BDM RURAL WATER SYSTEM

Quality On Tap!

April 2023 | Volume 18, Issue 4

THE STATE OF OUR WATERS

THE FIVE PRINCIPALS OF SOIL HEALTH

SAVE WATER IN THE YARD THIS SUMMER

ANNUAL MEETING MARCH 27 | KAPPES AWARDED | SCHOLARSHIP INFORMATION

FROM THE MANAGER

Rodney Kappes
Manager, BDM Rural Water System, Inc.

The days are getting longer and hopefully also warmer soon. We have been busy working on permitting and designing the new water treatment plant. In mid-February, we will have meetings to review the 30% design phase, which will provide basic insight into the layout of the proposed structure. In addition, we plan to initiate some longer period well testing to have a better understanding of the well field hydraulics. We did receive good news from USDA Rural Development in that they approved the parity agreement with our other two lenders. Now we will start working with the state of South Dakota to have the documents drawn up for our $8,006,917 Drinking Water State Revolving Fund Loan with $507,867 in principal forgiveness and a $3,530,083 ARPA Grant. The loan will be for 1.875% for 30 years. Once this project is complete, BDM will have much-needed additional capacity to pump, treat and deliver water and, of equal importance, increased redundancy and reliability with two water treatment plants to serve our customers. The big unknowns at this time are what the bids will look like compared to the engineering estimates and what timeframe the contractors will require to acquire the materials and equipment for the new water treatment plant. It is currently anticipated that this will be a 2-3 year project.

Shannon has been working with our new billing software company (CUSI – Continental Utility Solutions, Inc.) on data transfer and portal setup. When Shannon is comfortable with the platform functionality and data integrity, we will roll out this payment enhancement to our customers. This platform will allow the customer to make a quick payment online with a credit or debit card or sign up for automatic recurring payments from your credit or debit card, which will include a small processing fee charged by the processor. We will not be able to accept American Express cards. The other automatic option will be to have your bill drawn directly from your bank account by setting up an ACH withdrawal. We will provide information on navigating this portal once we go live. This project has been on the table for some time, and we are now moving closer to rollout. Thank you for your patience, as this is a huge task, and I very much appreciate all of Shannon's work in taking on this task.

We have an opening for our Operation Manager/Assistant Manager position. This position will have leadership and management responsibilities, with possible financial management responsibilities at some point in the future. Excellent communication skills to handle customer issues and work with contractors will be necessary. This position offers a competitive salary depending on experience, with benefits including health, dental, vision, life insurance, and a 401K retirement program. If you or anybody you know is interested in this opportunity, please contact me at BDM at 605-448-5417.

Despite the inflationary increase in materials and operational costs, it appears BDM had another favorable year. Financial metrics remained solid with continued capital investment into the system. We completed gathering the data for our year-

...continued on page 14

BDM RURAL WATER SYSTEM

BOARD OF DIRECTORS

President
Torre Raap – Andover, SD

Vice President
Kevin Deutsch – Sisseton, SD

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John Cloud – Sisseton, SD

STAFF

General Manager
Rodney Kappes

Operations Manager
POSITION OPEN

System Operations Specialists
Darin Roehr
Jim Hagen
Ryan Vrchota
Jared Marzolf

Office Manager
Shannon Wegleitner

Attorney
Danny R. Smeins

CONTACT INFORMATION

PO Box 49 | Britton, SD 57430
Phone: (605) 448-5417
Fax: (605) 448-2124
www.bdmruralwater.com

BDM RURAL WATER SYSTEM

ANNUAL MEETING

Be sure to join us for BDM's 43rd Annual Meeting to be held at 6:00 pm on Monday, March 27th at the BDM building in Britton! Supper will be served following the meeting.

More info can be found on page 15.

The BDM Rural Water System offices will be closed:

MONDAY, MAY 30TH MEMORIAL DAY

As always, if you have an emergency, please call the office at 605-448-5417 or toll free at 1-800-448-9236. You will then receive a message with the telephone number of the employee on call. Please call that person for assistance in an emergency only.

BE A LEAK SEEKER!

With over 2,300 miles of pipeline, occasional leaks are going happen in the BDM system. Not only are leaks an inconvenience for our members, they are a costly expense to your water system. If you see a possible BDM leak, please call the office to report it right away. The first caller to report a verified leak will receive a $30.00 credit on their next water bill.

BDM RURAL WATER SYSTEM, INC.

RATE SCHEDULE

(EFFECTIVE JANUARY 1, 2023)

GENERAL USER RATES:

Debt Service monthly payment: $41.00 per hookup per month for all meters

$6.95 per thousand gallons for the first 2,000 gallons used per month
$5.95 per thousand gallons for the next 5,000 gallons used per month
$4.95 per thousand gallons for the next 8,000 gallons used per month
$3.95 per thousand gallons for over 15,000 gallons used per month

