



MID DAKOTA RURAL WATER SYSTEM

Quality On Tap!

April 2024 | Volume 19, Issue 3

**PURPOSE OF
AN ANNUAL
MEETING**

**EFFECTS OF
ZEBRA MUSSELS
ON RURAL WATER
SYSTEMS**

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NEEDED**

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**BRUEGGEMAN
AWARDED**

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APPLICATIONS
DUE APRIL 1**

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FROM THE MANAGER

Scott Gross, General Manager
Mid-Dakota Rural Water System, Inc.



As 2024 begins, it looks like it will continue to be very busy at Mid-Dakota Rural Water. Mid-Dakota has hired some new faces to keep all areas running smoothly around here. Mid-Dakota's expansion project is really starting to gain momentum. In 2024, the Water Treatment plant backwash filters components will be manufactured and delivered on site. I am hopeful that the building of the filters will be bid soon so construction can begin in 2024 with hopes of completion in 2025. The distribution pipe upgrade to help with growth within the system is being bid to phases. This total upgrade includes 120 miles of additional pipeline and upgrading 3 booster stations. Phase 1 of this has been awarded and will begin spring 2024. Phase 1 is 70 miles of pipeline in an assortment of areas starting on the western side of our system. Mid-Dakota staff is currently contacting landowners of our project and permission to construct our system.

Mid-Dakota continues to grow with 54 new hookups already on the list to be installed. Keeping these hookups moving forward with materials and organizing with a contractor's schedule is a large challenge.

Also, Mid-Dakota has been forced to upgrade our Automatic Meter Read system due to company failure. We are going to install this with our own staff and will be done over several years as it will take all new collectors and end points at each meter. I want to thank everyone in advance for their patience and cooperation through this transition. One last but very important task Mid-Dakota is working on is inventorying lead lines. This is a mandatory task and needs to be completed fall of 2024, any help in assisting Mid-Dakota staff with completing this is greatly appreciated. I know that some communication has been done by Mid-Dakota staff, if you have questions on what you can do to complete this inventory task, please contact us at 1-800-439-3079.

All in all, I believe this will be a very busy year at Mid-Dakota and an exciting one with all that is happening. Don't hesitate to call with any questions or concerns.



MISSION STATEMENT
Enhancing quality of life
By providing high quality water
And excellent service.

Quality On Tap!

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JAMIE BRUEGEMAN RECEIVES STOFFERAHN MEMORIAL AWARD

Mid-Dakota announced its third annual Mike Stofferahn Memorial Award recipient is Jamie Brueggeman. Employees are nominated by their peers for this award. Mike Stofferahn started work for Mid-Dakota Rural Water as an inspector in 1997 where he worked until the tragic automobile accident near Cottonwood Lake August 31, 2001. Mid-Dakota staff along with directors congratulated Jamie Brueggeman for being the second recipient of this prestigious award.



Rate Table Effective January 1, 2024

501 Residential 1-Unit	
\$44.00	per month minimum bill
\$5.65	per 1,000 gallons 1st 33,000
\$8.05	per 1,000 gallons over 33,000
502 Rural Household 2-Units	
\$54.00	per month minimum bill
\$5.65	per 1,000 gallons 1st 10,000
\$4.62	per 1,000 gallons next 56,000
\$8.05	Per 1,000 gallons over 66,000
504 Rural Household 4-Units	
\$72.00	per month minimum bill
\$5.65	per 1,000 gallons 1st 10,000
\$4.62	per 1,000 gallons next 122,000
\$8.05	per 1,000 gallons over 132,000
506 Rural Household 6-Units	
\$89.00	per month minimum bill
\$5.65	per 1,000 gallons 1st 10,000
\$4.62	per 1,000 gallons next 188,000
\$8.05	per 1,000 gallons over 198,000
511 Livestock	
\$32.00	per month minimum bill
\$4.62	per 1,000 gallons 1st 300,000 (per year)
\$5.65	per 1,000 gallons 301,000 to 700,000 (per year)
\$8.05	per 1,000 gallons over 700,000 (per year)
161, 162, 164, 165 Special Class I & II	
\$16.40	per GPM per month minimum bill
\$28.00	per GPM per month demand charge
\$0.61	per 1,000 gallons
163, 166 Special Class III	
\$4.69	per Pers (equiv) per month minimum bill
\$5.70	per Pers (equiv) per month demand charge
\$0.61	per 1,000 gallons up to contract amount
\$8.05	per 1,000 gallons over contract amount

