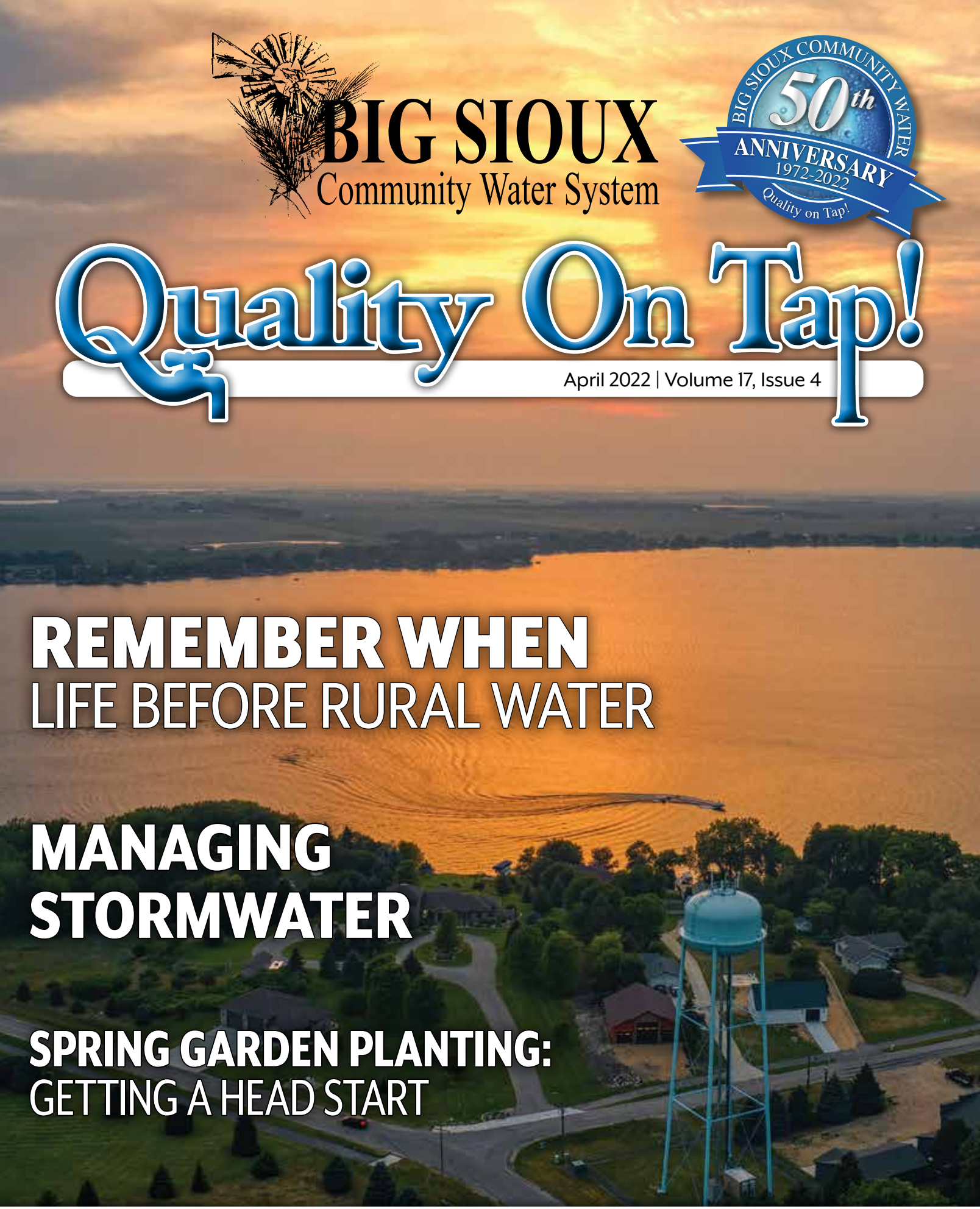
BIG SIOUX
Community Water System

BIG SIOUX COMMUNITY WATER
50th ANNIVERSARY
1972-2022
Quality on Tap!

Quality On Tap!

April 2022 | Volume 17, Issue 4



REMEMBER WHEN
LIFE BEFORE RURAL WATER

MANAGING STORMWATER

SPRING GARDEN PLANTING:
GETTING A HEAD START

FROM THE MANAGER | ANNUAL MEETING – APRIL 5TH

FROM THE MANAGER

Jodi Johanson, General Manager
Big Sioux Community Water System, Inc.

On April 5th Big Sioux Community Water System will be holding its 50th Annual Meeting Celebration at the Colman-Egan High School. We will be serving a free meal for the entire family beginning at 6:30pm and the business meeting to follow at 7:15pm.

Three Directors from District 2 terms expire. District 2 incumbent Directors Andy Groos (Secretary/Treasurer), Tom Kansanback (Vice-Chairman), and Vince Nelson have all expressed their willingness to run for another term (3 years). District 2 comprises those members residing in Western Moody County and Trenton Township in Brookings County. To qualify for nomination, at least 5 members from their district must sign the petition. The petition must be filed no later than fourteen days prior to the meeting.

Also at this year's meeting, will be honoring 50 years of service for two of our directors, 50 years of memories, system improvements, and recognizing past staff, board members, and companies that have help Big Sioux CWS become the water system we are today. Please make sure you join us for this celebration!

