MID-DAKOTA RURAL WATER SYSTEM

Quality On Tap!

April 2019 | Volume 14, Issue 4

PROFILES IN SOIL HEALTH

RURAL WATER SYSTEM SPOTLIGHT

CLAY RURAL WATER

UNDERSTANDING YOUR WATER QUALITY REPORT

SCHOLARSHIP APPLICATION | CONSUMER CONFIDENCE REPORT

FROM THE MANAGER

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

It's a new year, its cold, its windy, its supposed to be the "down-time" for water systems. Everyone would think so, but in reality, this time of year is when all those projects that got put on the "back-burner" have surfaced again as we prepare for the next "busy season.

Mid-Dakota is currently working with our engineers to bring to bid a couple of projects. First is working with the town of Ree Heights to switch their community over to individual water users of Mid-Dakota, this project should be bid soon and work to begin in 2019. Second, is a main line expansion project this will be a two-year project that will help the pressure issues and growth constraints happening from Highmore east to Huron. This project includes approximately 20 miles of 24" pipe paralleling existing mainline pipe and an additional 1.5-million-gallon storage tank beside the existing tank west of Highmore. Water to the Ringneck Energy facility has been completed and with testing to be completed on their end in February; Ringneck should be online and producing in March.

This past February, a few staff and board members from Mid-Dakota traveled to Washington, DC to attend the National Rural Water Rally. As Mid-Dakota was the fortunate and honored winner of the 2019 South Dakota Rural Water Taste Test, we were able to represent South Dakota in the National Rural Water Taste Test. Unfortunately, we weren't chosen as the nationwide winner, but we were honored to be able to represent our state. During the Rally we also had visits with Senator John Thune, Senator Mike Rounds, Congressman Dusty Johnson, and the USDA Rural Development office in DC to discuss the importance of rural water.

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Lennis Fagerhaug ..... District 4
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MID-DAKOTA RURAL WATER SYSTEM VOTED BEST TASTING WATER IN SOUTH DAKOTA

The Mid-Dakota Rural Water System headquartered in Miller, SD recently received a special recognition from South Dakota Association of Rural Water Systems (SDARWS) at the organization's 2019 Annual Technical Conference in Pierre. The water system was awarded with the Best Tasting Drinking Water in South Dakota award.

A panel of judges selected Mid-Dakota's water sample as the best tasting out of 16 water samples submitted by rural and municipal water systems throughout South Dakota. Each sample was judged on clarity, bouquet and taste. Mid-Dakota went on to represent South Dakota in the Great American Water Taste Test during the National Rural Water Rally held in Washington, DC, on February 6th, 2019.

MDRWS Employees and Directors Recognized for Years of Service in the Water Field

Bill Sarringer

Bill Sarringar received recognition for 30 years in the water industry. Bill first started his career working at the water treatment facility for the city of Aberdeen before coming to Mid-Dakota Rural Water System in 1997. He began his job with a newly constructed water treatment plant and has been serving as the department head the entire time.

Others recognized were Director Dwight Gutzmer and Lorin Johnson for 20 years; Directors Rick Benson and Jeff McGirr for 10 years; Directors Scott Oligmueller and Darrell Raschke, Craig Lunde, Mike Polak, and Steve Laird for five years. Altogether they represent a combined 115 years of service to the water industry.

Good afternoon, I just want to say thank you for the nice surprise of winning the puzzle prize from your magazine. It's kind of like the lottery. It's fun to play but you never expect to win. So it was a total surprise! I was able to share some of it with my dad, who's 90. Thanks again. I'll keep on playing. It's fun to do and I even include my husband when I get stuck.

– Pat Van Vleet

SCHOLARSHIP APPLICATIONS DUE APRIL 1, 2019

Every year for the last twelve 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 $500.00 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. An application can be found on page 13 of this issue of *Quality on Tap!*, on our website 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.

Applications must be received at the Miller office by 5:00 p.m. April 1, 2019. All applicants will receive a letter letting them know whether or not they were chosen to receive a scholarship. A $500.00 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.

QOT Waterwise Kids

TURN OFF THE TAP!

Just by turning off the tap while you brush your teeth in the morning and before bedtime, you can save up to 8 gallons of water! That adds up to more than 200 gallons a month, enough to fill a huge fish tank that holds 6 small sharks!