Gallons Used Per Month	Monthly Total	Gallons Used Per Month	Monthly Total
1,000	$ 47.95	25,000	$ 163.75
2,000	$ 54.90	30,000	$ 183.50
3,000	$ 60.85	35,000	$ 203.25
4,000	$ 66.80	40,000	$ 223.00
5,000	$ 72.75	45,000	$ 242.75
6,000	$ 78.70	50,000	$ 262.50
7,000	$ 84.65	55,000	$ 282.25
8,000	$ 89.60	60,000	$ 302.00
9,000	$ 94.55	65,000	$ 321.75
10,000	$ 99.50	70,000	$ 341.50
11,000	$ 104.45	75,000	$ 361.25
12,000	$ 109.40	80,000	$ 381.00
13,000	$ 114.35	85,000	$ 400.75
14,000	$ 119.30	90,000	$ 420.50
15,000	$ 124.25	95,000	$ 440.25
16,000	$ 128.20	100,000	$ 460.00
17,000	$ 132.15	125,000	$ 558.75
18,000	$ 136.10	150,000	$ 657.50
19,000	$ 140.05	175,000	$ 756.25
20,000	$ 144.00	200,000	$ 855.00

ALL USERS:

No water is included in the debt service payment. All water used is in addition to the monthly debt service payment. Payments are due by the 10th of the month. A $10.00 fee applies to all payments received after that date. Service is subject to disconnection if payment is not received by the 15th.

AFTER HOURS & WEEKENDS WATER EMERGENCIES:

Please call the BDM Office at 605-448-5417 or
1-800-448-9236 & a message will direct you to the employee on call.

KAPPES NAMED RURAL WATER MANAGER OF THE YEAR

The South Dakota Association of Rural Water Systems (SDARWS) recently named Rodney Kappes of the BDM Rural Water System as the Rural Water Manager of the Year during the organization's Annual Technical Conference in Pierre. This award recognizes managers of rural water systems across South Dakota for outstanding performance in operating a rural water system.

Rod Kappes took over as manager of BDM Rural Water in 2016 when the board of directors decided to make a change. Kappes stepped in, took the bull by the horns, and turned BDM around financially. He made the board see the importance of funding depreciation, its impact on a business, and its financial benefits to the organization. Kappes has steadfastly guided the system as we continually look to improve our infrastructure to meet our commitments to members. BDM has been in a perpetual improvement phase since he arrived, and the system is better for it.

Kappes works closely with BDM's consulting engineer to ensure we can provide adequate high-quality water to its members while keeping the system sustainable for the long term. He has put a lot of time and energy into the WINS project, coming up with creative solutions to many problems.

The South Dakota Association of Rural Water Systems is a non-profit membership organization dedicated to enhancing South Dakota's water and wastewater industries by providing training and on-site technical assistance. SDARWS is financially supported through its membership dues and grant programs as a member-driven organization. They host a yearly Annual Technical Conference in Pierre during the second week of January for rural and municipal water and wastewater systems for sessions in operations, management, boardsmanship, and governance, and to recognize leaders in the water and wastewater industry.

Manager: continued from page 2

end audit, which we will see the results in early to mid-March and share with the customer base at our annual meeting. For the year, we pumped, treated, and delivered 409,000,000 gallons of water. This is compared to last year's all-time record of 444,000,000 gallons and 412,000,000 gallons in 2020.

Lastly and most importantly, I want to thank Shannon, Darin, Jim, Ryan, and Jared for what they do day in and day out to make BDM the outstanding company it is today. Thank you to all of our customers for your business and support; it is very much appreciated, and God Bless.

SAVE WATER IN THE YARD THIS SUMMER

AS TEMPERATURES RISE IN THE SUMMER, SO DOES OUR OUTDOOR WATER USE – MOSTLY ON LAWNS AND LANDSCAPES

29 BILLION GALLONS of household water is used daily across the U.S.

9 BILLION GALLONS

come from daily residential outdoor water use, mainly for landscape irrigation

Depending on the region, homeowners use **30-60%** of their water oudoors

60% of that is wasted, in part, due to overwatering.

The average family's water use is

320 GALLONS PER DAY

During the summer, it can be up to

1,000 GALLONS PER DAY

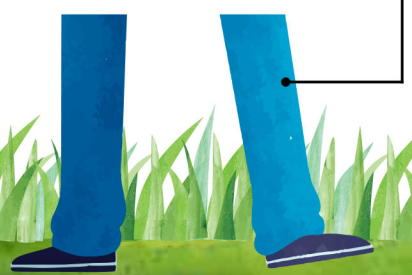
Some even use up to **3,000 GALLONS PER DAY**

... equal to leaving a garden hose running for nearly **8 HOURS!**

SIMPLE THINGS WE CAN ALL DO

STEP ON IT:

Step on the lawn: If the grass springs back, it doesn't need water.

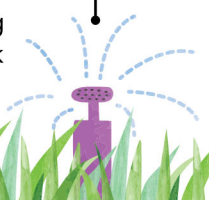


Timing is everything. Plan to water in the early morning or evening to beat daytime evaporation

TAKE A SPRINKLER BREAK:

Grass isn't really meant to be bright green in the summer.