In 2021 the nation saw heavy price increases in every sector of business. In the water sector, pipe and materials have increased double to triple in cost from two years ago. Supplies have bottle necked on both coasts and made 2021 a difficult year for new construction projects, new hookups and finding materials for everyday maintenance. This year we are still feeling the higher prices and supply shortages. Costs have gone up for chemicals, electricity, insurance, payroll, and virtually every other operating cost has risen as well.

Following careful analysis of our financial position and approval of the 2022 budget, the Big Sioux Board of Directors has implemented a price increase for your monthly water bill. The increase includes a $5 increase to the monthly minimum (debt service relief), and a .10 cent increase per thousand gallons. These increases will help continue BSCW to keep moving forward by keeping the budget balanced, keeping the water system up to date, and using the latest technologies available to always provide safe drinking water with uninterrupted service to your tap. The last price increase was in 2019.

As of January 1st, 2022, the hookup fee for a new service will increase to $3,000. This increase will offset the tremendous price increases for construction costs and provide some monetary relief toward adding system capacity to carry new users. The increase in hookup fees will no way affect existing services.

In the back of this issue you will find Big Sioux Community Water System's Consumer Confidence report that includes water from the Big Sioux aquifer and Minnehaha Community Water System. This report shows that our water quality meets or exceeds all the standards demanded by the US EPA, some of the most stringent water quality parameters demanded. We have one of the best sources of water in our area. It is the youngest and freshest water available. Big Sioux CWS works hard every day to insure the cleanest and safest drinking water for all our consumers.

Don't forget to join us to celebrate 50 years of water service on April 5th at the Colman-Egan High School. The system belongs to you, the consumers. We look forward to celebrating our success, planning our future, and thank all our customers who made the last 50 years of quality water on tap possible!

BIG SIOUX
Community Water System

BOARD OF DIRECTORS

Dan Dannenbring, Chairman
Tom Kansanback, Vice-Chairman
Andy Groos, Secretary / Treasurer
Dan Carlson, SA Director
Tom Hagedorn, Director
Reggie Gassman, Director
Gaylen Backus, Director
Kent Whipkey, Director
Vince Nelson, Director

STAFF

Jodi Johanson, General Manager
Chad Kneebone, Chief of Distribution
Aric Olson, Chief Plant Operator
Jeff Carruthers, Small Systems Operator
Lucas Dailey, Distribution Operator
Taylor Bult, Distribution Operator
Dawn Christenson, Bookkeeper
Lehni Olson, Customer Service / Billing Clerk

CONTACT INFORMATION

23343 479th Avenue
Egan, SD 57024
Phone: 24hrs.
(605) 997-2098
Email: bscws@bigsiouxcws.com
Website: bigsiouxcws.com

OFFICE HOURS:

8:00 a.m. to 4:30 p.m.

BIG SIOUX
Community Water System

NOTICE OF 50th ANNUAL MEETING

TUESDAY, APRIL 5TH, 2022

Colman-Egan School
200 S. Loban Avenue • Colman, SD

Dinner @6:30 PM
Meeting @7:15 PM

BIG SIOUX COMMUNITY WATER 50th ANNIVERSARY 1972-2022 Quality on Tap!

BIG SIOUX DIRECTORS UP FOR ELECTION

Tom Kansanback
Vice-Chairman
District 2 Director

Andy Groos
Secretary/Treasurer
District 2 Director

Vince Nelson
District 2 Director

This year we will be celebrating our 50th Anniversary at our Annual Meeting on Tuesday April 5th. Pursant to Article VII Section I of the Big Sioux Community Water System, In. By-Laws the annual meeting will be held at the Colman-Egan High School, Colman, South Dakota. A dinner will be held before the meeting at 6:30 PM with a brief business meeting to be held at 7:15 PM. This business meeting will include our financial reports, reported to us by our Auditors, Wohlenberg Ritzman of Madison, South Dakota. Last year's minutes will be read by our Secretary / Treasurer Andy Groos. The election of Directors will be handled by our Attorney, Reed Mahlke. There will also be comments from Chairman Dan Dannenbring and Manager Jodi Johanson relating to the business of the company and South Dakota Rural Water in general. Questions from the floor will also be invited.

Concluding the business session, there will be plenty of opportunities to win a door prize. We look forward to seeing you there. In accordance with the by-laws, nominating petitions are due fourteen days prior to the date of the annual meeting. Nominating petitions can be picked up at the Big Sioux Community Water System office, Egan, SD between the hours of 8 a.m. and 4:30 p.m. Monday through Friday. Director terms expire for Andy Groos, Thomas Kansanback, and Vince Nelson, directors from District 2. District 2 comprises those members residing in Western Moody County and Trenton township in Brookings County. All three incumbents have expressed their willingness to run for another term in office. Directors are elected for a three-year term.

Five Things This Earth Day to Save Water

If you want to celebrate the Earth this year, don't forget to include water. More than 70 percent of the surface of our planet is water, but almost all of that is ocean water so full of salt, so we can't drink it! Because water is such a precious resource, we all need to do our part to save it. Here are five ways you can start saving water on Earth Day—and every day:

1. **Stop the flow.** Water doesn't need to be flowing while you are busy brushing your teeth, so why not turn it off and save a couple gallons? Also, be sure that the faucet is turned off tightly when you're done washing your hands…those drips become wasted gallons.

2. **Lose the hose, reuse those drops.** If you don't drink all the water in your glass, use it to water houseplants or flowers in the garden. Leftover ice cubes can go right into small plant pots; as they slowly melt, they will give the roots just the water they need.