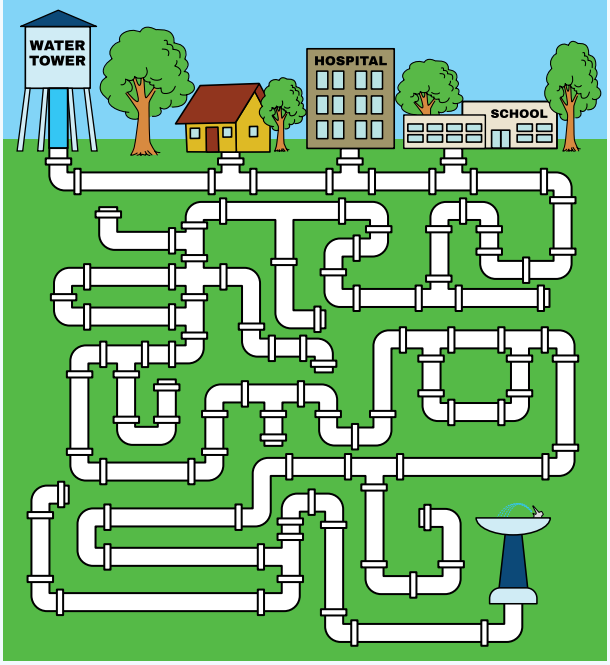
BEAT THE HEAT!

Watering your yard first thing in the morning is a great first step to water-efficient landscaping. Avoid watering your yard in the middle of the day. Watering when it's hot and sunny is wasteful because most of the water evaporates before the plants have time to drink it. Also, when you're helping your parents water the yard, make sure not to water the plants too much – remember that a little sprinkle goes a long way!

SHOWER POWER!

Taking a shower uses much less water than filling up a bathtub. A shower only uses 10 to 25 gallons, while a bath takes up to 70 gallons! If you do take a bath, be sure to plug the drain right away and adjust the temperature as you fill the tub. To save even more water, keep your shower under five minutes long – try timing yourself with a clock next time you hop in!

Underground pipes carry water all throughout your community. Can you find the way water flows from the water tower to the water fountain?



WATER WORD SEARCH

M	I	W	S	P	P	F	P	L	E
P	I	P	E	S	I	B	H	K	J
W	E	T	O	S	R	N	B	N	S
S	S	W	H	R	D	M	E	I	F
R	D	E	E	A	O	C	O	R	V
N	A	T	R	H	I	N	F	D	W
O	A	I	J	B	S	J	N	G	H
W	U	Z	N	A	B	A	T	C	B
X	E	G	V	T	F	R	W	T	P
R	L	G	B	H	P	W	L	A	H

BATH
DRINK
DRIP
FISH
ICE
PIPES
RAIN
SWIM
WASH
WATER
WET

Hey, That's Funny!

What happens before it starts raining candy? It sprinkles!

Why couldn't the fish watch YouTube? He couldn't stream the video.

What did one ocean say to another? Nothing, it just waved.

How did the raindrop ask another raindrop on a date? He asked her "Water you doing tonight?"

PROFILES IN SOILHEALTH: A SYSTEMS APPROACH

This article was provided by the USDA Natural Resources Conservation Service - SD 200 Fourth Street SW, Huron, SD 57350 www.sd.nrcs.usda.gov

Chad Schooley keeps an eye on the past. His rough farmer's hands work in the present. His boots tread ground plowed by his father, grandfather, and great grandfather. With a mind on the future, he walks the acres of his Cabin Still Cattle Company – the rolling hills of Hamlin County, South Dakota, and looks for balance.

Sitting on the end-gate of his pickup truck, young son Beau beside him, Schooley says, "I'm not a firm believer that we need to turn everything back into pasture, but we need an equal balance. If our farming practices continued like they were when our great grandfathers were farming; where we plowed all the land every year, where we were losing topsoil and we had no trees - if we had kept farming like that, I think we'd be in a worse situation. We have turned the corner. We're building the soil back up, and we've got our soil headed back to where it once was."

"On our farm we produce grass for cattle, corn and beans, wheat and oats for feed," he explained. "We raise cover crops after small grains are harvested for winter grazing for cattle, so we're a pretty diverse operation." Chad started converting some tillable ground to warm season grasses over 15 years ago. Two years ago, he converted more tillable acres to warm and cool season perennial grasses. This added pastures for spring calving.

