



TM Rural Water District

Quality On Tap!

January 2021 | Volume 16, Issue 2

**FROM ETHANOL
TO HAND SANITIZER**

BUILDING CONNECTIONS
Soil Health Mentor Network

NRWA
Strengthening State Associations
& Rural Communities

FROM THE MANAGER

Jay Jorgensen
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2020 is wrapping up and oh what a year it has been with COVID. TM Rural Water District was able to modify daily work schedules to accommodate social distancing and reduced the amount face-to-face contact with our customers to help reduce the spread of the virus. Until the CDC instructs us otherwise, we will continue with our modified platform. The office is currently open to the public, but we ask that only one customer enter the building at any given time.

2020 was an exceptionally dry year as compared to the previous three years and water usage was up system wide as a result. The District supplied an average of 1.5 million gallons per day to the water users on our system. The District's water supply remains secure and healthy with the persistent drought conditions that we have been seeing. TM treats ground water pumped from our well fields in the Dolton area and blends our finished water with supplemental water connections from BY Water User District and the city of Parker. By utilizing these supplemental connections, the District is able to properly manage the aquifers that we draw the majority of our water supply from.

TM operators kept busy this year adding new users to the system and completing regular system maintenance like fixing leaks and installing meter pits at existing water users residences. The District's long-term plan is to eventually switch all users over to water meter pits in order to get water meters out of our customer's basements.

Capital Improvements to the system included the rehabilitation of a 300,000-gallon water tower located just east of Canistota and a 200,000-gallon water tower located northeast of Parker. The rehabilitation of the 300K tank included the sandblasting and recoating of both the inside and the outside of the tower along with replacement of the riser pipe and insulation on the tower. The rehabilitation of the 200K tank included sandblasting and recoating of the inside of the tower and an overcoat on the outside of the tower along with replacement of the riser pipe and insulation on the tower. The cost to rehab these two towers came in at just over \$600,000.00 total and was paid from cash on hand from the District's depreciation fund. Engineers tell us that the new paint job inside and out should last 30 years with a good preventive maintenance plan.

A couple of other capital improvement projects included the completion and activation of a replacement well along Highway 81. The new well is capable of pumping up to 800 gallons/minute and was paid for from cash on hand from the District's depreciation fund. TM also started an upgrade to a booster station south of Salem. The new pumps at this station will be more efficient and will help reduce pressure fluctuations in the area served by this station.

Just a reminder that TM's website is up and operational and can be accessed by typing www.tmruralwater.com into your internet browser. On this site you will be able to access forms and documents relating to the District, and you also have the option to pay your water bill online utilizing debit/credit card or an echeck.

Repairing leaks is a big part of the maintenance that TM performs each year and we rely on our users to call in if they see a potential leak. Please do not hesitate to call if you suspect a leak, and the sooner the better, fixing leaks early reduces expenses to the system which benefits all users in the District. If in doubt, call us out.

Merry Christmas and Happy New Year from all of us, here at TM Rural Water District and May God Bless you and your families in the New Year.

And once again, thank you for choosing TM Rural Water District for your source of clean, reliable drinking water.

TM Rural Water District
Quality On Tap!

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OFFICE HOURS

8:00am - Noon & 12:30pm - 4:30 pm
Monday - Thursday
Office is Closed
Friday-Sunday and Holidays

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for its water users

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TM Rural Water District CALENDAR

DECEMBER 24-25TH
Christmas (TM Office Closed)

JANUARY 1ST
New Years Day (TM Office Closed)

If you have an emergency,
please call the office at 605-297-3334.



NOTICE OF VACANCY TM Rural Water District

The following office of the Board of Directors of the TM Rural Water District will become vacant due to expiration of the present term of office of the following Directors.

Division I – Greg Nugteren, 3-year term, Monroe SD

Division II – Dennis R. Johnson, 3-year term, Parker, SD

Division III – Steve Knutson, 3-year term, Centerville, SD

Nominating petitions may be obtained from the office of TM Rural Water District located at 110 North Main Street in Parker, South Dakota between the hours of 8:00 AM and 4:30 PM, Monday thru Thursday, starting Monday January 11th. All completed petitions must be filed at the TM office no later than Thursday, February 11th, 2021 in order to be valid.

Greg Wirth
President
Board of Directors
TM Rural Water District

TM RURAL WATER DISTRICT'S MISSION

TM Rural Water District's goal is to improve the quality of life in the rural and small community areas of our state. The District is committed to providing the highest quality drinking water possible at the lowest reasonable cost consistent with good business practices. As a water user district, the only other product that we have is the service we provide the users. The District goal is that the service is offered with the highest standards.

TM TRIVIA

In this edition of *Quality on Tap*, be the first person to call Tanya with correct answers to the following questions below at 605-297-3334 to receive \$10 off of your next water bill. A second place drawing for \$10 off your next water bill will also be taken from those people who call in after the initial winner, so don't give up.

Living in SE South Dakota, many of us are descended from Scandinavian/European roots. Below I have listed some interesting facts about some of those countries. I couldn't include them all and I apologize if your ancestry is not represented. Have fun guessing the correct country. Good Luck!

Heritage Trivia

Choose from: Netherlands, Sweden, Denmark, Germany and Norway

1. This country has been named the home of the "Happiest People in the World."
2. 52% of the energy consumed by this country is renewable.
3. This country annually publishes every resident's annual income and the amount of income tax paid for everyone to see as a way to prevent tax fraud?
4. This country gave carrots their orange color.
5. This country started the tradition of Christmas trees.

TM Rural Water District employs six full-time employees from three different communities in the areas that we serve. Whenever possible we attempt to buy our supplies and consumables locally and prefer to hire local contractors when the need arises. We are thankful to have the ability to serve the communities and rural areas in which we live and hope that our service will continue to be a benefit to everyone in our District.



How many snowflakes ❄️ can you find in this picture?

SNOW MUCH FUN!