3. **Scrap the rinse, scrape instead.** If you're cleaning up after meals, scrape food scraps into the trash before loading the dishwasher. Washing and rinsing dishes in the sink uses a lot more water than the dishwasher, but only run the washer when it's full.

4. **Take a shower instead of a soak.** A shower uses less water than filling the bathtub; just don't stand under the spray for too long! If you shorten your shower by just a minute, it will save two gallons of water. Use less shampoo, so it doesn't take long to rinse.

5. **Don't use the toilet for trash.** Used paper towels and tissues belong in the garbage. Only flush the three Ps—pee, poop, and (toilet) paper. When you use the toilet as a trash can, you waste anywhere from one gallon of water to three gallons or more!

EPA WaterSense

For more information, fun activities, and even a game you can play while you learn to save water, visit www.epa.gov/watersense/watersense-kids.

SPRING GARDEN PLANNING:
Getting a Head Start

By Donna Rumbaugh | Extension Master Gardener

Get on your marks, get set...GO! Whether you are an avid gardener or an aspiring new gardener, this is the time to get ready! While Mother Nature isn't quite ready for us to roll up our sleeves and start breaking ground yet, planning is the key to a successful garden.

The most important thing to remember when it comes to spring gardening is to not be in a hurry. It is easy to be lured into thinking spring has sprung, only to get blown away with a late spring blizzard or freezing temperatures. According to the Farmer's Almanac, the last spring frost for our area should be around May 3rd this year. As a general rule, Mother's Day kicks off the gardening season, but even then, it can be pushing it a little.

When planning your garden, there are many things to consider now to make gardening a joy, not a chore. First and foremost, location, location, location! If a garden is close to the house, the gardener can easily check the plant's progress and provide the needed care. Water is generally more accessible near houses or other buildings as well. But if the soil is poor, drainage is inadequate, or there is too much shade, then look elsewhere.

Vegetables require regular watering, so a water source is very important. Most vegetables will need an inch or more of water a week. Inconsistent watering causes produce to crack and develop diseases. The water source should be convenient, or it will be challenging to water as often as needed and gardeners will become discouraged. If you are far from a water source, consider a drip system fed by a water tank. Not all water in South Dakota is suitable for irrigation. Artesian water is often higher in salts or sodium and may not be usable.

If space is limited, consider placing plants that require a small amount of room near the house, and put those requiring larger space where more room is available. "Pretty" vegetables can be mixed into flower beds. Vining plants such as cucumbers can be trellised against a wall, and most bush types of vegetables can be grown in a container.

Next, let's think about the amount of sun that touches the ground throughout the day. Most vegetables need at least six to eight hours of full sunlight a day. Less light will cause your plants to grow tall and leggy. You will get leaves, but little produce. Leafy vegetables such as lettuce may be grown in shadier areas during the hottest part of the summer, as they prefer a cooler environment.

The wind is another consideration, especially here on the upper plains. If your garden is in an exposed area, consider providing some sort of windbreak. Trees and shrubs are effective, but if they are too close to the garden, they can compete for soil moisture and nutrients, and shade the garden. Tilling too close to trees or shrubs can result in rapid regrowth from the roots and cause headaches down the road. Also, keep your garden away from black walnut trees, as the roots produce a substance that will harm tomatoes and other garden plants. If trees are not an option, think outside the box. Plant three to four rows of sweet corn or sunflowers on the windward side of the garden. Snow fences can be strategically placed to block wind, or planting Sorghum-sudangrass adds interest to the garden area.

Look for spots that have fertile soil that is workable and easy to dig at least eight inches deep. The soil should be well-drained. Avoid spots that have a history of flooding, as floodwaters can carry pathogens or chemicals that can contaminate the plants and make them unsafe to eat. Test your drainage by digging eight to 10 inches deep and filling it with water. If, after 12 hours, there is any water left in the hole, choose a different site, or consider building raised beds.

So, when you are feeling that itch to get outside and get started, just take a stroll around your yard, and keep these factors in mind while envisioning the location best suited for producing your fall harvest.

Managing Stormwater

By John McMaine, PhD

Until there is a flood, stormwater is not often at the forefront of people's mind. When a flood comes, it is often too late to react which leads to infrastructure damage or even loss of life.

Any rain drop that falls on the ground can do one of four things – run off the ground surface, go into the ground (infiltration), return to the atmosphere (evapotranspiration), or be stored on the ground surface or in soil. Most natural landscapes are primarily infiltration dominated systems but developed areas are runoff dominated systems. Any impervious surface generates significantly more runoff and less infiltration than most pervious surfaces. Impervious surfaces could include driveways, parking lots, roofs, or sidewalks. Around 55% of precipitation in a highly urbanized area with 75-100% impervious surfaces becomes runoff and only 10% is infiltrated into the ground. In comparison, only 10% of precipitation in an undeveloped area (0-10% impervious surface) becomes runoff. This dramatic change in hydrology increases risks of localized and downstream flooding and erosion.

Storm sewers have been used to manage excess localized flooding but because storm sewers do not reduce the peak flow (highest rate of runoff) and total volume (total amount of runoff from a storm), flood and erosion risk just gets shifted downstream. Detention basins are part of the second iteration of stormwater management and were introduced to control peak flow during storm events. Detention basins function by holding and storing water and releasing it through a controlled outlet like an orifice or a weir. While detention basins effectively reduce peak flow they do not reduce overall flow volume that is produced from impervious area. Excess volume can still lead to downstream flooding and erosion.