1 Minimum & demand charges do not include any water.
 2 Livestock (511) water allocations are annual use, not monthly.
 3 "equivalent" population "person" = contract GPD ÷ 270

RAETHZ HIRED

Mid-Dakota would like to welcome our newest member, Jerod Raethz. Jerod was hired as the Mainline Transmission Specialist on November 27, 2023. He was a 1992 graduate from Faulkton High School where he was a lifelong resident until he moved to Miller in the fall of 2023. He attended Northern State University for two years after high school. Jerod was the Public Works Supervisor for the City of Faulkton for 16 years. He holds Class 1 Certifications in Water Distribution, Wastewater Collection and Lagoon Operation. Raethz states, "I am hopeful



that my background of water and wastewater will benefit Mid-Dakota as I look forward to working with a great bunch of people and taking on new challenges and tasks."

After Hours or Emergencies
 Call Mid-Dakota
 TOLL FREE at: 1-800-439-3079

MID-DAKOTA CALENDAR

The Mid-Dakota Rural Water System offices will be closed on the following dates:

May 27, 2024 - Memorial Day

June 19, 2024 - Juneteenth

In case of an emergency, please call the office

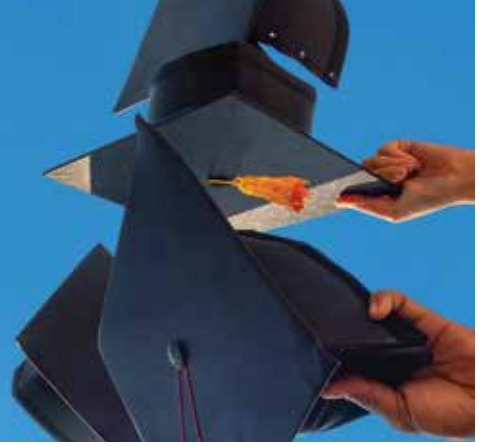
Toll Free at 1-800-439-3079.



For online bill paying:
www.mdrws.com



MID-DAKOTA SCHOLARSHIP APPLICATIONS DUE APRIL 1, 2024



Every year for the last 15 years, Mid-Dakota Rural Water System has presented scholarships to students attending a post-secondary school in South Dakota. This year will be no exception, and once again Mid-Dakota will be selecting four students to receive \$750 scholarships to be used in their continuing education. The students must be a child of someone who is a member of Mid-Dakota or a resident of a community that is a Mid-Dakota member. The application can be found below, online at www.mdrws.com, or at the Mid-Dakota office in Miller. Copies of the application have been sent to schools within the Mid-Dakota service area. The completed application must be accompanied by the most recent transcript from high school or college, a photo to be used for publicity purposes, and a 250-500 word essay about what rural water means to the applicant or the applicant's community.

Official Application - Please fill out completely:

Name: _____ Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

Parent(s) Name(s): _____ Mid-Dakota Acct. #: _____

If no Account number, please state which participating community you are a member of: _____

Grade point average: _____ (Remember to attach a copy of transcript)

College Applicant will be attending: _____

(must be a post-secondary education facility in South Dakota)

Career Applicant is pursuing: _____

School Activities: _____

Community Involvement: _____

Please compose and attach a 250-500 word essay about the benefits of rural water or what Mid-Dakota has done for you or your community (title is of your choosing).

DEADLINE FOR THE APPLICATIONS TO BE IN THE MID-DAKOTA OFFICE IS 5:00 P.M. APRIL 1, 2024.