Did you know that Snowflakes are essentially ice covered specks of dirt?! In many snowflakes, the water vapor crystallizes on a particle in the air - such as dust - when the water vapor in the air drops below the freezing point and the vapor loses an amount of energy. This process is called “the heat of crystalization.” A similar process forms ice, except that the water is a solid, not a vapor. (Snow can also be compressed into ice as happens in glaciers and avalanches). It is probably true that no two snowflakes are exactly alike given that it can take up to 100,000 water vapor droplets to make each snowflake. It is highly improbable that all 100,000 droplets of one snowflake could arrange themselves exactly the same way as another.

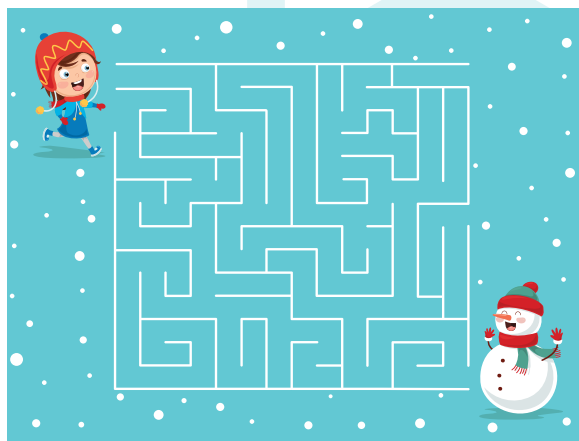
FIND THE DIFFERENCES!



Hint: there are 7 differences

Q: What do snowmen eat for lunch?

A: Icebergers!



How can You capture Your own Snowflakes?

If you want to capture snowflakes of your own to observe, you need the following:

- ❄️ a snowy day
- ❄️ a black piece of foam board or paper
- ❄️ a magnifying glass



Place the black paper or foam board outside, but out of the snow, for 15 – 20 minutes, or until snowflakes can land on it and not melt immediately. When the paper is cold enough place the paper on a level surface or hold it carefully where snowflakes can fall on it. Observe the collected snowflakes with the magnifying glass quickly before they disappear.

FROM ETHANOL TO HAND SANITIZER

POET Switches Production During COVID-19 Battle

By Randy Dockendorf

Reprinted with permission from the Yankton Daily Press & Dakotan

Sioux Falls-based POET – the world’s largest producer of biofuels – has produced an allnatural, ethanol-based sanitizer to tackle the severe local shortage.

For POET, the production switch to hand sanitizer came at a good time for the Scotland and Chancellor plants. Fuel consumption, including ethanol, had fallen because of social distancing during the pandemic. More people were remaining at home or taking fewer, shorter trips.

MAKING A DECISION

POET founder and CEO Jeff Broin said he knew his company could ease challenges created by the hand sanitizer shortages, according to a company press release.

“Frontline workers are facing risks every day to keep our communities safe from COVID-19, and we all need to do our part,” he said. “At POET, we saw an opportunity to help our community while living our mission – to be good stewards of the Earth by converting renewable resources to valuable goods – and created an all-natural ethanol-based sanitizer product.”

POET engineers created an additional distillation process for corn, which results in pharmaceutical-grade ethanol. The higher-grade product is then blended into a sanitizer product.

“The effort required the company to adjust its manufacturing processes at biorefineries, work around the clock and lean into its strengths in engineering and operations,” according to the press release.

“The resulting product is pharmaceutical grade, meets FDA (Food and Drug Administration) guidelines and has been verified by toxicologists as safe for human health. In fact, purified ethanol has been used in hand sanitizers and disinfectants for years before the COVID pandemic.”

Once the process fell into place, the company’s Scotland and Chancellor ethanol plants shifted gears to produce the hand sanitizer. The World Health Organization (WHO) recommends that sanitizer contain at least 60% alcohol. However, POET’s supply surpasses that standard as it contains 80% alcohol.

Once the product was finalized, POET partnered with Sioux Falls-based companies Senproco Inc. and Cimarron to package and label the sanitizer for consumer use.

Another major player came in with the sanitizer’s bottles and labels: Groomer’s Choice, a Sioux Falls-based national leader in wholesale pet grooming supplies. Thanks to this new partnership, the team at Groomer’s Choice can produce upwards of 10,000 16-ounce bottles each day.

MAKING CONTRIBUTIONS

Once production was up and running, POET began distributing

sanitizer to front-line workers. The company donated 220 gallons of hand sanitizer to help tackle the severe local shortage. The initial donations of about 10,000 bottles went to a wide variety of front-line workers.

An initial donation went to Pioneer Memorial Hospital and Health Services in Viborg. The facility provides health services to many of the POET team members who work at the Chancellor plant.

POET donated 220 gallons of sanitizer, produced at its Chancellor plant, to the City of Sioux Falls. In addition, POET donated 780 bottles, each 16 ounces, to the South Dakota Health Care Coalition. These groups then distributed the sanitizer to nursing homes, assisted living facilities, firefighters, emergency medical services (EMS) and other frontline workers.

The additional supply of sanitizer has helped South Dakota as it reaches its anticipated peak of the coronavirus, said Lynn DeYoung, executive director of the South Dakota Health Care Coalition.

“This is another reminder of the great partnerships that we have in South Dakota,” DeYoung said. “POET saw a need and became innovative to protect health care workers, EMS, fire, law and critical infrastructure personnel.”

Donations were also shared with frontline workers and healthcare systems across the state seeking more hand sanitizer for their use. Hospitals have worked to contain the virus, including their work with COVID-19 patients. Nursing homes and assisted living facilities have been hit hard by the virus, which has proven fatal for the elderly and those with medical conditions or compromised immune systems.

FUTURE DEMAND

POET released figures reflecting the dramatic increase in demand for hand sanitizers. Adobe Analytics, an agency that monitors E-commerce transactions for the top 80 online retailers, reported the December-January demand for hand sanitizer jumped more than 1,000%. Nielsen, a company that collects sales data from point of sale scanners, reported hand sanitizer sales in the United States were up 73% in February alone.