Green stormwater infrastructure or low impact development (LID) is a stormwater management philosophy that manages both peak flow as well as total flow volume. LID practices include rain gardens or bioretention, rainwater harvesting, permeable pavement, green roofs, and disconnection of impervious surfaces. While these practices are commonly part of the built environment across many cities in coastal states and some midsize and large cities in the Midwest, LID is not common in South Dakota. LID can be implemented by a homeowner or a municipality.

Rainwater harvesting (RWH) can be done at a small or large scale and can reduce potable (drinking water quality) water use as well as reduce peak flow and flow volume. RWH can be as simple as a 50 gallon rain barrel for watering flowers or as large and complex as a 10,000 gallon cistern with filtration that is used to flush toilets and wash vehicles in a commercial or industrial setting. For homeowners, a rain barrel is a great way to keep roof runoff from heading downstream and use that water as a resource. While it may not seem like much runoff is generated from a roof, it takes just 0.6 inches of rain on a 1,000 ft2 to fill a 50 gallon rain barrel. The average rainfall in eastern South Dakota (around 25 inches) would produce almost 2,100 gallons of

runoff from a 1,000 ft2 roof each year which would fill about 70 bathtubs!

Another practice that can be implemented by a homeowner is a rain garden. Rain gardens come in many shapes and sizes and can be made to look like a typical flower bed that can catch and store water. Instead of mounding a flower bed or having the flower bed even with the ground surface, a rain garden is dug out to be a little lower than the surrounding landscape. This allows water to pond for 24 to 48 hours and seep into the ground or return to the atmosphere through evapotranspiration (evapotranspiration is a combination of evaporation, water returning to the atmosphere due to the sun's energy, and transpiration, water returning to the atmosphere through plants). A rain garden is an attractive landscape feature that can also improve downstream water quality and reduce downstream flooding by reducing peak flows and flow volume. An easy rule of thumb for design is to make the rain garden about 10 times smaller than the area draining into it. For a 1,000 ft2 roof, a rain garden could be about 100 ft2 or 10 ft by 10 ft. This relatively small footprint allows rain gardens to be added to yards without inconveniencing the homeowner. One caveat is to stay 10-15 feet away from a building foundation so infiltrating water does not cause foundation problems. Rain gardens should also not be built over a septic system since the extra water could overload the system. Plants should be chosen that can get their feet wet but also be able to withstand dry periods. Some common rain garden plants are rudbeckia (coneflower and black eyed susan), liatris (blazing star), heliopsis (false sunflower), salvia (sage), calamagrostis (reedgrass), heterolepis (prairie dropseed), and aquilegia (columbine). Since the deepest part of the rain garden will maintain water for a longer period of time and the upper parts for a shorter period of time, plants should be placed according to their ideal conditions.

Research and extension faculty in the Agricultural and Biosystems Engineering department and Landscape Architecture department at South Dakota State University have recently implemented several LID practices for demonstration and research. In partnership with the Brookings Boys and Girls Club, students and faculty built a bioretention cell (engineered rain garden) with an area of approximately 2,000 ft2. The bioretention cell collects runoff from about 20,000 ft2 large parking lot and part of a roof. A rainwater harvest cistern was also installed to collect rainwater from a community garden shelter roof. Collected water can then be used to water plants in the community garden. It is best to apply harvested rainwater as directly to the roots as possible and to not apply to root crops such as potatoes or carrots. Though the risk is very low, there is some chance of bacteria presence in the rainwater if there are bird droppings on the roof.

Are you interested in improving water quality and reducing downstream flooding? Consider implementing easy, attractive LID practices and encourage others to consider how they manage runoff. Rain barrels benefit the homeowner by reducing the amount of potable water that is used for landscaping while also limiting the amount of water that flows downstream. Rain gardens add both beauty and function to a landscape and can also provide pollinator habitat. Remember, we are all upstream of someone and everyone has a responsibility to be a good water neighbor and consider what we send downstream.

John McMaine, PhD is the Assistant Professor/Extension Specialist-Water Management Engineer at South Dakota State University in Brookings, SD.

REMEMBER WHEN...

Life Before Rural Water in South Dakota

Before Clay Rural Water, we had to buy water as our well water was too hard to use in the house.

When we first got married, we ran out of water and couldn't get anyone to deliver water because we weren't regular customers! We had a 3 day blizzard and I had to haul 5 gallon buckets from the well for basic needs.

Then my cousin and his wife from Detroit came to visit. They had no idea about water conservation and used all our water taking showers the first morning.

On the livestock side of things, I had pressure systems on both places so there wasn't much difference, but if I had well trouble it always seemed to be on the coldest day of the year. Did seem I had less pig scours after I went to Clay Rural Water.

Thankful for Clay Rural Water!

– **John Haver, Former Director of Clay Rural Water System**

For many years, our family used water from several shallow or artesian wells on our homestead. The wells were powered by windmills or had to be pumped by hand to get any water, which was a lot of work. These wells were not fit for our family to drink, so once a week we had to haul water from town. We had a 1,000 gallon tank on a trailer and as I remember, it cost our family about $2.00 for this tank of water. The water was used sparingly, so it would last until the next trip to town. This was very difficult especially in the winter and bad weather. It was a blessing when our family finally received rural water.

