, more than \$2 million has been awarded. Approximately 87 percent of SVE members are enrolled in Operation Round Up along with employees that donate from their paycheck. The following received ORU funds in 2023:

- Ag Women's Day
- Arlington Area Chamber of Commerce
- Brandon Valley Optimist Club
- Brookings County Youth Mentoring Program
- Charles R Doman American Legion Post
- Child's Remembrance Garden-Luverne Area Community Foundation
- Dakota State University
- Dolphin Foundation
- Garretson School District & 605 Travel
- Kelly McGeough Foundation
- Kids Chess, Inc.
- Lake County Food Pantry, Inc.
- Lifeline Children's Services
- Luverne High School/Middle School Robotics
- Madison VFW Baseball
- Making Oldham Ramona Excellent/Ramona Express Baseball
- National Inventors Hall of Fame, Inc.
- Pipestone Area French Club
- Sioux Falls Public Schools Education Foundation
- Sioux Valley Schools-Music Department
- South Dakota FFA Foundation, Inc.
- The Community Outreach
- West Central Educational Foundation
- Blue Dragon Foundation
- Brookings Area Camp Adventure
- Brookings County 4-H Leaders
- City of Colton
- City of Pipestone, Recreation Department
- Dynamic Booster Club
- ELC-Pipestone
- Flandreau Elementary School
- Garretson Community Ambulance Corporation
- Habitat for Humanity
- Junior Achievement
- Luverne Child Guide Program
- Luverne Elementary School
- McCrossan Boys Ranch
- Moody County 4-H Robotics Club
- Moody County Shooting Sports-Dell Rapids
- Pipestone Area Softball and Baseball Association
- Pipestone Senior Citizens Center
- Pipestone Sportmen's Club
- Ramona Community Club
- South Dakota Youth Foundation
- Tri-Valley School District
- Catholic Community Foundation
- City of Pipestone Lights at the Lodge
- Crooks Veterans Park
- Girl Scouts-Dakota Horizons
- Health Connect of South Dakota
- Inter-Lakes Community Action Partnership
- Madison HS-Track & Field/Pole Vault
- Palisades State Park
- Rock Ranch
- South Dakota Renegades 18U McDougall
- SWWC Foundation for Innovation in Education
- The Gathering
- TSC Fire (Tiger Softball Club)
- A.C.E. SW MN Pipestone County
- Brookings County Sherriff's Office
- Carroll Institute
- Carson's Cause
- Chester Area Middle School
- Chester Area School Fellowship of Christian Athletes
- Christ Lutheran Church Daycare
- Crooks Community Child Care Center
- East Dakota Transit, Inc.
- Flandreau After Prom 2024
- Generations, Inc.
- Hawks Volleyball Club of Colman
- Kids Rock! Child Care Center
- Madison High School Softball Team
- Pipestone Area Schools
- Pipestone Area Band Parents
- Rare by Design
- South Dakota Freedom Hunts, Inc.
- St Mary Catholic Schools
- Sunset Harbor Homeowners Association
- Washington Pavilion Management, Inc.
- West Central Music Association

WHEN ARE ORU APPLICATIONS DUE?

The Operation Round Up Board meets quarterly and all applications must be received by the 20th of the month preceding a Board meeting. Due dates are February 20, May 20, August 20, and November 20.

WHO IS ELIGIBLE FOR ORU FUNDS?

Non profit organizations, schools, and communities within the Sioux Valley Energy service area may apply. The region served

by the Trust is the electrical service area footprint of Sioux Valley Energy which includes Rock and Pipestone counties in Minnesota and Brookings, Kingsbury, Lake, Minnehaha, and Moody counties in South Dakota.



SCAN HERE TO DOWNLOAD THE OPERATION ROUND UP APPLICATION AND LEARN MORE.



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
 11 a.m.
 City Boat Landing
 Hendricks, MN

FEB. 10
Polar Bear Chili Cook-Off
 11 a.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
A Trip to Portugal
 6:30 p.m.
 Mangiamo
 Hill City, 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.