POET Vice President Rod Pierson said the company wanted to create superior product.

“Our frontline workers deserve nothing but the best,” he said. “We’re proud of what we’ve been able to create and the impact it will have in protecting the public.”

As the COVID-19 pandemic continues, the nation is likely to see continued demand for sanitizer products. Broin has indicated his company looks to remain in the sanitizer market.

The commitment to the hand sanitizer product isn’t just a business decision, Pierson said.

“It is crucial that we prevent shortages of PPE (personal protective equipment) as we saw when this pandemic began,” he said.





Building Connections

Soil Health Mentor Network

By Janelle Atyeo for South Dakota Natural Resources Conservation Service

When your doctor prescribes a new daily regimen or a major surgery to improve your health, it's common practice to turn to an expert and seek a second opinion. When setting out to improve the health of your crop, range and pastureland, there's a resource for finding advice from other producers who've made the same journey.

A directory of agriculture and local foods producers throughout the state has been assembled with South Dakota people who are ready and willing to talk with other farmers and ranchers as they navigate through the process of building soil health and using regenerative practices. We work closely with the SD Soil Health Coalition, SD Grassland Coalition and South Dakota's Conservation Districts with the Mentor Network. As people are learning and asking questions, NRCS and our partners help connect people with others who have the experience to address the question.

"Building Connections" is a 40-page directory that lists volunteer mentors by county, giving their contact information along with a synopsis of their soil health-building experience. Some have tried diverse crop rotations or full season cover crops. Others are experts in rotational grazing, multi-species livestock, or managing native grasses.

Unique to South Dakota, there are more than 160 mentors in all, with at least one in every county with expertise ranging from large operations to average size acreages to small local foods

producers and gardeners. The Natural Resources Conservation Service spans South Dakota and started organizing the group through the USDA's Earth Team network in 2013. Several gardeners, Master Gardeners, and small acreage folks have joined the network.

Doug Sieck is one of three producers under the Walworth County listing, ready to share his experience with cover crop

rotations and grazing, no-till, soil biology and more. More experienced producers helped him out when he was first trying some unconventional management styles. "Being part of the mentor network is a way to give back," he said.

Sieck remembers when he was first planting some of his crop land back to grass and alfalfa. He made the mistake of putting hungry cows in the alfalfa, and he lost one cow and others got sick.

The experience could very well have soured him on the practice and made him abandon his grazing plans altogether, but instead, he reached out to others who had been grazing alfalfa/grass combinations. They warned him against letting hungry cows loose on the mix and told him how the practice was a success for them. It gave him the confidence to keep going.

Now he's counseled others – most recently about grazing in standing corn. It's something he lauds as a great way to adapt to less-than-ideal conditions. When wind blows down a field of corn and makes it impossible to harvest, producers might fear it's a total loss, but the crop can become fodder for grazing herds.

"When we get curve balls, it's nice to have a reference from



people who can help us adapt,” Sieck said.

He hopes the mentor network will give producers the reassurance they need to try new things.

“It’s experiences shared farmer-to-farmer and rancher-to-rancher,” said Colette Kessler, public affairs officer for NRCS South Dakota. “The peer network is really the best place for a real-life example of how things really work. They’re living it on a daily basis.”

Kessler and her team got the idea for the “Building Connections” directory after working with producers across the state, helping them share their conservation success stories. They spoke highly of how their soil practices were working, and Kessler saw the value of making that information available to others interested in doing similar things. “The network is an important sounding board for how to adapt these principles to your operation,” she said. “Changes are not always easy or quick, such as transitioning fields from tillage to a no-till system, so finding good coaches certainly helps. Sometimes, conversations about smaller tweaks such as modifying equipment can be very timely,” she commented.

The mentor network was built with the help of several organizations whose experts provide technical advice for resource management. Along with NRCS, the South Dakota Grassland Coalition, the South Dakota No-Till Association, the South Dakota Soil Health Coalition, the South Dakota State University Extension and South Dakota’s Conservation Districts are involved. Producers interested in joining the mentor network can contact any of the partnering organizations.

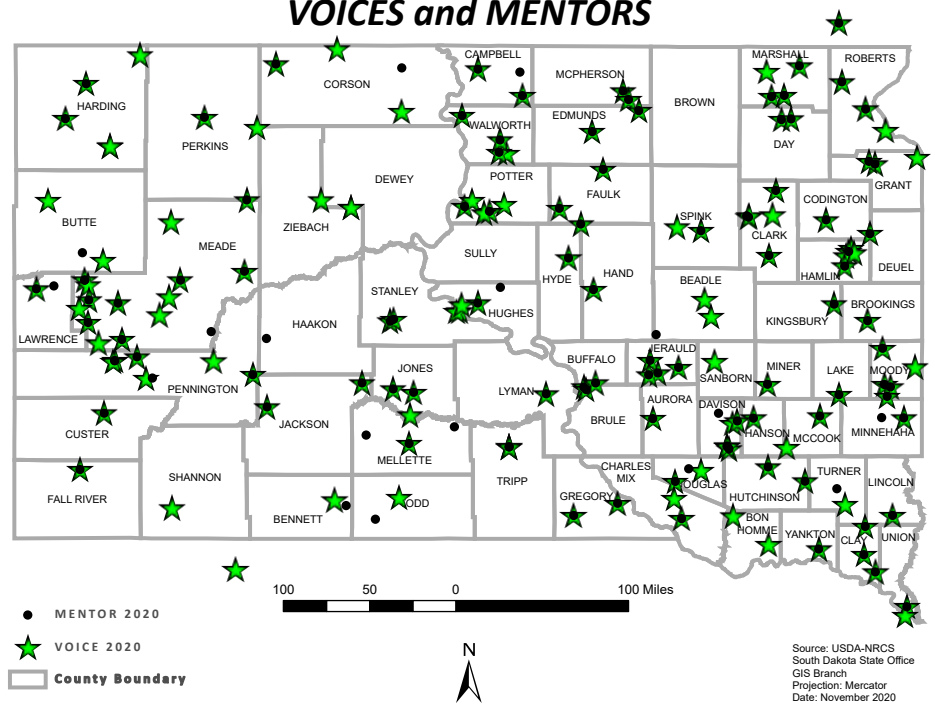
The network is free. There is no charge to contact or get involved with the mentors in the directory. Anyone can receive the directory by sending an email to colette.kessler@usda.gov or call (605) 352-1200 to receive the publication in the mail. Directories are available in every county at local USDA Service Centers with the NRCS or conservation district.