– **Dale Waters, Retired Board Member of the Tripp County Water Users District**

Before the advent of a rural water system in the area, water tanks in truck beds were a common sight on the roads around Winner, as northern residents drove to and from town hauling water for household use and in some cases to water livestock. The southern half of Tripp County had easy and plentiful access to water for its use, while the residents of northern Tripp County historically had a lack of potable water and drilled deep artesian wells at a great expense. These wells which produced smelly, foul-tasting water were usable for livestock, but not potable for humans. Some residents collected rain water in ponds, cisterns and barrels. Whether they drilled wells or collected water, generally they had to supplement by hauling fresh water for household use. Winner offered a coin operated tap on the northeast side where folks could plunk in 25 cents for 250 gallons of fresh water to haul away. My family had three cisterns to keep full, one at our house, one at my parents who lived next door and the other at my brother's house which was five miles away. Because we had three cisterns to maintain, we kept a full tank on the truck and it seemed like we were always hauling water. Our life before the water system was a huge everyday family priority of conserving the water we needed. Once rural water arrived it raised the standard of living in rural areas to levels long enjoyed by residents of the system. Tripp County Water Users District is a prime example of the people's dedication to make rural water a success.

– **Excerpt from Ideal Pioneers: Memoirs of Martin F. Jorgensen Jr.**

I grew up on a dairy farm in rural South Dakota. My earliest memories without rural water were getting a glass of water from a 5-gallon water jug with a spigot. My parents would go to town and fill this jug with water whenever it started running low. Aesthetically this water was not very pleasing; the color was rusty (similar to the color in of the jug) and it tasted a little funny. It was however safe which was why we used it as our drinking water. Our well provided all the other water we used; showers, toilets, washing machine, ect. When I was around 8 years old we got rural water. I don't remember it as being a big deal when I was a kid, but looking back I remember how the water was crystal clear and had a pleasing taste. I also remember when friends and family visited there were many that commented on how good the water was. Safe, aesthetically pleasing water is something that many people never think about, but it is a big deal and a blessing we should all be thankful for.

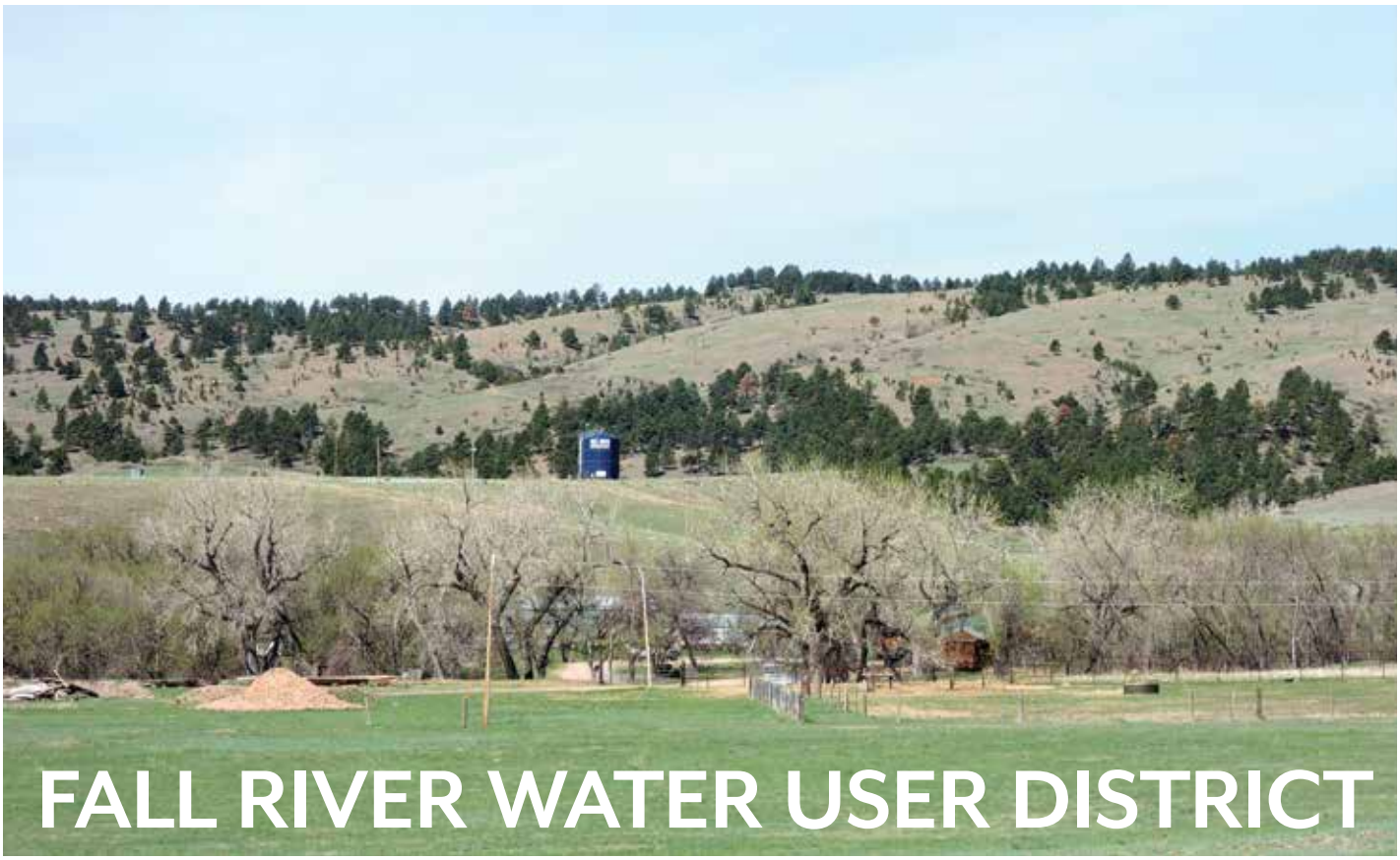
– **Steve Attema, South Dakota Association of Rural Water Systems**