Send completed application, transcript, current photo and essay to:

Mid-Dakota Rural Water System, Inc. • Attn: Scholarship Committee • P.O. Box 318 • Miller, SD 57362-0318

All applicants will receive a letter letting them know whether or not they were chosen to receive a scholarship. A \$750 check will be sent to each of the successful applicants' schools at the beginning of their second semester at the post-secondary school of their choice located in South Dakota.

ZEBRA MUSSELS INVADE SOUTH DAKOTA WATERWAYS

*Tanner Davis, Aquatic Invasive Species Coordinator
South Dakota Game, Fish and Parks*

Zebra mussels are a small invasive mollusk (clam) that originated in Eastern Europe and first arrived in the U.S. in the mid-1980s. Zebra mussels were first found in the Lake St. Clair near Detroit, MI and since have spread throughout the Mississippi River drainage (Missouri, Arkansas, Tennessee, and Ohio Rivers). Populations also exist in the Western U.S.. Adults range in size, anywhere between ½ inch to 2 inches and can rapidly spread under the right conditions. Larval zebra mussels, called veligers, can spread by water transfer and veligers are so small they are invisible to the naked eye which adds to their invasiveness and ease of incidental transfer. Adults will attach to hardy surfaces and vegetation and for this reason, South Dakota Game, Fish & Parks enforces recreationalists to stay Clean. Drain. Dry. between waterbodies to help slow the spread. Always make sure to pull all plugs on your watercraft and don't transport any water, vegetation, mud or other organic matter from one body of water to the next. Below are the list of impacted waters in South Dakota.

History of initial positive detections of Zebra Mussel

- 2014 Lewis and Clark Lake
- 2015 Missouri River below Gavins Point Dam
- 2015 McCook Lake
- 2018 Lake Yankton
- 2019 Lakes Sharpe and Francis Case
- 2020 Lake Cochrane, Kampeska, Pickerel and Dahme Quarry
- 2021 Lake Mitchell
- 2022 Enemy Swim, Blue Dog, Clear Lake, South Rush and Pactola Reservoir
- 2023 James River/Sand Lake Refuge, Roy Lake, Big Sioux River, Bigstone Lake, Lake Oahe

Please visit sdleastwanted.sd.gov for more information regarding AIS regulations, news/updates, maps, frequently asked questions, media gallery of AIS, and to report any potential AIS you may have found on our citizen monitoring page.



Photo By: Sam Stukel

THE EFFECTS OF ZEBRA MUSSELS ON RURAL WATER SYSTEMS

Zebra mussels (*Dreissena polymorpha*) first discovered in South Dakota in Lewis & Clark Reservoir in 2015 are invasive freshwater mollusks that have spread rapidly across various water bodies. Zebra mussels have been found in many bodies of water in South Dakota, such as the Missouri River, Big Sioux River, Blue Dog Lake, Lake Mitchell, Sand Lake National Refuge on the Jim River, Pactola Lake, and many more. Zebra mussels are small, fingernail-sized mollusks with distinctive zigzag stripes on their shells. They are highly adaptable and can thrive in a wide range of environmental conditions, making them formidable invaders. Zebra mussels are filter feeders, extracting phytoplankton and other particles from the water column, which can lead to competition with native species for resources. The spread of zebra mussels is facilitated by their ability to attach to various structures, including boats, docks, and water intake structures. Once established in a water body, they reproduce prolifically, with each female capable of producing hundreds of thousands of eggs per year. Their larvae, called veligers, can be transported over long distances by water currents.

Zebra mussels have had profound ecological impacts on invaded ecosystems. Their dense colonies can outcompete native species for food and space, leading to declines in native mussel populations. The increased water clarity resulting from their filter feeding can promote the growth of harmful algae, negatively affecting fish populations and disrupting food webs.

The economic consequences of zebra mussel invasions are significant. They can clog water intake pipes, leading to increased maintenance costs for industries and municipalities. Furthermore, the decline in native fisheries and alteration of ecosystems can have long-lasting economic repercussions.

Several strategies have been employed to control and manage zebra mussel populations. Physical methods, such as the use of barriers and underwater mats, aim to prevent the attachment of zebra mussels to structures. Chemical methods, including the use of molluscicides, have been employed, but their environmental impact raises concerns.