“The farmers and ranchers are all volunteers who simply want to help their peers with questions,” Kessler said.

Soil health experts, agronomists and range specialist have a great understanding of soil health principles and the microbiology that makes healthy soil function like it should. But it’s the producers with boots on the ground who have an intimate understanding of how it works in practice.

“They’ve made mistakes. They’ve learned through doing it rather than just in theory,” said Bryan Jorgensen, a member of the mentor network who has long been incorporating no-till and cover crops on his family’s ranch near Ideal in southern South Dakota.

SOUTH DAKOTA VOICES and MENTORS



He doesn’t discount the expert advice and the researchers or university extension, NRCS and other groups are doing. It’s the partnerships between researchers and producers that give them the ammunition to help other people, he emphasized.

Jorgensen also doesn’t discount the value of making mistakes. They’re part of the learning process and serve as useful examples for others. Jorgensen encourages anyone with success stories in regenerative agriculture to become part of the mentor network.

“We feel it’s important to spread the good word about soil health. We’re passionate about soil health, and we want people to improve the soil,” he said.

As a statewide service, NRCS South Dakota has organized the network of mentors who are willing to talk other producers through adopting regenerative practices such as transitioning away from tillage, use of cover crops or rotational grazing. Producers can directly contact a mentor and their conversations are private.

The Mentor Network is a free service available to anyone by contacting your local Natural Resources Conservation Service, Conservation District, the South Dakota Grassland Coalition or the South Dakota Soil Health Coalition. A newly updated version of the "Building Connections" Mentor Network publication is now available. Request your free copy of the booklet today!



The National Rural Water Association

STRENGTHENING STATE ASSOCIATIONS & RURAL COMMUNITIES

The National Rural Water Association is a non-profit organization dedicated to training, supporting, and promoting the water and wastewater professionals that serve small and rural communities across the country.

NRWA provides training and technical assistance through 49 affiliated State Rural Water Associations that currently have over 31,000 utility system members. Rural Water training and technical assistance covers every aspect of operating, managing and financing water and wastewater utilities through multiple federally funded programs. NRWA programs generally focus on assisting small and rural communities that serve less than 10,000 people. However, State Associations work in different ways with all sized systems, with many large cities demonstrating their support for Rural Water as members.

The NRWA Circuit Rider Program is made up of 49 State Rural Water Associations (CT/RI are combined as one) and Puerto Rico, totaling 147 Circuit Riders in the U.S. These Circuit Riders provide hands-on training and technical assistance to small, rural water systems on an everyday basis, 24/7. Personal, professional assistance is at the heart of the Circuit Rider program. On-site help is delivered when and where a rural community needs it.

“Circuit Riders have provided technical assistance more than 700,000 times to help rural systems and communities since 2009,” said Rita Clary, NRWA Circuit Rider Program Manager.

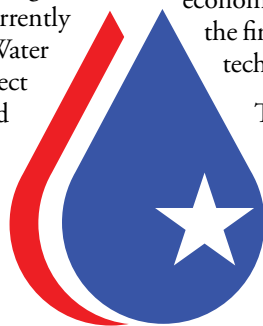
The purpose of the Wastewater Program is to protect the nation’s multi-billion-dollar investment in rural and small municipal water/wastewater systems by providing on-site technical assistance,

which ensures cost-effective operations and adequate income for both operations and debt service within each state. There are 65 dedicated and talented Wastewater Technicians throughout the country working through their State Rural Water Association. The primary goal of these technicians is to assist small, rural and economically challenged communities to enhance and maintain the financial sustainability of their wastewater systems through technical assistance and/or training.

The Apprenticeship Program provides standards and guidelines to State Associations so they can build their own program to hire and train apprentices in their state. Through these programs, apprentices can earn while they learn and emerge with a secure career as a water or wastewater operations specialist. With a declining workforce, this program has proved essential to provide future water and wastewater operators.

The NRWA Source Water Protection Program is built around small water utilities, local businesses, agriculture, government, and other groups working together to develop and implement strategies to protect their drinking water sources. This cooperative program has made significant progress in reducing point source pollution from industrial, agricultural, municipal, and even household sources. The program has also made progress in the challenging area of nonpoint source pollution.

NRWA’s Energy Efficiency Technical Assistance Program is designed to promote energy efficient practices in small water and wastewater systems. Funded through a grant from the U.S. Department of Agriculture Rural Utilities Service, the program performs energy assessments, recommends energy efficient



NRWA™

practices and technologies, and provides support following recommendations. Technical support includes assisting with presentations to governing boards, accessing financing, training, and developing documentation.

The USDA loan and grant program helps very small, financially distressed rural communities extend and improve water and waste treatment facilities that serve local households and businesses. This assistance supports infrastructure improvements, business development, housing, community services such as schools, public safety and health care, and high-speed internet access in rural areas. It can be used to finance drinking water, stormwater drainage and waste disposal systems for rural communities with 10,000 or fewer residents.

The Safe Drinking Water Act Compliance Assistance Program is designed to strengthen the technical capacity in small water systems, ultimately resulting in the reduction of the number of systems out of compliance with health-based standards. The Training Specialists provide technical assistance in compliance with the Safe Drinking Water Act to small public water system personnel by working directly with them on-site at their system.

Training Specialists use NRWA's nationwide pool of expertise to provide diagnostic and troubleshooting assistance for operational and compliance-related problems.