How far have we come to live in rural South Dakota? In the past the only way to get water out of a pipe for a drink was to pump the water out of a cistern or fire up the well next to the cattle yard. The water that was pumped out of our well was so hard that you could walk on it in the summer as well as in the winter. Cistern water seemed to magically fall from the sky and filled the cement structure in the ground next to the house. At the time it sounded wonderful to use the free water that rolled off the roof. All you had to do was run it over some charcoal, and shazam! – we had water to use. No matter how little water we used in our daily life the cistern would run dry. Our rural community was fortunate to have two bulk water haulers that would bring a 1,200 gallon truckload of water to fill empty cisterns. I am not going to go into the difficulties of raising baby pigs or calves from the well water, or the challenges of hauling water in a steel tank in the winter.

How far have we come in rural South Dakota? If we remember to pay the bill on time, we have water to water our animals, wash our clothing, shower, and get a good drink of water almost 100% of the time we want. We are spoiled! I do not want to go back to the good old days.

– **Jeff Fossum, South Dakota Association of Rural Water Systems**

SYSTEM SPOTLIGHT



FALL RIVER WATER USER DISTRICT

Fall River Water Users District is located near the Southern Black Hills in the west half of Fall River County and the southwest portion of Custer County. The distribution system begins near the City of Hot Springs and follows Fall River east of town to the Cheyenne River where the line branches to the north and south. Water is delivered to the towns of Buffalo Gap and Oelrichs in bulk and 375 users between Buffalo Gap and the Nebraska State Line.

The system began the planning process in 1991 and began construction in 2000 with the assistance of Rural Development, State DENR, and community funding. The original system was designed around 115 hookups with a potential growth of 15%. Since 2000 the system has had several pump station upgrades and additional water mains installed to meet the growing demand. Most of the upgrades were made in 2009 through the availability of American Recovery & Reinvestment Act (ARRA) funding. Since the district was formed the board has sought an economical and reliable source for water and has worked together with the City of Hot Springs to meet the growing demand. The City has sold the district on average 100 million gallons a year the last few years.

In 2010 the district drilled a deep Madison Well which turned out to be a disappointment because of the large capital investment and low production of the well. In April of 2012 we received long awaited approval for a loan from Rural Development to drill another Deep Madison Well near Fall River and the City of Hot Springs. In April of 2013 the well was completed with capable production of 450 gallons per minute. The well was drilled to a depth near 3,500 feet and free flows around 200 gpm. Throughout the summer the free flow from the well was utilized to lessen the amount of water purchased from the city. The contracts have been let to install the well house and submersible pump and the district is excited to have the well fully on line by the end of 2013. The new well should cover 90% of the districts peak demand with the city retained as an additional source.

Fall River Water Users District is committed to providing quality drinking water at the lowest possible cost to the rural residents within our service area. The availability of quality water has made a positive economic impact in Fall River and Custer Counties. With the availability of water it has lessened the blows from drought to area ranchers the last few years and will continue to do so into the future.

Fall River
Water Users District

DIRECTORS:

Cam Seger – Chairman

Jeff Davidson – Vice-Chairman

Lesta Conger – Secretary

Matt Dunbar – Treasurer

Josh Rickenbach – Director

Carl Sanders – Director

STAFF:

Keith Neugebauer – General Manager

Mark Siebenthal – Operator

Misti Cantrell – Office Assistant

STATISTICS:

Hookups – 297

Miles of Pipeline – 300

Water Source – City of Hot Springs

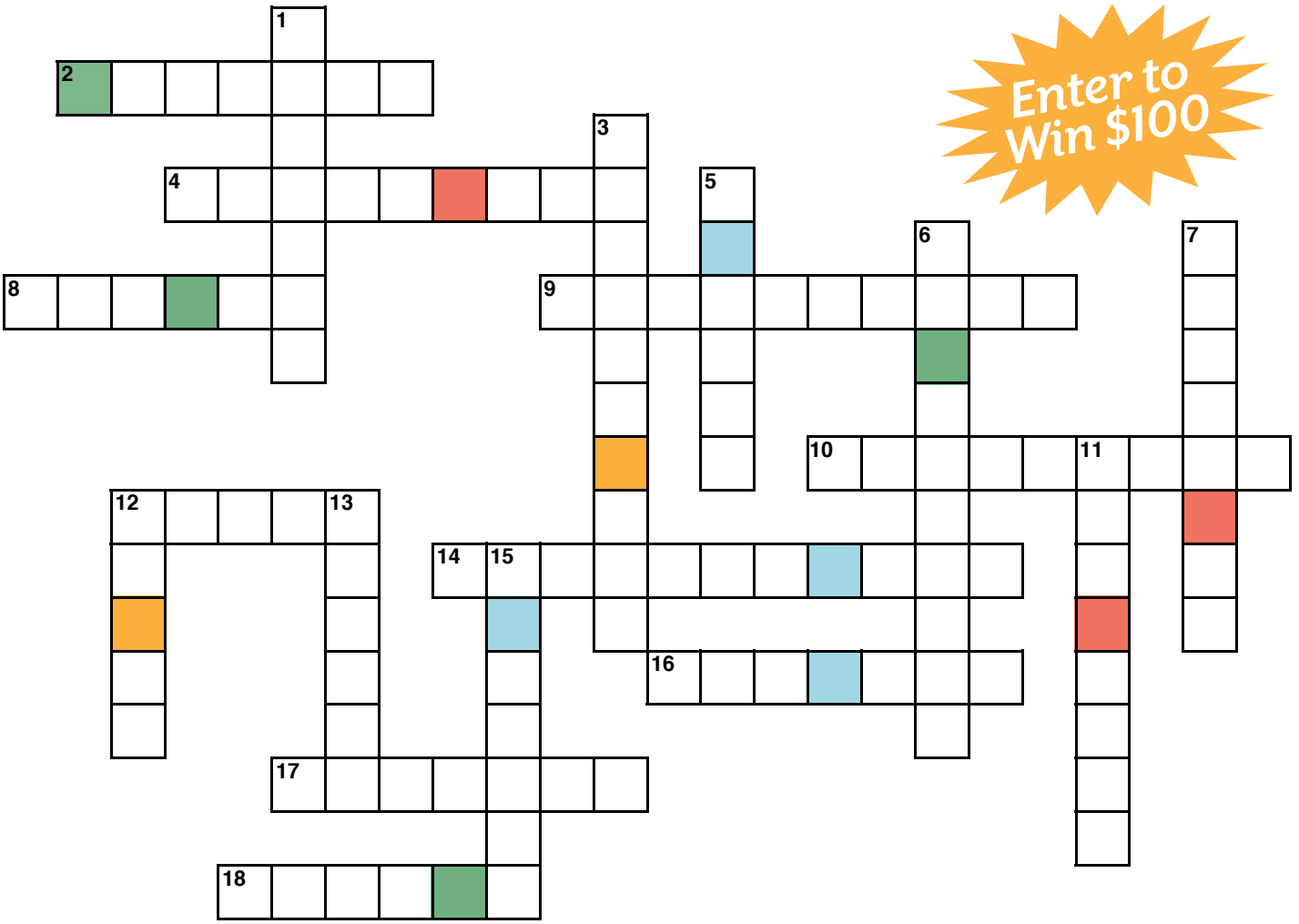
Counties Served – Fall River

Towns Served Individual – Oral and Smithwick

Towns Served Bulk – Oelrichs

RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

GARDENING



ACROSS

2. Gardener's chore
4. Cabbage, carrots or beans
8. Where the dirty work is done
9. Sweet fleshy red fruit
10. Big bloom with edible seeds
12. Nature's aerators
14. Gardener's pushover
16. DIY Fertilizer
17. Daisies and marigolds
18. Water carrier

DOWN

1. Done with a shovel or spade
3. Yield booster
5. Foliage
6. Nursery of sorts
7. Plot-tender
11. Where to spend a sunny day
12. Key component to irrigation
13. Digging tool
15. Season's yield

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 April 10, 2022 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 Judy Anderson with Kingbrook Rural Water who had the correct phrase of "COLLECT MOMENTS NOT THINGS" for January 2022.

RURAL WATER
ACROSS SOUTH DAKOTA

RURAL WATER AWARD WINNERS

The South Dakota Association of Rural Water Systems (SDARWS) held their Annual Technical Conference in Pierre this past January. Each year SDARWS recognizes outstanding individuals and organizations that have served the water and wastewater industry and the citizens of South Dakota. Below is a list of this year's winners.

RURAL WATER SYSTEM OF THE YEAR
– Mid-Dakota Rural Water System

WATER/WASTEWATER SYSTEM OF THE YEAR
– City of Delmont

MUNICIPAL OFFICE PERSON OF THE YEAR
– Sheila Gerhold, City of Castlewood

RURAL WATER OFFICE PERSON OF THE YEAR
– Megan Bergin, Randall Community Water District

RURAL WATER OPERATIONS SPECIALIST OF THE YEAR
– Dave Viet, TM Rural Water District

MUNICIPAL OPERATIONS SPECIALIST OF THE YEAR
– Victor Huber, City of Sioux Falls

RURAL WATER OPERATIONS SUPERVISOR OF THE YEAR
– Brandon Kinsley, West River/Lyman-Jones RWS

MUNICIPAL MANAGER OF THE YEAR
– Brad Mohror, City of Chamberlain

RURAL WATER MANAGER OF THE YEAR
– Terry Kaufman, Clark Rural Water System

ASSOCIATE MEMBER OF THE YEAR
– Hawkins

DONALD B. POSPISHIL MEMORIAL AWARD
– Terry Koupal, Randall Community Water District

FRIEND OF RURAL WATER
– Mark Mayer, SD DANR

CARROLL ANDERSON AWARD
– Lloyd Rave, Minnehaha Community Water Corp.