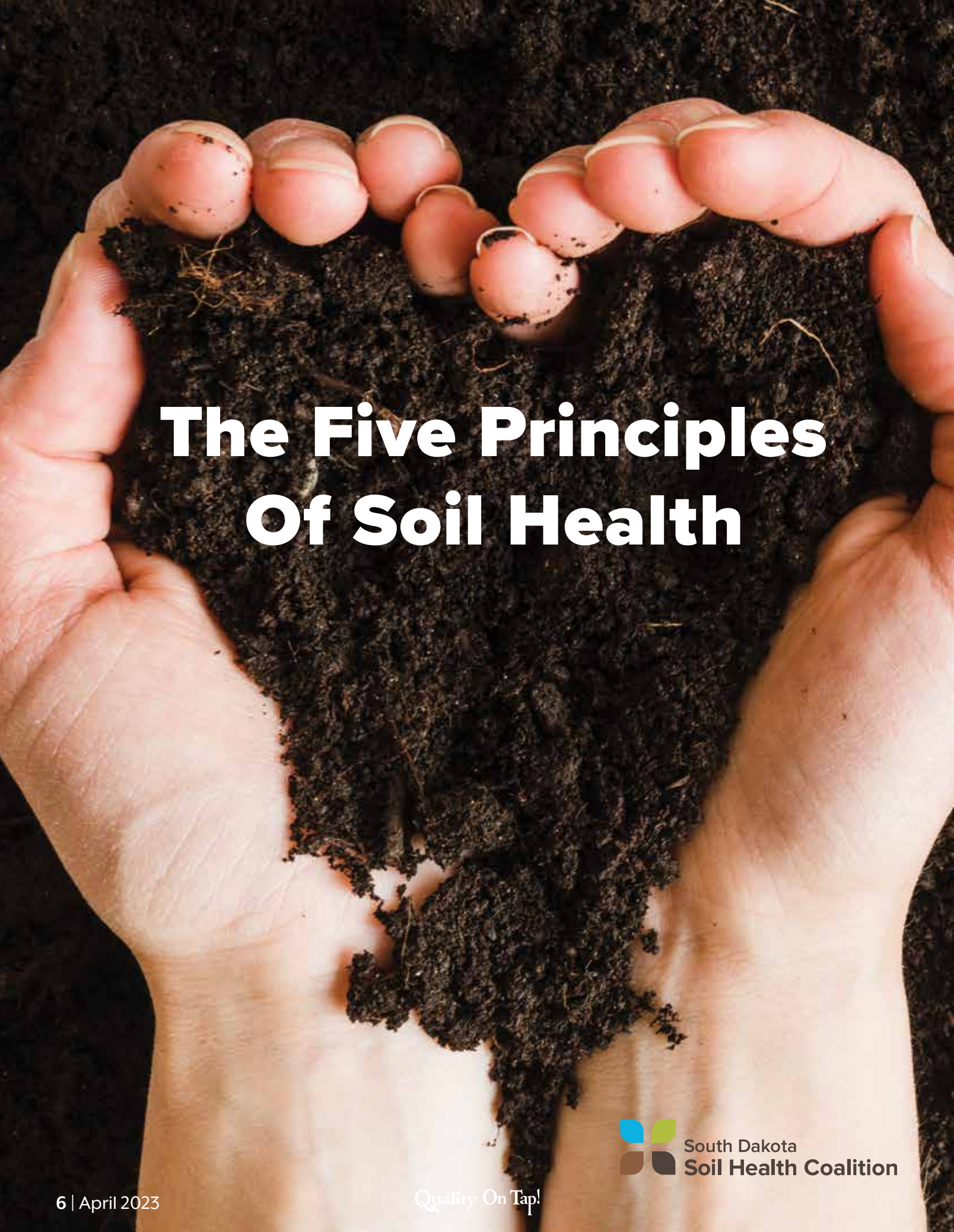
Make sure you're watering the lawn, not the sidewalk or driveway!



LEAVE IT LONG: Longer grass promotes a more drought-resistant lawn, reduced evaporation, and fewer weeds.

TUNE UP YOUR SPRINKLER SYSTEM: Inspect irrigation systems, and fix leaks and broken or clogged sprinkler heads. Just one broken sprinkler head could waste up to 25,000 gallons of water over a 6-month irrigation season

WaterSense, a partnership program by the U.S. Environmental Protection Agency, seeks to protect the future of our nation's water supply. For more tips on reducing outdoor water use, visit epa.gov/watersense/outdoor.



The Five Principles Of Soil Health

South Dakota
Soil Health Coalition

Soil Cover: *Keep plant residues on the soil surface.*
Look down, what percentage of your soil is protected by residue? Erosion needs to be minimized before you can start building soil health.

Limited Disturbance: *Minimize tillage as much as possible.*
You will start building soil aggregates, pore spaces, soil biology, and organic matter.

Living Roots: *Keep plants growing throughout the year to feed the soil.*
Cover crops can add carbon to the soil, provide a great food source for micro-organisms. Start small to find the best fit for your operation.

Diversity: *Diversify as much as possible with 3 or more crops and cover crops whenever possible.*
Try to mimic nature by including cool and warm season grasses and broad leaf plants. Three or more crops in rotation benefits the soil food web, improves infiltration, nutrient cycling, reduces disease and pests, and aids in weed suppression.

Integrating Livestock:
Fall/winter grazing of cover crops increases livestock's plane of nutrition at a time when pasture forage quality can be low, increases the soil biological activity on the cropland, and improves nutrient cycling. Proper grassland management improves soil health.

Soil Health Benefits

Builds organic matter which retains and cycles nitrogen and sequesters carbon; which in turn reduces fertilizer and fuel costs.