The National Rural Water Association also creates multiple public relations and outreach campaigns to promote a positive image of the water and wastewater industry to the public. Americans often take for granted that they have the highest quality, most affordable water, piped directly to their homes and businesses. This level of quality is accomplished because of dedicated professionals that take pride in their hard work, education, and service to the community. We also provide resources and information on current issues in the industry to our State Associations like the COVID-19 pandemic, PFAS, and Disaster Response during natural disasters.

Clean drinking water and safe wastewater treatment are vital to the health and safety of Americans. With the support of our State Associations, NRWA strives to protect the quality of life in America, while supporting the grassroots efforts required to help rural communities thrive. For more information, please visit www.nrwa.org.



BDM RURAL WATER SYSTEM

In 1976, the need became apparent for a rural water system in southwestern Marshall County and later in adjoining townships in Day and Brown counties. The Marshall County Extension Agent was instrumental in holding informational meetings and designing the BDM information sheet questionnaire. It was completed at the collection of the \$30 good intention fee by the Steering Committee over the next two years. A letter stated, “The BDM Rural Water Steering Committee was organized in spring 1977. Since that time, it has sought every available means to bring the project to pass. The total project cost was projected to be \$5,300,000, which increased to \$5,900,000 due to some of the proposed new users being in fringe areas outside the original proposed boundaries, necessitating more miles of pipeline and thus more expense.” The initial steering committee consisted of seven very dedicated and forward-thinking members. By December of 1981, the steering committee had grown to 27 committed, resilient, devoted, and persistent members. As I read through files of notes and letters of correspondence, it was evident that many disappointing events occurred to justify the committee to throw in the towel on this endeavor. However, they continued to work through every challenge and obstacle they were confronted with, to look for that next ray of hope to bring good quality water to the rural farms and towns in Northeast South Dakota. For this, we are forever grateful for those who went before us with determination and foresight to build BDM Rural Water into what it is currently. We today, in the farms and rural towns of South Dakota, are the beneficiaries of the seeds of rural water systems that were planted decades ago by our parents and grandparents.

The Preliminary Engineering Facility Study for the BDM Rural Water System was dated April 25, 1979. The report stated it “consists of a summary of the study made to determine the feasibility of constructing and operating a rural water system for Brown County, Day County, and Marshall County South Dakota. The study comprised of individuals located in an area including eight townships in the eastern part of Brown County, four townships in the northwestern part of Day County, and 12 townships in Marshall County. The area lies mostly in the James Basin, bounded on the west by the James River and east by the Coteau Des Prairies’ numerous lakes. The area is approximately 25 miles wide and 40 miles long along an axis running northeast to southwest. There are 526 members (who have paid a \$30 good intention fee) constituting more than 3,500 persons. Of the total membership, 518 are farm or rural residences, three are residences in a small community, and 5 are towns. Those towns include Bath, Groton, Pierpont, Langford, and Claremont, which have central distribution systems and are interested in purchasing water on a bulk basis.”

A letter dated June 16, 1980, explained the situation to the South Dakota national congressional delegation. “BDM was organized in 1977 (steering committee), and 520 potential users paid good intention fees. They were projected for funding in 1981, but due to current and proposed reduction in funds, that date is very unlikely to be met, if at all.

The area is not densely populated, and therefore, any system has a relatively high cost per user. However, due to the lack of quantity and quality of water, it is of considerable significance to the area. Also, wells are not cheap! Most wells are artesian and cost from \$8,000 to \$12,000. That is for water that is too high in dissolved solids to meet public health water quality standards. This causes continuing problems with diarrhea. Some of the shallower wells have problems with nitrates to such a degree that it can be deadly for infants and small animals to drink the water.

Many people haul water to drink and for household use. The livestock has a reduced rate of gain, causing economic loss. Plumbing corrodes, water heaters last about five years, and in some cases, clothes can’t be washed with the water because of stains and rust, so they have to be washed in town.”

On November 5, 1981, it was decided that the Brown Day Marshall Rural Water System, Inc. should be formed as a non-profit corporation. On December 3, 1981, the newly formed corporation’s directors approved the Articles of Incorporation. The Articles of Incorporation for BDM Rural Water System, Inc. were filed on December 22, 1981.

The first ray of hope was on December 3, 1982, where the South Dakota Dept of Water & Natural Resources approved a grant for \$650,000. On April 11, 1983, FmHA approved a loan for \$2,880,000 at 7.125%, and BDM was becoming a reality.

The original system was designed for 406 customers in Brown, Day, and Marshall County. This was to be completed in three sections. Bids for these three sections were advertised for bid opening on April 25, 1984. Section I was for 2,041,800 linear feet of 1.5 inch to 8-inch PVC water main and 8,339 linear feet of railroad and highway crossings with 406 water service meter assemblies. Section II was for a 100,000-gallon reservoir, pump house, filtration plant, and two 40,000-gallon reservoirs with pumps and controls. Section III was for two water supply wells and equipment. The three sections were awarded on May 14, 1984, and April 18, 1985, for \$3,215,148, which came from a combination of loans and grants. Interest increased as construction started in the summer of 1984 and took two years to complete, with the final project clean up in 1986. Almost 600 users were added in the initial phase.



BDM RURAL WATER SYSTEM

In 1996 BDM added a small expansion project, which added 45 users to the system. This project was a warmup to the project that was to take place in the next few years.

In 1999 construction began on the East Marshall project, which would add over 1,000 users in Marshall and Roberts counties. This project added several wells, reservoir capacity, and expanded the treatment plant. The project was completed in four phases, with completion in 2006.

In 2008-09 the Hecla expansion project started, which added 29 rural users and the community of Hecla.

The last two wells were added in 2012, which brought the total number of wells to eight, which provides the source water for the system today. BDM's source water is from the Middle-James aquifer. Water is stored and distributed from the water treatment plant and 14 reservoir sites with a total capacity of 2,860,000 gallons of storage. Stand-alone generators provide back-up power in case of electrical failures at the treatment plant and five reservoirs, with several mobile generators.