SPIRIT OF RURAL WATER
– Larry Wasland, Clark Rural Water
– Jesse Christianson, Brookings-Deuel RWS
– Guy Gronewold, Sioux Rural Water
– Bruce Jennings, DGR Engineering
– Andy Groos, Big Sioux Community Water
– Dan Carlson, Big Sioux Community Water
– Harold Haber, Brookings-Deuel Rural Water
– Dale Thompson, Kingbrook Rural Water
– Nick Jackson, SDARWS
– Jim Zeck, SDARWS

BEST TASTING WATER IN SOUTH DAKOTA
– City of Sioux Falls


Megan Bergin


Sheila Gerhold


Terry Kaufman


Lloyd Rave


Mid-Dakota RWS


Terry Koupal


Mark Mayer

NOT PICTURED:
DAN CARLSON
JIM ZECK


Dave Viet


Brandon Kinsley


Victor Huber


Brad Mohror


City of Sioux Falls


Hawkins


City of Delmont


Larry Wasland


Jesse Christianson


Guy Gronewold


Dale Thompson


Andy Groos


Bruce Jennings


Harold Haber


Nick Jackson

Big Sioux Community Water System, Inc.

Annual Drinking Water Quality Report

JANUARY 1, 2021 — DECEMBER 31, 2021

This report is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies.

WATER SOURCE

We serve more than 5,337 customers an average of 2,175,000 gallons of water per day. Our water is groundwater that we produce from local wells. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Big Sioux Community Water System public water supply system is medium.

For more information about your water and information on opportunities to participate in public meetings, call 605-997-2098 and ask for Jodi Johanson.

ADDITIONAL INFORMATION

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and can pick up substances resulting from the presence of animals or from human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic chemicals or compounds**, such as salts and metals, which can be naturally occurring or result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses.
- **Organic chemicals or compounds**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, septic systems and agriculture.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants can be obtained by calling the Environment Protection Agency's Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Big Sioux Community Water

System public water supply system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

DETECTED CONTAMINANTS

The attached table lists all the drinking water contaminants that we detected during the 2021 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2021 The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

2021 Table of Detected Contaminants For Big Sioux Community Water System (EPA ID 0429)

The Big Sioux Community Water System public water system purchases 10% of their water from Minnehaha Community Water Corp (0432).

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
Copper	0.1	0	06/16/21	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	1	0	06/16/21	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.

Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Antimony	0.48	ND - 0.48	08/10/21	6	6	ppb	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
Arsenic *	1		11/01/21	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
Barium	0.009	0.025 - 0.009	08/10/21	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Barium *	0.026	0.025 - 0.026	11/01/21	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	2.9	1.0 - 2.9	09/14/20	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Chromium *	0.37	0.21 - 0.37	11/01/21	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	0.77	0.45 - 0.77	11/01/21	4	<4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Fluoride *	0.76	0.53 - 0.76	10/11/21	4	<4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (RAA)	14.4		08/10/21	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Haloacetic Acids (RAA) *	15.7		08/12/21	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Nitrate (as Nitrogen)	3.9		11/04/21	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrate (as Nitrogen) *	0.8		06/07/21	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	5.6	0.78 - 5.6	08/10/21	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Selenium *	0.86	0.81 - 0.86	11/01/21	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total trihalomethanes (RAA)	29.1		08/10/21	80	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.

Please direct questions regarding this information to Mr. Jeff Carruthers with the Big Sioux Community Water System public water system at 605-997-2098

Minnehaha Community Water Coproration (EPA ID 0432) test result

Terms & Abbreviations Used in Tables

Action Level (AL) — the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.

Maximum Contaminant Level (MCL) — The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) — The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Running Annual Average (RAA) — Compliance is calculated using the running annual average of samples from designated monitoring locations.

UNITS

ppb — parts per billion, or micrograms per liter (ug/l)

ppm — parts per million, or milligrams per liter (mg/l)

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WATER MATTERS

Aquatic Invasive Species: Zebra Mussels

WHAT IS AN AQUATIC INVASIVE SPECIES?

Aquatic Invasive Species (AIS) are organisms that invade ecosystems outside of their natural or historic ranges. They are also known as exotic, non-native, or non-indigenous. They have spread outside of their ranges due to intentional or unintentional introductions. Ways they are spread include emptying aquariums into lakes or streams, by way of watercraft and sea planes, or by recreational activities like fishing, diving, and hunting.

PHOTO COURTESY OF SD GF&P

AIS SPOTLIGHT: ZEBRA MUSSELS

The impacts of AIS vary greatly, depending on the organism. One of South Dakota's most harmful AIS is the Zebra Mussel. Zebra mussels were first discovered in 1988, in the Great Lakes. They were brought to the United States from Europe in the ballast water of ocean-going ships. They likely made their way to South Dakota as hitchhikers on recreational watercraft. Zebra mussels have caused considerable damage to native ecosystems around the country as well as to industries, such as power plants and water suppliers. Zebra mussels can filter a vast amount of water altering entire aquatic food webs. They also have the ability to attach themselves to hard surfaces such as rocks and swim rafts, thus impeding water recreation. They also smother native mollusks as well as wreak havoc on irrigation intakes and boat motors. Zebra mussels currently infest Lewis & Clark Lake and McCook Lake in South Dakota.

3 WAYS YOU CAN HELP PREVENT THE SPREAD OF AIS!

1. DO NOT RELEASE YOUR AQUARIUM PETS INTO THE WILD
2. DO NOT MOVE WATER, ANIMALS, OR PLANTS FROM ONE WATER BODY TO ANOTHER
3. LEARN HOW TO IDENTIFY THE COMMON INVADERS AND REPORT ANY SIGHTING TO SD GFP AT 605-223-7660

PHOTO COURTESY OF SD GF&P

TO LEARN MORE ABOUT SOUTH DAKOTA'S AQUATIC INVASIVE SPECIES VISIT: SDLEASTWANTED.COM

BACK PAGE CONTENT PROVIDED BY:

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