Stabilizes soil aggregates which improves resistance to erosion by wind and water.

Improves water infiltration and retention which helps to better manage the effects of flood or drought and improves trafficability on cropland fields.

Enhances wildlife habitat and balances the biological community above and below ground.

Healthy soils filter and clean water that moves through it, for improved water quality.

THE STATE OF OUR WATERS

Jay Gilbertson, East Dakota Water Development District

Every year, the people of South Dakota, along with thousands of visitors, make use of the many and varied water resources of the state. Rivers and lakes are tapped by public water suppliers and private citizens for drinking water; irrigation provides water to crops and lawns to augment natural precipitation; anglers scour our lakes and streams in search of fish; and young and old enjoy a quick dip to escape the heat of summer. All of these activities are things we take for granted, but how do we know that the water on which we depend is really up to the task?

The South Dakota Department of Agriculture and Natural Resources (DANR), in cooperation with the United States Environmental Protection Agency (EPA), has identified a number of general classes of activities, known as beneficial uses, for the waters of the state. These are:

1. Domestic water supply;
2. Coldwater permanent fish life propagation;
3. Coldwater marginal fish life propagation;
4. Warmwater permanent fish life propagation;
5. Warmwater semipermanent fish life propagation;
6. Warmwater marginal fish life propagation;
7. Immersion recreation (swimming);
8. Limited contact recreation (boating and fishing);
9. Fish and wildlife propagation, recreation, and stock watering;
10. Irrigation; and
11. Commerce and industry.

All rivers and streams in South Dakota are assigned the beneficial uses (9) and (10) unless otherwise stated in the Administrative Rules of South Dakota (ARSD) Chapter 74:51:03. Lakes listed in ARSD Chapter 74:51:02 are assigned the beneficial uses of (7), (8) and (9) unless otherwise specified. These water bodies may also be assigned additional beneficial uses depending on local conditions.

For each beneficial use, DANR and EPA have established measurable standards (numeric criteria) to determine if the use can be safely met. For example, if the intended use is Immersion Recreation (swimming), bacteria counts in the water must be below a certain level and dissolved oxygen must be over a particular level. If the water body is to be used as a domestic water supply, concentrations of nitrate, sulfate, total dissolved solids, and other constituents cannot exceed specific levels. Temperature and suspended solids are the primary criteria used to evaluate suitability for the fisheries classifications, (2) through (6).

If 90% or more of the analyses from a particular water body meet the numeric criteria, then the resource is considered fully supporting of the designated use. It should be noted that a "fully supporting" designation does not necessarily mean that there were no problems found. It just means that if they were, they were few and far between, and not considered a serious risk to human health and safety. However, if violations of the numeric criteria are frequent (>10%), then the water body is considered impaired, and not supporting one or more of it's intended uses.

Every two years, DANR assembles water quality information on the rivers, lakes and streams of the state. The purpose of this report is to assess the water quality of South Dakota's water resources and to identify the impaired water bodies. This report meets the requirements of Sections 305(b), 303(d), and 314 of the federal Clean Water Act, which mandate a biennial report on state water quality be submitted to Congress. This report is also intended to inform the citizens of South Dakota on the status of the quality of their water resources. Finally, it serves as the basis for management decisions by natural resource agencies and interested stakeholders to plan and prioritize water pollution control activities. The report is published in even-numbered years. The most recent (2022) South Dakota Integrated Report for Surface Water Quality Assessment is available on the DANR website: *danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_2022_IR_approved.pdf*

The Integrated Report breaks the State into fourteen major watersheds. It shows the name and location (county) of each lake and river/stream segment for which information is available. Each specific beneficial use is listed, along with whether or not it is meeting the intended use. In some cases, most often for immersion and/or limited contact recreation, there is insufficient information on which to determine if the use is supported or not. If an impairment exists, the cause is given, and where possible, potential sources of the problem are listed.

In the 2022 Integrated Report, excessive amounts of bacteria (primarily from livestock) and total suspended solids (agricultural and natural sources) were the most common sources of impairments to recreational and fisheries/aquatic life uses respectively. Another significant impairment is mercury found in fish flesh, although as this is mostly attributed to atmospheric deposition from out-of-state sources, local corrective measures may be of limited effectiveness.

So, what happens when an impairment is found? Once a

water body is determined to be impaired, DANR is required to conduct a more thorough investigation to better identify the source(s) of the impairment(s). Although the State maintains a network of over 150 surface water monitoring locations on rivers and streams, and annually samples about 35 lakes, their efforts are designed to function largely as screening tools. Rarely does this system provide sufficient information so that a particular problem can be effectively identified and treated.

These detailed investigations result in the development of something called a total maximum daily load, or TMDL. A TMDL represents the amount of a particular contaminant that can enter a water body in a given day without the beneficial use being impaired. A comparison of the actual pollutant load and the TMDL can give a pretty good idea of the amount of effort needed to correct the problem(s). A TMDL report will include recommendations for what actions may be necessary to address the problem(s) and to reduce the pollutant loadings.

In most cases, non-point source (NPS) pollution sources are responsible for identified impairments. NPS pollution, as it's name implies, results from the cumulative impact of many small activities across a watershed, as opposed to emanating from a single, readily identifiable location (point source). In South Dakota, where agriculture dominates the economy, it is no surprise that a significant amount of the NPS pollution is ag related. However, municipalities and commercial and residential areas can also be significant contributors, and in some instances, natural sources have caused impairments.