These infestations can cause significant problems in water systems, including clogging water intake pipes. Chemical treatment is one of the methods used to control zebra mussels in water intakes. Several chemicals can be effective in treating water to prevent or mitigate zebra mussel infestations. It's important to note that chemical treatment should be done carefully, considering potential environmental impacts and the safety of other aquatic life.

Here are some chemicals commonly used for the chemical treatment of water intakes for zebra mussels:

CHLORINE: Chlorine is a powerful disinfectant and is often used for controlling zebra mussels. It can be applied as a gas or in various chemical formulations. However, its use requires careful monitoring to prevent harm to non-target organisms and ecosystems.

QUATERNARY AMMONIUM COMPOUNDS (QACs): QACs, such as polyquat or benzalkonium chloride, are chemicals that disrupt the membranes of zebra mussels, leading to their mortality. These compounds are often used as part of a rotation strategy to prevent resistance.

COPPER-BASED COMPOUNDS: Copper is toxic to zebra mussels and is commonly used in antifouling coatings on boat hulls and water pump intake screens. Copper sulfate is a chemical option for treating water intakes, but its use needs to be carefully managed due to potential environmental concerns.

POTASSIUM-BASED COMPOUNDS: Potassium-based chemicals, such as potassium chloride, can be effective against zebra mussels.

PEROXIDE-BASED COMPOUNDS: Hydrogen peroxide is an oxidizing agent that can be used to control zebra mussels. It is generally considered less harmful to the environment than some other chemicals, but its effectiveness may vary.

It's crucial to consult with experts, environmental agencies, and follow state regulations before implementing any chemical treatment. Additionally, regular monitoring is essential to assess the effectiveness of the treatment and minimize potential negative impacts on non-target species and the overall ecosystem. Integrated pest management approaches, combining chemical treatment with physical methods and other control strategies, may provide more sustainable solutions for zebra mussel control in water intakes.

According to Matt Hansen of Hawkins Chemical. "Earthtec QZ is what the majority of water plants/dams are using on the Missouri River. It is the only approved molluscicide in the state of South Dakota and on the Missouri River. It is also NSF 60 certified, and EPA registered. Plants are feeding 1 PPM dose using peristaltic/ diaphragm pumps on manual mode or connected to SCADA. Plants have been feeding out of drums/totes and bulk tanks. Tubing is usually run by a diver from the intake building, down to the intake through PVC pipe to keep weighted to the ground in front of the intake screen. Based on management plan, some plants feed EarthTec QZ year around, turning down the dose in the wintertime to .5 PPM for a maintenance dose. When the water temp drops below 40 degrees Fahrenheit, it discourages colonization."



Zebra mussels cling to an intake valve from a water system in South Dakota.

THE PURPOSE OF AN ANNUAL MEETING



Annual meetings are pivotal for Rural Water Systems. These meetings provide the consumers with a time to come together and listen to the system's year in review, hear about future plans and projects, and help make important decisions. These meetings offer transparency, accountability, and communication between the Board of Directors and the customers. The purpose of the meeting is to show financial transparency, strategic decisions, regulatory compliance, and the election of board members.

At the meeting, financial statements for the previous year are presented. This shows the consumers financial responsibility and shows the financial health of the system. Many of the rural water systems have their Auditor, Treasurer or Accountant give a report at the meeting on the financial statements and go over the overall financial status of the water system.

Strategic discussions are also reported on, which can include plans for upcoming projects and potential challenges that may arise. Many times, the system engineer will give updates on the status of the distribution system, current or ongoing construction projects. This keeps the consumers well informed and can let them ask any questions about the direction or goals of the system. This open proactive approach allows for timely investment in the water system, reducing the risk of unexpected breakdowns and service disruptions.

Members of the rural water systems will have the opportunity to vote on the election of board members during the annual meeting. This democratic process allows them to have a say in the governance of the company and ensures leadership aligns with their interests.