Today BDM serves 2,279 users with annual growth in users realized every year for the past five years. In addition to individual users, we currently provide bulk water to Amherst, Claremont, Langford, Pierpont, Britton, Veblen, Lake City, New Effington, Peever, and Hecla. The Sisseton-Wahpeton Oyate is also provided bulk water at several of their housing sites and over 200 individual homes throughout the area. The system provides between 400,000,000 to 420,000,000 gallons of high-quality water to its' customers annually. The system has 1575 miles of PVC pipe varying from 1.5" to 14." This is equivalent to a pipeline running from New York City to Dallas, Texas. The system is 78% converted to an AMR reading system that provides valuable customer and BDM usage data in 5-minute increments. The system has a hydraulic model on 100% of the system that is updated annually. The SCADA system is in the final stages of being 100% replaced. For the past several years, the system has covered 100% of depreciation expense, with approximately \$5,000,000 invested in capital replacement over the past three years, of which \$2,000,000 is financed over ten years.

The system is directed by a seven-member board and a system attorney. The day to day staff includes a general manager, operations manager, office manager, and four operations specialists.



DIRECTORS:

- Torre Raap** – Chairman, State Association Director
- Kevin Deutsch** – Vice-Chairman
- Hal Treeby** – Secretary/Treasurer
- Don Ogren** – Director
- Terry Leonhardt** – Director
- Marc O'Brien** – Director
- Alex Suther** – Director

STAFF:

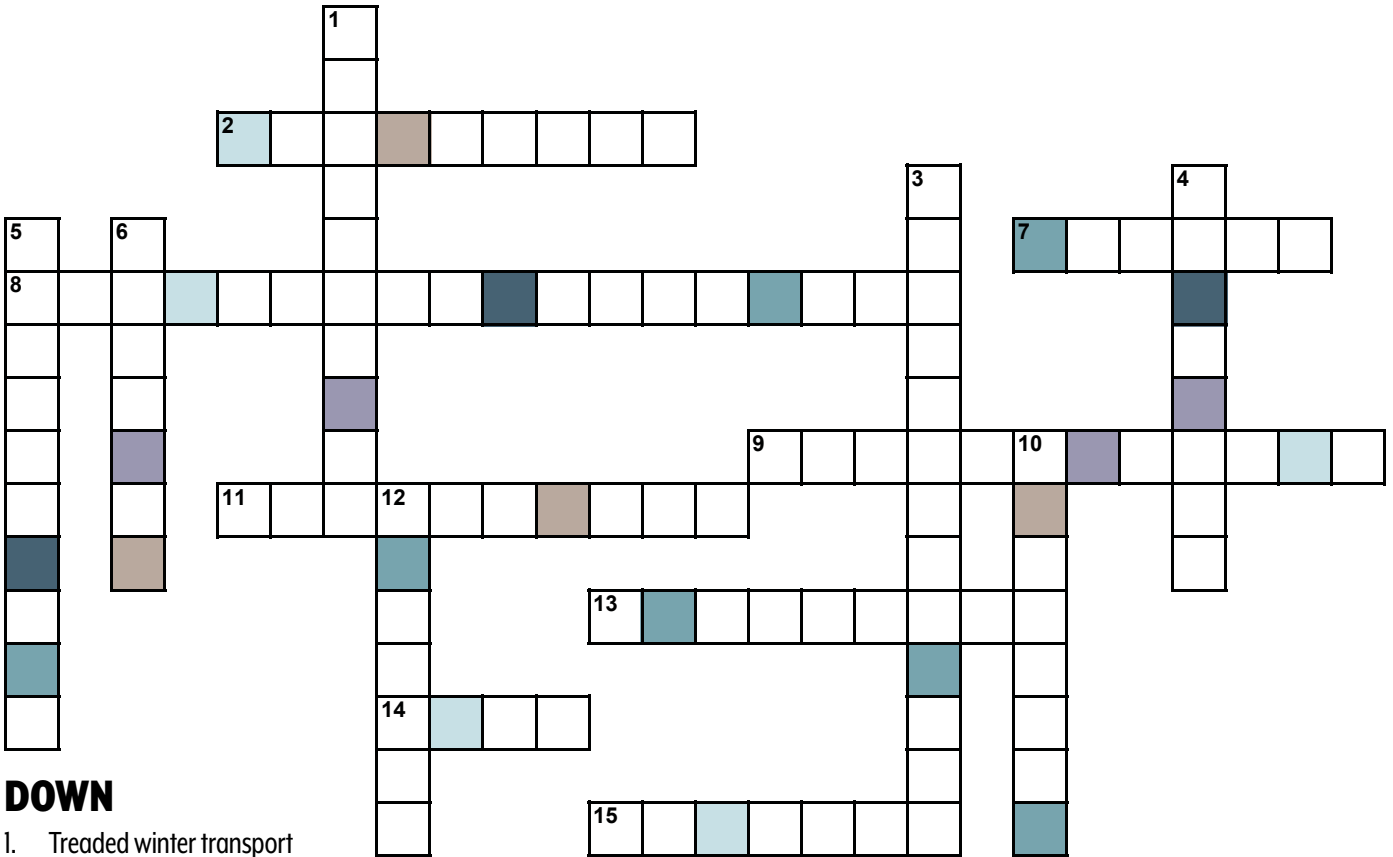
- Rodney Kappes** – General Manager
- Mark Hagen** – Operations Manager
- Darin Roehr** – Senior Operations Specialist
- Jim Hagen** – Operations Specialist
- Ryan Vrchota** – Operations Specialist
- Jared Marzolf** – Operations Specialist
- Shannon Wegleitner** – Office Manager

STATISTICS:

- Hookups:** 2,268
- Miles of Pipeline:** 1,600
- Water Source:** Middle James Aquifer
- Counties Served:** Brown, Day, Marshall, Roberts, Sargent (ND)
- Towns Served Individual:** Claire City, Houghton, Putney
- Towns Served Bulk:** Amherst, Pierpont, Langford, Claremont, Britton, Lake City, Veblen, New Effington, Peever, Sisseton-Wahpeton Oyate, Hecla

RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

Winter Sports



DOWN

1. Treaded winter transport
3. Graceful event scored on jumps, spins, and lifts (2 words)
4. Plummeting head-first down a steep and treacherous ice track on a tiny sled; considered the world's first sliding sport.
5. Arctic angling (2 words)
6. Racing toboggan
10. Best done with a tube, saucer, or flexible flyer
12. Iditarod racer

ACROSS

2. Rink game minus skates
7. Goal-oriented winter sport
8. A recreational sport in which people tour through wooded trails at a leisurely pace (3 words)
9. Racing on blades (2 words)
11. Pair skating's relative (2 words)
13. A board resembling a short, broad ski
14. Racing toboggan
15. Stone sliding

Enter to Win \$100

SCRAMBLE ANSWER



RULES: Use the colored squares in the puzzle to solve the word scramble above. Call your Rural Water System (See page 2 for contact information) or **enter online at www.sdarws.com/crossword.html** with the correct phrase by January 10, 2021 to be entered into the \$100 drawing.

Only one entry allowed per address/household. You must be a member of a participating rural water system to be eligible for the prize. Your information will only be used to notify the winner, and will not be shared or sold.

Congratulations to Bonnie Rusche who had the correct phrase of "ATTITUDE DETERMINES DIRECTION" for October 2020.

RURAL WATER

ACROSS SOUTH DAKOTA

SDARWS RECEIVES AWARD FOR ACHIEVEMENT IN PUBLIC RELATIONS

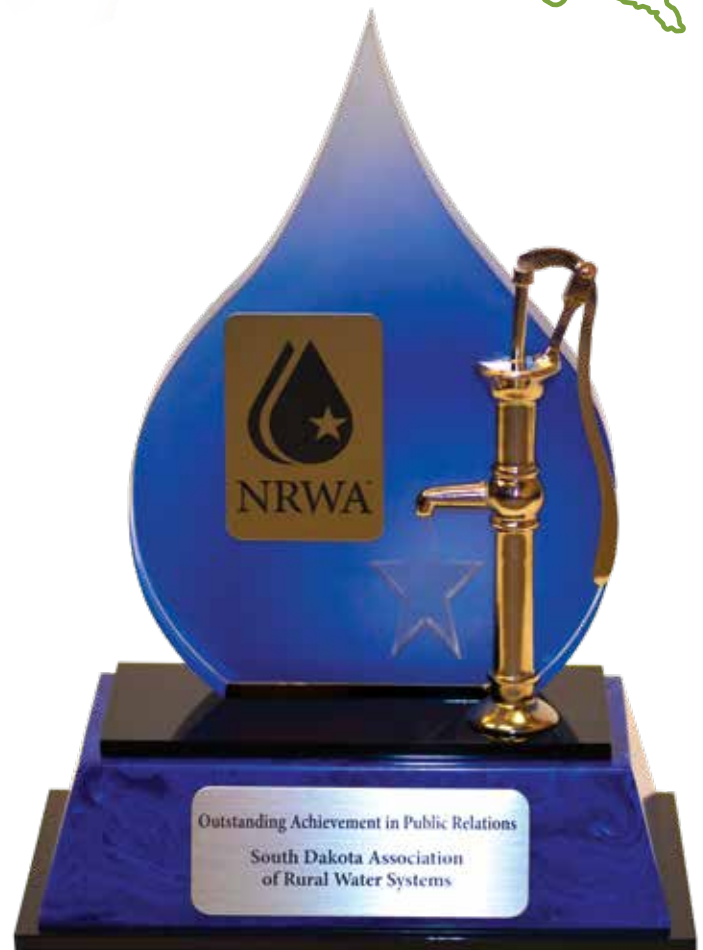
The South Dakota Association of Rural Water Systems (SDARWS) was recently recognized for Outstanding Achievement in Communications, Publications and Public Relations by the National Rural Water Association.

SDARWS is the only Rural Water Association in the nation that produces a consumer magazine. *Quality on Tap!* is created in-house and published quarterly along with 17 participating Rural Water Systems. Thirty-five thousand copies are mailed quarterly and reach about half of our rural water consumers in South Dakota. *Quality on Tap!* highlights water issues affecting consumers and proves successful in creating a unified voice for rural water in our state. Other publications produced by SDARWS include *ServiceLine* magazine, *Rural Water Bi-Monthly eNews*, *JobConnection* eNewsletter, and *Ripples* Legislative eNewsletter.

"Our publications focus on water conservation, stewardship, regulations, as well as promote the Association. The consumer magazine is a cooperative effort between several rural water systems and the Association and works to unite us as one voice for water in our state," said Jennifer Bame, SDARWS Communications and Marketing Coordinator.

Jennifer Bame administers SDARWS' public relations efforts. Jennifer is a graduate of South Dakota State University with a B.A. in Journalism/Mass Communications and has been with SDARWS since 2012. The Association has also received this award in 2016 and 2018.

"We are incredibly proud of our marketing effort and continually look for new ways to promote rural water through as many mediums as possible, including social media, print and, digital publications. We also promote rural water at farm shows and children's water festivals throughout the state," said Bame. "SDARWS is also very active on social media with almost daily posts highlighting our work, as well as providing education on water issues."



Water for Agricultural Development Requires Thoughtful Planning



By Jay Gilbertson, East Dakota Water Development District

Water is something that we all depend on, but it can be especially important in agricultural settings. The presence or absence of available water has long dictated where and when many agricultural activities can take place. Substantial efforts have been undertaken in South Dakota to supply water to areas that might be lacking in water of sufficient quantity or quality (including the regional water system that sends out this publication). Large, interconnected water distribution networks have been created to bring water to a wide range of users homes, farms and business operations.