Efforts to address known water quality impairments are currently active in nearly every major watershed in South Dakota.

Once a TMDL report has been prepared, DANR works with interested local natural resource agencies and others to develop a project to address the problems. Referred to as watershed implementation projects, they utilize local, state and federal fiscal and technical resources to put into place voluntary changes to problematic land use practices. The changes, or best management practices (BMPs), are designed to allow the landowner to continue to use their property in a manner they desire, while also eliminating, or at least minimizing, adverse impacts on the public water bodies. In most cases, adoption of BMPs results in improved efficiency and productivity, as well as reducing pollution potential. However, in recognition of the very real public benefit derived from BMP implementation, projects provide cost-share assistance of up to seventy-five percent (75%) to willing landowners.

The BMPs that may be promoted by a particular project can vary depending on the type(s) of impairment(s) and likelihood of adoption. After all, the best solution is no good unless someone is interested in putting it into practice. Examples of BMPs supported by watershed implementation projects around the state include: upgrading animal waste management systems, installing terraces and grassed waterways, irrigation system upgrades, river bank and shoreline stabilization, long-term or permanent easements along rivers and streams, and public awareness and education. Most projects also have a water quality monitoring component to measure impacts on impaired waters.

Unfortunately, there is rarely a single action, or small set of changes, that can alter the status of a water body. NPS pollution comes from many places over a large area, and so "fixing" such problems involves implementing many BMPs across the watershed. As a result, watershed restoration projects may need to put in place hundreds of BMPs to affect change. The problems they are seeking to correct developed over many years - fixing them can also be a long-term, and very expensive, commitment.

Efforts to address known water quality impairments are currently active in nearly every major watershed in South Dakota. The Big Sioux River Project has developed innovative riparian buffer activities that are having demonstrable impact on water quality in the most heavily used watershed in the state. The Belle Fourche River Partnership is working to improve irrigation efficiency, and a subsequent reduction in field runoff. The South Central Watershed Project provides guidance and assistance to landowners in the Vermillion and James River basins, along with the watershed of Lewis & Clark Lake, spanning territory from Clearfield to Canova. These are just a few of the efforts underway.

Where do things go from here? DANR, the East Dakota Water Development District and other natural resource agencies continue to monitor the status of our water bodies. For the most part, the problems that have been identified, while real and requiring corrective efforts, do not represent significant threats to human health and safety, provided a little common sense is exercised. Drinking water impairments are rare, and with the ever increasing improvements in treatment technology, public water supplies are unlikely to be seriously harmed. (Provided we are prepared to pay treatment costs.)

What can you do? As noted above, most of the problems arise from NPS pollution. Every one of us can be, or is, a source, so each of us should look at what we might to doing and how to make things better. Never has the old adage, "An ounce of prevention is worth a pound of cure," been more relevant.

SYSTEM SPOTLIGHT

BEAR BUTTE VALLEY WATER

The first documented and recorded minutes for the formation of the Bear Butte Valley Rural Water System (BBV) located east and north of the town of Sturgis were recorded on April 2, 2009. The organizational meeting was the culmination of several telephone calls from Neal Rowett, a rural area resident, to the South Dakota Rural Water Office located in Spearfish. "If I recall the first conversation, said George Vansco, "it went something like this: 'Are you the guy who can help a bunch of rural area ranchers and homeowners start up a water system?'" The reason for his interest in starting a new system stemmed from a concern over poor water quality due to the local creek picking up undesirables as it weaved its way through the town of Sturgis. Bear Butte Creek has allowed some owners the benefit of drilling shallow wells near the creek while others were forced into deeper aquifers at a much higher cost.

With a desire to provide the area with quality drinking water; the next steps were getting local area residents involved and begining to search for funds enabling them to conduct a feasibility study. After attending several Meade County Commission meetings and bringing the idea of developing another west river water system to the Department of Environment and Natural Resources (DENR), the steering committee decided to incorporate as a non-profit.

Five days after the first documented meeting, Bear Butte Valley Water was incorporated on May 7, 2009. At this meeting the following board members were elected: Neal Rowett, President; Robert Yantis, Vice-President; Bruce Weyrich, Secretary/Treasurer; Clair Rowett, Director; Don Chord, Director; Jesse Whitford, Director. As the years have passed, some directors dropped off the board and others were newly elected – but the majority of the board has remained the same.

While it takes most water systems about 30 years from inception to completion, Bear Butte Valley Water has been on the fast track. After receiving their certificate of incorporation on May 7, 2009, they received funding from

the state just a year later. Incorporating allowed them to get an initial $7,500 in planning funds, which they used to pay DGR Engineering to draw up plans for the system. Total project costs in 2010 were estimated at $5.1 million.

In April of 2010, BBV was given the go-ahead from USDA Rural Development to apply for loans after an archaeological study was conducted. A $500,000 grant was received from the State of South Dakota through the Consolidated Water Facilities Construction Program to begin the project. The initial cost for those interested in hooking up to the system was $1,500/connection. Meetings continued to be held to determine where the best source of water would come from. Proposals came in from cities, individual landowners, campgrounds and others, while drilling a well for the system was also looked at as an option.