Regulation compliance will also be presented at these meetings. These regulations are crucial for the functioning of the system. These will be reviewed, discussed and the consumers will be shown the requirements needed to keep health and safety standards.

Annual meetings are the cornerstone of effective governance and sustainable operations for the rural water system. These gatherings, whether it be an open house, an afternoon or evening meeting in a district of a water system, or a drive through as some had during the pandemic, are mandated by the by-laws of the system. Every water system's annual meeting may look different, but they facilitate community engagement, communication, planning, compliance, and democratic elections of the leaders. By actively participating in annual meetings, you can contribute to the success and longevity of your water systems, ensuring access to clean and safe water for generations to come.



RAPID VALLEY SANITARY DISTRICT/WATER SERVICE

Nestled in the Black Hills of South Dakota, Rapid Valley Sanitary District–Water Service stands as a testament to community vision and dedication. Established in 1962 by local citizens, this organization was born out of the necessity for a safe drinking water supply in an era where many relied on shallow wells.

Early Challenges and Innovations:

The journey began with a humble start, marked by challenges. Initial attempts at well construction faced setbacks due to poor production and high radium content. However, undeterred, the team persevered. In 1990, an underground gallery was installed along Rapid Creek to harness surface water, signaling a commitment to innovation.

The Merger of 1994:

A pivotal moment arrived in 1994 when the Sanitary District and Water Service merged, forming a quasi-governmental entity – Rapid Valley Sanitary District–Water Service. This strategic union aimed at optimizing customer service and operational efficiency.

Infrastructure Growth and Technological Advancements:

Over the years, Rapid Valley has evolved with the times. Infrastructure upgrades, new water and sewer main projects, and the addition of microfiltration units showcased a commitment to staying ahead in the ever-changing water industry.

In 2010, the addition of a third microfiltration unit, along with a Trojan ultra-violet system, catapulted the treatment

capacity from two to three million gallons per day. This not only exceeded Environmental Protection Agency standards but also positioned Rapid Valley to serve neighboring districts.

Looking to the Future:

Rapid Valley remains a beacon of forward thinking. In 2009, a 1.85 million-gallon tank was added, and in 2013, a .256 million-gallon Aqua store tank bolstered storage capacity to 3.61 million gallons. Annual project plans ensure continuous improvements, with a booster station added in 2009 for future expansion.

Looking toward sustainability, Rapid Valley is pilot testing ceramic membranes for water treatment. Early results suggest increased production capacity, higher recovery rates, and lower operating costs, paving the way for the long-term success of water treatment initiatives.

Community Collaboration:

Serving approximately 3,900 connections, Rapid Valley is not just a water provider but a vital community partner. Collaborating with the expanding Rapid City, the district emphasizes high-quality service and anticipates the needs of its residents.

For over 60 years, Rapid Valley Sanitary District–Water Service has been a guardian of water quality, adapting to challenges and embracing innovations. As they continue to pilot test new technologies and plan for the future, Rapid Valley remains at the forefront of the water industry, ensuring safe and sustainable water for generations to come.





DIRECTORS:

- Chairman – Andy Fitzgerald
- Vice Chairman – Bob Phillips
- Secretary – Connie Olson
- Treasurer – Diana Nelson
- Director – Shirley Haines
- Director – Jennifer Battles
- Director – Carrie Wheeler
- Director – Eric Krebs

STAFF:

- General Manager – Rusty Schmidt
- Field Operations Supervisor – David Flint
- Office Team Lead – Sara Bender
- Administrative Clerk – Kathy Graff
- Administrative Clerk – Samantha Faatz
- Service Technician – Mike Chrobak
- Service Technician – Nate Broom
- Service Technician – Tyler Volk
- Service Technician – Garret Whipple

STATISTICS:

- Hookups: 3,771
- Miles of Pipeline: 70
- Water Source: Rapid Creek,
Interconnection with Rapid City
- Counties Served: Pennington



RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

SMALL TOWNS OF SOUTH DAKOTA

Across

- Pinnacle or peak
- Thieves
- Beverly Cleary heroine
- British director of classic thrillers
- Named after the colonial center in

Virginia

- Named after a much larger city in Texas
- Named after Austrian capitol
- Stackable canned chip
- Align or position something

Down

- Highlander country
- Dependence on or trust in someone or something
- Similar name to Black

Panther kingdom

- German head of government
- Chief manservant
- George Michael Song
- Ring around the sun

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 April 15, 2024 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 Don & Lura Kirkpatric with West River/Lyman-Jones who had the correct phrase of "Everything Comes Back to You" for January 2024.