For anyone interested in starting up a new agricultural operation, or expanding an existing facility, identifying an adequate and available water source is critical.

potential for harm or contamination of the water source(s). For example, a number of counties in the eastern part of the state have adopted zoning ordinances designed to protect shallow

aquifers, limiting or at times outright prohibiting certain practices in specific areas. State permits issued to community waste water treatment facilities, and other large waste water generators, also contain restrictions on the character of the effluent they discharge. When a majority of the population, as well as agricultural, commercial and industrial development, depend

At the same time, given the critical nature of this resource, limitations are often placed on activities that might create a

on limited water resources, it only makes sense to protect it for current and future users.

When someone is considering starting, or expanding, an agricultural operation, consideration must be given to both how water for the operation will be obtained, as well as how local water resources will be protected. Unfortunately, these two concepts often are in direct conflict. Locating a facility over a shallow aquifer means that an easily accessible water supply is literally just a few feet away. However, such a resource is by definition highly susceptible to contamination that might emanate from such a facility, potentially ruining the resource for all who depend on it.

A few years back, the South Dakota Department of Agriculture created the County Site Analysis Program (CSAP) to identify land parcels that were suitable, according to state and local requirements, for a range of agricultural development activities. Most of the constraints relate to setback distances from a range of features, such as individual residences or communities, but could include prohibitions on development over shallow aquifers. Local setback criteria and policies can vary, so assessments were conducted at the county-by-county level.

In addition to the applicable governmental constraints (largely based on physical location), the CSAP also considered proximity to necessary support services, such as transportation, power sources and water supplies. Few enterprises could likely exist, let alone thrive, without suitable roads, adequate power lines and access to sufficient quantities of high-quality water. In many instances, access to a suitable water supply has proven to be a considerable challenge.

Surface water features, such as rivers, lakes or streams, are readily identifiable on published maps of a given area. In most cases, they are largely features to be avoided when planning a major agricultural development. Beyond general irrigation, such sources would require significant treatment prior to most everyday usage, the likes of which is beyond all but the largest facilities. Further, such features are often highly valued for recreational purposes, uses that may be viewed as incompatible with large-scale development of any kind. Note: Although seemingly static features, water levels in lakes and streams can change over time in response to climatic conditions. Site selection should include consideration of what might happen to a nearby water body in response to abnormally high (flood) or low (drought) conditions.

Many existing and future agricultural facilities might look to make use of ground water to address their needs. The Geological Survey Program of the South Dakota Department of Environment and Natural Resources has been working to identify and map the aquifers of the state for many years. Numerous published reports describe these resources, backed up by records from thousands of test holes and observations wells. Chances are pretty good, particularly in the eastern part of the state, that if there isn't information available about a particular location, there is data from nearby that can be used to predict what might be found.

In an ideal situation, most new or expanding agricultural enterprises would like to be able to just purchase water from a supplier, and avoid all that goes with developing, operating and maintaining their own supply. If you drive around the countryside, it certainly seems like the ditches are full of

water lines from one rural water system or another. However, it must be noted that while there might be a water line close to a particular property, the water in that pipe might well be fully allocated (already spoken for). If a pipeline is already running at full capacity, there is no water available for new/additional consumers.

It is important to understand that when a rural water system is constructed, it is built to provide the amount of water that is needed to serve its customer base, i.e., system members. In most cases, members contributed earnest money that helped leverage other funds used to build the system. Consequently, water treatment and distribution capacity of a system were sized to account only for those needs identified at the time of system construction. In most instances, there is relatively little 'extra' capacity that might provide service to other customers. As a result, a new or expanding agricultural development project may be required to cover all, or at least most, of the costs of construction of a new or expanded delivery line.

For anyone interested in starting up a new agricultural operation, or expanding an existing facility, identifying an adequate and available water source is critical. As noted above, while it might seem that water is always going to be available whenever and wherever it might be desired but, that is definitely not the case. It might not be the very first thing taken into consideration, the presence or absence of water can be a critical determining factor in many instances. In more than a few cases, considerable development plans and investments have been made, only to have the effort scuttled by a lack of available water. A little early planning can prevent a lot of headaches later on.

When someone is considering starting, or expanding, an agricultural operation, consideration must be given to both how water for the operation will be obtained, as well as how local water resources will be protected.

TM Rural Water District
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Testing Your Well



Until fairly recently, most rural homes, farms and ranches in South Dakota depended on individual wells for water. In some cases, the quality and/or quantity of what came out of the well was not great, but it was at least better than the alternative - no water at all. The growth and expansion of regional water systems (insert your system name here!) has provided plentiful, high quality water for consumption by people and livestock, replacing the sometimes sketchy wells.

In some cases, the old well(s) were completely decommissioned and sealed (hopefully in full compliance with state law (see denr.sd.gov/des/wr/abandonedwell.aspx for details). In other cases, the wells were simply disconnected and abandoned. However, a large number of these otherwise functioning wells remain active, with use largely restricted to lawn and garden watering and other non-consumptive uses.

Why check the well water?

Just because you no longer use the old well all the time, it is important to check the quality of the water occasionally. On a hot day, it is tempting to take a quick drink of the cold water coming out of the garden hose. At the same time, running through the spray of lawn sprinklers is irresistible to small (and not so small) children. If the well is still functional, chances are it will be used.



What should I check for?

Bacteria and nitrate are the most common things to look for. Bacteria in the well suggests that the integrity of the well has been compromised. Most bacteria are harmless, but some can cause serious illness. Shallow wells are most susceptible to nitrate contamination where they leach into the ground water from excess nutrients and fertilizers. They can interfere with oxygen intake, particularly for very young children and those with compromised immune systems.

How do I check the water?

This is the easy part. The Public Health Laboratory at the South Dakota Department of Health has a program for just this situation. They provide sample bottles which include complete instructions for collecting and submitting water samples for testing. Fee information for the various tests is included. Bottles can be requested by calling (605) 773-3368, or by completing a form on-line at doh.sd.gov/lab/environmental/privatew.aspx. Sample bottles and instructions are also available from South Dakota State University Extension offices.



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