USDA Rural Development awarded Bear Butte Valley Water, Inc. with a water and environmental loan in the amount of $2,917,000, and a grant of $2,000,000 in January of 2014. The State of South Dakota also kicked in additional funding through a $1,500,000 grant, an additional $500,000 was acquired from DENR, and USDA Natural Resources Conservation Service provided significant funding through its EQIP program to provide water for livestock. Through this funding, construction was planned to expand the system to 150 miles of distribution pipeline, with water available to 220 users and 150 service locations upon completion.

A ground breaking ceremony was held on June 24, 2015 to commemorate the awarding of bids to complete the entire rural water system – including installing 110 miles of pipeline, storage reservoirs, and pumping stations. Bruce Jones – USDA Rural Development Acting State Director, and Jacqueline M. Ponti-Lazaruk – USDA Rural Development Assistant Administrator for the Water and Environmental Program in Washington, DC, were on hand at the ground breaking to announce additional funding of a $200,000 loan coupled with a $2,527,000 grant to complete the system. Representatives from the Congressional offices, the South Dakota Association of Rural Water Systems, Meade County Commissioners, the engineer, and Sturgis Economic Development were also on site for the ground breaking activities.

Said Neal Rowett, Board President of BBV Water, Inc. "This accomplishment is the result of many days, weeks, and years of service and perseverance by a dedicated board of directors, along with the help of professional guidance received from our engineering partners and South Dakota Rural Water. We appreciate the support of the community for the confidence these people have shown in our efforts. Bear Butte Valley Water is a community owned, non-profit corporation that will serve its members for many future generations. It is with great pride that we will be providing drinking water of excellent quality with enough volume and pressure to fulfill the needs of our members."

The most recent construction project included 252 services, 146 miles of pipe at a cost of $11.4 million. The project was funded in part with a $3.1 Million WEP loan and $4.5 Million grant. The South Dakota Department of Environment and Natural Resources provided $2,000,000 grant under the Water Facilities Construction Program. Additionally, 28 livestock producers in the area have joined together with the Natural Resources Conservation Service to secure Environmental Quality Incentives Program (EQIP) funding for using rural water service to improve the environmental quality of their livestock operation. The available funding to the water system through the EQIP program is approximately $1.1 Million. The remaining funding came from local sources and the customers of BBVW. The well was completed in 2014, the tanks and pump stations in early 2016 and the pipeline was complete at the end of 2016. BBVW is now providing rural water service to their 309 members with an additional 30 in the works. These new customers will be included in a new 25-mile line of pipe in the Alkali road project, which is funded by Rural Development. A standby well and new booster station and storage tank are also planned. We have let bids for the well at $1,335,000 and the line extension at $3,076,815. The tank and booster will follow soon.

BOARD MEMBERS:

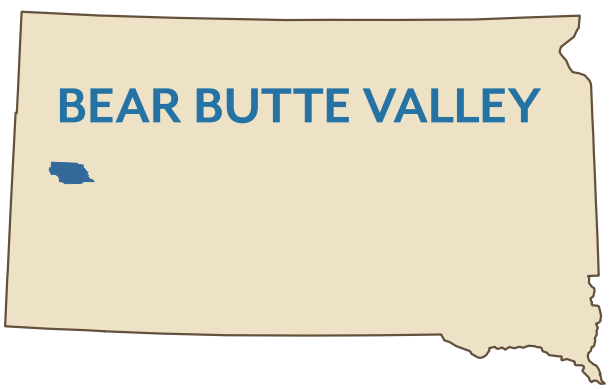
Bruce Weyrich – President
Ed Blair – Vice-President
Bob Kaufman – Secretary/Treasurer
Clair Rowett – Director
Randy Hallock – Director
Rich Grosch – Director
Brook Looby – Director

STAFF:

Dennis Kinslow – Manager

SYSTEM AT A GLANCE

Service Connections: 275
Water Source: wells
Counties Served: Meade

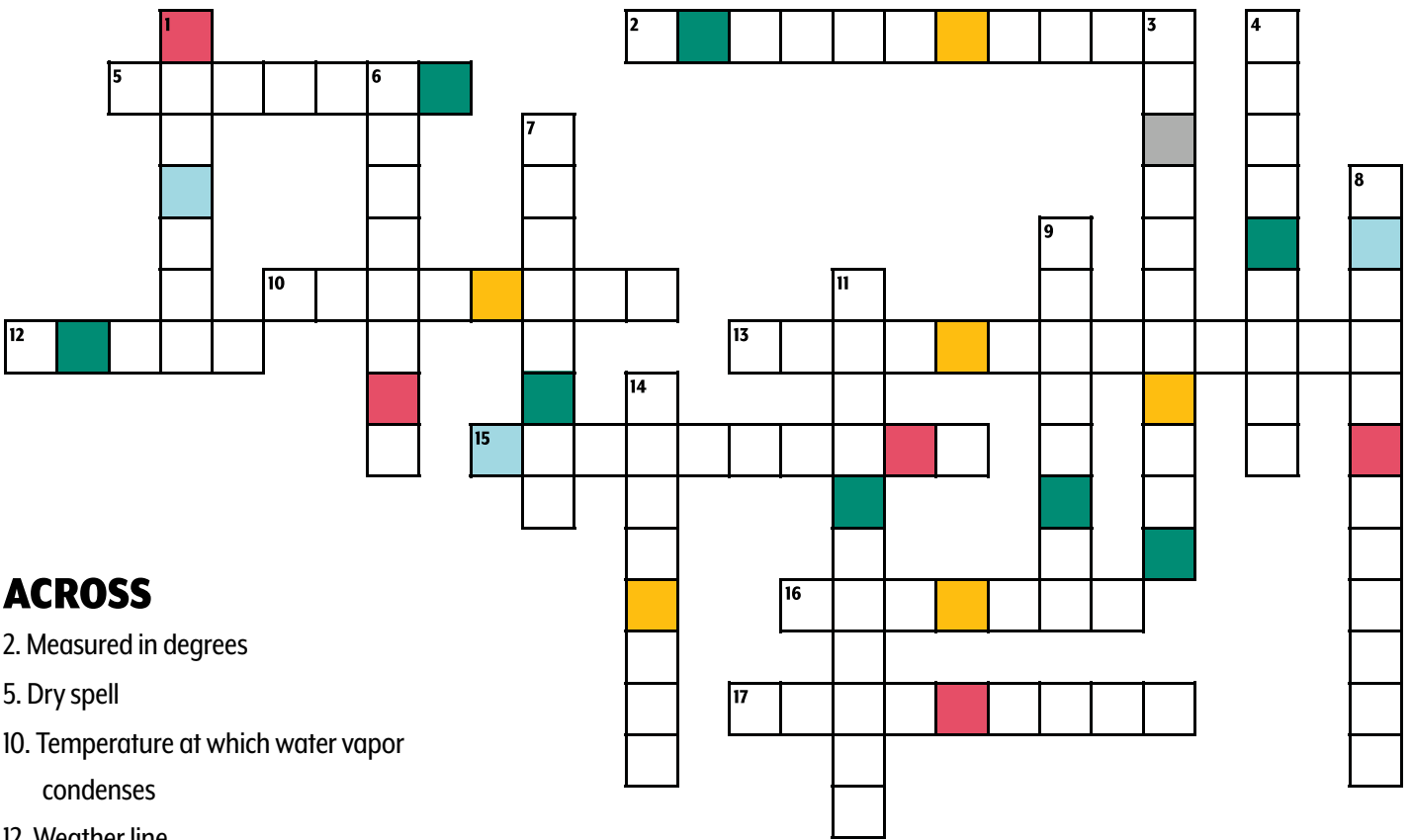


RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

CLIMATE

Enter to Win $100

SCRAMBLE ANSWER



ACROSS

2. Measured in degrees
5. Dry spell
10. Temperature at which water vapor condenses
12. Weather line
13. Rain, snow, sleet, or hail
15. The air in any particular place
16. Violent rotating windstorm
17 Environmentalists concern

DOWN

1. Process of wearing away
3. Process of turning liquid into vapor
4. Freezing weather factor
6. Long hot spell
7. Air Dampness
8. Loud weather event
9. White storm
11. Study of Weather
14. Prediction

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 April 15, 2023 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 Randy Stanley with the BDM Rural Water System who had the correct phrase of "The secret ingredient is love" for January 2023.

IT'S TIME TO TALK PFAS

Kevin Christenson – Source Water Protection Specialist, South Dakota Association of Rural Water Systems

Almost everywhere you go, especially in the water industry, people cringe and cuss when you mention the word PFAS. At the same time, talking with people at ball games, the grocery store, and various other businesses in their communities, I've found that people outside the water industry know just bits and pieces about PFAS. Hopefully, I can help with some of the "bits and pieces."

What is PFAS?

Per and Polyfluoroalkyl Substances, also known as PFAS, are a large, complex group of manufactured chemicals that are ingredients in various everyday products. For example, they keep food from sticking to packaging or cookware, make clothes and carpets resistant to stains, and create more effective firefighting foam. PFAS are also used in the aerospace, automotive, construction, and electronics industries.

PFAS molecules have a chain of linked carbon and fluorine atoms. Because the carbon-fluorine bond is one of the strongest, these chemicals do not degrade quickly or easily in the environment, so they are often labeled the "Forever Chemical."

Why be concerned about PFAS?

Multiple health effects associated with PFAS exposure have been identified and are supported by different scientific studies. Concerns about the public health impact of PFAS have arisen for the following reasons:

- Widespread occurrence. Studies find PFAS in the blood and urine of people, and scientists want to know if they cause health problems.
- Numerous exposures. PFAS are used in hundreds of products globally, with many opportunities for human exposure.
- Persistent. PFAS remain in the environment for an unknown amount of time.
- Bioaccumulation. People may encounter different PFAS chemicals in various ways. Over time, people may take in more chemicals than they excrete, which leads to body bioaccumulation.

Because there are many PFAS chemicals, which often occur in complex mixtures and various everyday products, researchers face challenges in studying them. More research is needed to understand all exposure sources fully and if and how they may cause health problems.

The research reveals possible links between human exposure to PFAS and adverse health outcomes. These health effects include altered metabolism, fertility, reduced fetal growth and increased risk of being overweight or obese, increased risk of some cancers, and reduced ability of the immune system to fight infections.