AQUATIC INSECTS

Are you ready to explore the amazing aquatic insects that call South Dakota home? Grab your virtual magnifying glass, and let's dive into the fascinating world beneath the surface of the state's ponds, rivers, and streams!

1. WATER STRIDERS - THE POND SKATERS:

Imagine gliding effortlessly on the water's surface like a tiny superhero. That's exactly what water striders do! These insects have long legs that help them skate on ponds and streams. They use the surface tension of the water to stay on top and even catch prey like mosquitoes with lightning-fast reflexes.

2. DRAGONFLIES - THE AERIAL ACROBATS:

Meet the daredevils of the insect world - dragonflies! These colorful acrobats zip and zoom through the air, performing incredible mid-air stunts. But did you know they spend most of their life underwater as nymphs before transforming into the dazzling flyers we see above the water?

3. DAMSELFLIES - GRACEFUL FLYERS OF THE WATERWAYS:

Damselflies are like the ballerinas of the insect world. With their delicate bodies and graceful flight, these colorful insects add a touch of beauty to South Dakota's ponds and marshes. They spend their youth as nimble nymphs in the water, and when ready, transform into stunning aerial acrobats.

4. MAYFLIES - THE SHORT-LIVED BEAUTIES:

Mayflies might not have a long life, but they sure know how to make it count! These delicate insects are famous for their short adult stage, sometimes lasting only a day or two. They dance in the air, showcasing their stunning colors before leaving their eggs in the water, starting the cycle all over again.

5. CADDISFLIES - NATURE'S ENGINEERS:

Caddisfly larvae are like little architects of the water. They collect tiny pebbles, bits of plants, and even pieces of wood to create protective cases around themselves. These cases act like underwater homes, keeping them safe until they transform into graceful adults.

6. BACKSWIMMERS - THE UPSIDE-DOWN SWIMMERS:

Backswimmers are like the gymnasts of the insect world. They swim upside-down, using their long legs to paddle through the water. These clever insects are skilled hunters, preying on other smaller aquatic creatures. Watch out for their shiny bodies as they zip around in search of their next meal!

WHY ARE THEY IMPORTANT?

Aquatic macroinvertebrates are like water detectives. Scientists use them to investigate the health of lakes and streams. Different types of these tiny creatures can tolerate various conditions, such as water temperature and pollution levels. By studying which macroinvertebrates are present, scientists can determine if the water is clean and healthy or if there might be some issues that need attention.

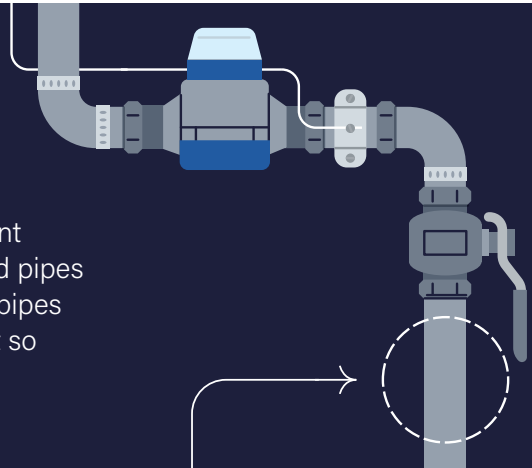
These little creatures are also the favorite snacks of fish! Fish rely on aquatic macroinvertebrates as an important part of their diet. So, not only do these tiny heroes keep our waters in check, but they also provide a tasty treat for our finned friends.