The Safe Drinking Water Act (SDWA) requires that once every five years EPA issue a list of unregulated contaminants to be monitored by public water systems. Unregulated Contaminant Monitoring Rule (UCMR5) requires sample collection for 30 chemical contaminants between 2023 and 2025 using analytical methods developed by EPA and consensus organizations.

This action provides EPA and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. UCMR 5 will provide new data that is critically needed to improve the EPA's understanding of the frequency that 29 PFAS (and lithium) are found in the nation's drinking water systems and at what levels. This data will ensure science-based decision-making and help prioritize the protection of disadvantaged communities.

Nationwide, all PWSs serving more than 10,000 people (i.e., large systems) will monitor; all PWSs serving 3,300 to 10,000 people and 800 representative PWSs serving fewer than 3,300 will monitor for PFAS, subject to availability of appropriations and sufficient laboratory capacity.

The South Dakota Association of Rural Water Systems has partnered with the South Dakota DANR. By doing so, SDARWS has taken a lead role and will be collecting the samples required by the UCMR5 in South Dakota, with the thought of keeping sampling protocols and procedures consistent and easing the sampling burden on communities and systems.

RURAL WATER SYSTEM

PO Box 49
705 7th Street
Britton, South Dakota 57430
www.bdmruralwater.com
605-448-5417

2023 Scholarship Application

BDM Rural Water is sponsoring four $500 scholarships to be presented for the 2023 school year. Two boys and two girls will each receive the $500 award to be drawn at random.

APPLICANT INFORMATION:

Last Name _____ First Name _____

Mailing Address _____

City _____ State _____ Zip _____

Email Address _____

Telephone Number _____ Date of Birth _____

FAMILY INFORMATION:

Parents Names _____

BDM Rural Water System, Inc. Account Number _____

ACADEMIC INFORMATION:

Name of High School _____ Year of Graduation _____

University/College/Technical Institute you are or you will be attending _____

At present I am or plan on majoring in _____

REQUIREMENTS:

- You must be a child of a member of BDM Rural Water System, Inc. with a billing account directly from BDM Rural Water.
- GPA must be a minimum of 2.0. A sealed official transcript from your current school must accompany this application.
- You must attend either a 2-year or a 4-year college or vocational institute.
- In order for this application to be considered, a photo to be used for publicity purposes must be submitted along with your application.

All forms must be returned to the BDM Rural Water office by May 1, 2023.
BDM Rural Water System, Inc., PO Box 49, Britton, SD 57430

This institution is an equal opportunity provider.
Esta institucion es un proveedor de servicios con igualdad de oportunidades.

BDM
RURAL WATER SYSTEM

BDM ANNUAL MEETING

MONDAY, MARCH 27th, 2023

BDM office building
705 7th Street, Britton, SD

The business meeting will be called to order at 6:00 PM

Cash prize drawings will be held!

Note: Only BDM members are eligible to enter the drawings.

There will be no election, as nominating petitions for the incumbent Directors for Districts Two and Five were the only ones received.

Financial and operations reports will be available.

Supper will be served following the meeting.

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RURAL WATER SYSTEM
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WATER MATTERS

Aquatic Invasive Species - Zebra Mussels Part I

Although South Dakota lacks the '10,000 lakes' our neighbor to the east likes to talk about, the rivers, lakes and streams that we do have are important and treasured water resources. Given the relative scarcity, it might be argued that we should put more effort into the protection of what few water bodies we do have.

Aquatic Invasive Species (AIS) - As the name implies, the plants and animals that make up AIS in South Dakota are not native to the area. Consequently, they often lack natural predators or other controls on their growth and distribution. Under the right conditions, they can quickly take over a water body by out competing native species. Because they are not native, AIS need to be introduced to new territories. Sometimes this is done intentionally, but most often the introduction is the unintended consequence of some other action.

Zebra mussels, a fingernail-sized mollusk that is native to fresh waters in Eurasia, is an example of an AIS that is drawing a lot of attention in South Dakota. They probably arrived in the Great Lakes in the 1980s via ballast water that was discharged by large ships from Europe, and have spread rapidly throughout the Great Lakes region. From there, they spread into the large rivers of the Mississippi River drainage, including the Missouri River. Currently (March 1, 2023), zebra mussels are found in over a dozen water bodies in South Dakota.

Aquatic invasive species can cause recreational, economic, and ecological damage, potentially changing how residents and visitors use and enjoy South Dakota waters.

Zebra mussel impacts:

- Encrust equipment, such as boat motors and hulls, which reduces performance and efficiency and is costly to clean and repair.
- Swimmers and pets can cut their feet on zebra mussels attached to rocks, docks, swim rafts and ladders.

- Create a costly problem for power plants, cities and residents when they clog water intakes.
- Filter tiny food particles out of the water, which can reduce available food for larval fish and other animals, and can increase aquatic plant growth as a result of increased water clarify.
- Attach to and kill native mussels.

To provide information about AIS in South Dakota, the South Dakota Department of Game, Fish & Parks has established a website: https://sdleastwanted.sd.gov/.

BACK PAGE CONTENT PROVIDED BY:

EAST DAKOTA WATER DEVELOPMENT DISTRICT

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Brookings, SD 57006
605-688-6741
eastdakota.org