Next time you're near a stream or pond in South Dakota, take a moment to appreciate the incredible world of aquatic macroinvertebrates. They may be small, but they play a big role in keeping our waterways healthy and vibrant. Happy exploring, young scientists!



Lead-Free SD

Drinking water is free of lead when it leaves the water treatment plant—however, water can absorb lead if it travels through lead pipes on its way to your faucet. The majority of South Dakota water pipes are free of lead, but we need to find where lead pipes still exist so they can be removed.

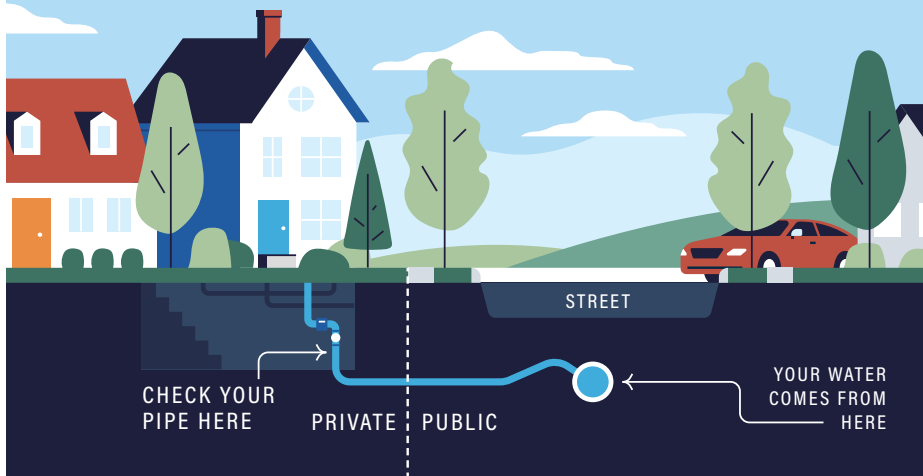


Take this quick survey to help protect your health

Your water system is asking you to help find where the lead pipes are located. It's important and easy to do.



When you have five minutes to spare, visit survey.SDWaterPipes.com to complete a quick assessment of your water pipe. We'll even help you locate the pipe in your home.



- 1 SCRATCH IT.
- 2 STICK IT.
- 3 REPORT IT.
- ✓ DONE!

The survey gives you step-by-step instructions to find and test your water pipe.

- ✓ Scratch the water pipe with a coin or key to see if the scraped area is silver-colored and shiny
- ✓ Check to see if a magnet sticks to the pipe—any magnet will do!
- ✓ Report your results

As a part of a nationwide initiative, water systems are asking everyone to check their pipes and report their results, regardless of what they find. Knowing where the lead pipes are is just as important as knowing where they are not.

A paper copy of this survey can be found on page 15.

If you have questions, please contact the Mid-Dakota office in Miller office at 605-853-3159.



Open the camera app on your smartphone, hover over the QR code below, and tap the link to get to the survey.

Visit sdwaterpipes.com for more information.

LEAD-FREE SD WATER CUSTOMER SURVEY

Please take the survey below to see if your home's water pipe contains lead. If you have a smartphone we encourage you to try out the electronic survey at survey.SDWaterPipes.com as an alternative to the paper form. The electronic survey uses smart technology to tailor the questions to your specific case. You may even find a relative, a neighbor, or a friend to help.

Part A

Physical street address: (P.O. Box not acceptable) _____

Account/Hookup number: _____ Year home was constructed: _____

If structure is other than a single family residential home, indicate it here: _____

NOTE: There is no need to fill out a survey for livestock taps not serving humans or residences.

Was your water pipe from the street to the house constructed at a time different from when the home was constructed? Yes No

If so, what year was the water pipe constructed: (the oldest date applies) _____

Locate the water pipe coming into your home, take a picture and send it to your water system with your account/hookup number at: [605-290-7711](tel:605-290-7711) or email office@mdrws.com

NOTE: The pipe in question is the drinking water pipe that comes into your home from the street. It is typically located in a utility room on the lowest level of your home. It could also be accessed in a crawl space if your home has one. We're interested in the first 18 inches of pipe coming through the floor or exposed in the crawl space.

Part B

What is the diameter of your water pipe? _____ inch

NOTE: Measured from top of pipe to bottom of pipe in a straight line, it is generally less than 2-inches in diameter.

What color is your water pipe? (circle the example)



Black



Gray/Silver



Orange/Copper



White

Other, indicate color here: _____

If the water pipe is gray/silver, move to Part C.

If it is a color other than gray/silver, move to Part D.

Part D

NOTE: Please send this survey to your water provider. We also urge you to email a photo of your water pipe along with the address and account/hookup number listed above for tracking and coordination purposes to your water system, or include a printed picture with this survey.

This survey is submitted by:

Print first and last name

Signature

Thank you for completing the survey.

Don't forget to send a picture of your service line to your water system with your name and account/hookup number.

Part C

Items Needed: Key or coin, magnet, protective gloves, dust pan and broom, garbage can

Within the first 18 inches of pipe coming out of the floor of the lowest level of your house (or within a crawl space below your home, if applicable), perform the following simple test:

1. Is the pipe dull or shiny before it is scratched with a key or coin?
2. Is the pipe dull or shiny where it was scratched with a key or coin?
3. Does a magnet stick to the gray pipe. Yes No

NOTE: Lead is dull, very soft, and will turn shiny silver color when scratched. Magnets will only stick to steel, they will not stick to lead pipe. If you answered dull, shiny and no in that order to the questions above in Part C, your pipe is likely lead. Questions can be directed to your water provider at this time, you may also find more information at SDWaterPipes.com.



Mid-Dakota Rural Water System, Inc.

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WATER MATTERS

HOW WATERFALLS WORK

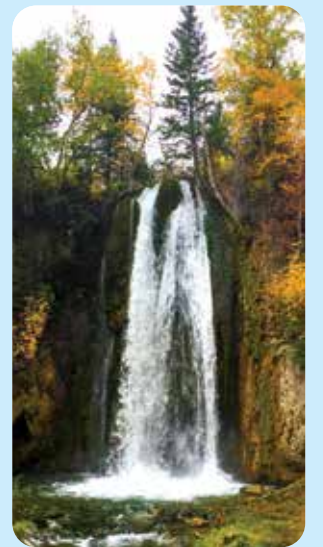


According to the dictionary, a waterfall is “a cascade of water falling from a height, formed when a river or stream flows over a precipice or steep incline.” Such a dry, academic description might well provide a workable technical definition, but it does little to convey the beauty of such features that have drawn the attention of people for ages. Waterfalls, both large and small, are the focal points of many national, state and local parks and scenic areas, ranging from the massive Niagara Falls along the St. Lawrence River to the modest Minnewissa Falls at the Pipestone National Monument 50 miles northeast of Sioux Falls.

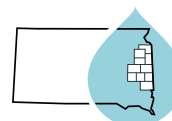
In many cases, waterfalls form when fast-moving water passes over hard, resistant rock that transitions into softer, more easily eroded material. The harder capping rock is preserved (or eroded much more slowly), while the softer rock is quickly worn away. As a result, a step (geologists call it a nick point) develops in the river or stream, over which the water “falls.” Over time, the harder rock will also be eroded, and the waterfall moves slowly upstream. Chunks of the more resistant cap rock are often visible at the base of the waterfall. Roughlock Falls and Spearfish Falls along Little Spearfish Creek in the Black Hills are two good South Dakota examples of this type.

In other cases, the ledge over which the water “falls” is the result of a break in otherwise fairly uniform rock. Over millions of years, forces within the earth have created faults and fractures in the Sioux Quartzite, which is found across parts of southeastern South Dakota. These breaks have left behind a fairly irregular surface on the quartzite. When modern day rivers and streams flow across this surface, waterfalls and cascades develop where there are sharp transitions. The Falls of the Big Sioux River are an example, and led to the development of our states largest community. Rock Rapids, Iowa, got its name in a similar manner.

Next time you come across a waterfall, see if you can figure out just why it is there, but only after admiring what is taking place.



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