There was a learning curve in developing the grazing strategies. "Once we started rotating cattle through the different paddocks we could really tell that we were stretching the capacity of the grass," he said. "We extended our stocking rates by doing rotational grazing, and now we have three rotational grazing systems with up to 8 paddocks in each one." He went on to explain that the native grasses he established showed more promise than other varieties, with a better rate of gain for the cattle and a better fit for maintaining and improving soil health.

"Practices we are using are becoming widespread across the country as more people are finding the benefits," he said.

Schooley's plant community was previously diverse but non-native. He's recently reintroduced up to five species of native grasses on what was tillable ground. Even when compared to very diverse native rangelands in western South Dakota where over 200 species may thrive, he's noticed more nesting habitat for waterfowl and pheasants.

Leaning on a corral gate, he added, "One of my landlords has let me convert his tillable ground to grassland, and he appreciates the fact that we're taking care of the land and making it better. So, for him, it's not all about the economics. His land is marginal land, and now it's doing a better job in grass than it was in tillable. We are getting close to the same monetary results as we were doing by tilling it."

He says that when converting tillable land into grass, there can be lost revenue at first, but up-front costs are not as intense. Once grass is planted and established, costs go way down.

Water quality is another important subject. It's tied to a healthy population of wildlife of all kinds. "On our grazing system one of the paddocks won't get grazed late season and will have more cover going into the winter," Schooley says. The leftover tall grass provides shelter and feed for wild birds. "The riparian buffers are areas we no longer farm, so there are cattails coming into the creeks. Deer and pheasants live there all winter," he says with a big smile.

"We're not watering cattle out of the sloughs any more, either. We're using a central watering system that keeps cattle out of the sloughs and out of the wild bird nesting areas, so undisturbed nests produce flocks of young birds," he noted.

A buffer runs adjacent to a waterway, and a minimum width is 35 feet, with a maximum width of 180 feet on each side to qualify as a riparian buffer zone.

Water from a recent rain poured through a wetland area, making the waving grasses dance beneath the waters' bubbling surface. The water ran clear as a new glass. Schooley scanned the marsh, and his planted trees and shrubs that lined the edges of the waterway and remarked, "a lot of our water runoff in our area goes into the Big Sioux River. That's the water source for Sioux Falls. There's a big push to keep water quality better for their metro area, it's their main drinking water source. I wish everyone understood how many things are involved in grasslands from wildlife to cattle, to bees, to water quality, songbirds, butterflies, insects and the whole ecosystem," he said.

"I'm on the Conservation District board for Hamlin County, and what that means to me is I get to try to help make this land better than when we received it, to help the next generation continue to be viable and keep farming this land," Schooley continued. "Ours is a fourth-generation farm, I have two sons very involved in the farm. My hope is that they can come on board and be a viable part of it."

"Our farm has been in the family long, long time," he said, looking over the herd of Black Angus cows and calves chewing on the wet and cold spring grass. "If my great grandfather was alive today, he'd not believe what we're doing. My mom's dad was already a conservationist. He planted trees on contours and tried to conserve the soil. My dad bought it from him, and now I'm buying it from my father, and buying my own land. We are using new practices that take us in the right direction for the next generation."

"It doesn't take long to plow up grass and plant corn," he stated. "What does take a long time is to reestablish grass and make good range land for cattle to thrive on."

ARE YOU GUILTY of Using the Toilet as a Trashcan?

By Nick Jackson, Circuit Rider for the South Dakota Association of Rural Water Systems

While traveling across the state making visits, I had stopped into several towns and facilities asking this same question: What are the most troublesome issues you have experience within your wastewater collection or treatment system? Surprisingly the answer wasn't what I thought – you know, aging infrastructure or treatment facilities. No, it was what goes down the toilet and into the wastewater collection system.

Although the things that you may flush down the toilet may escape your home's plumbing, the sewage blockages that occur in the larger pipes affect many more people than just your family.

Although the things that you may flush down the toilet may escape your home's plumbing, the sewage blockages that occur in the larger pipes affect many more people than just your family. If what you do flush down the toilet does not make it out of your home's plumbing, the damage it can cause can be costly.

Backed-up drains and sewers often mean that the sanitary systems require rodding or jetting. What's usually the culprit? Everything that isn't supposed to go down the toilet! These backups can also affect other sanitary equipment such as lift stations, bar screens, grinders, pumps, etc. which can become worn out prematurely because of what goes down the toilet.

We know it is tempting to flush nearly anything down the toilet. It's like a black hole; just dump, flush, and it's gone – out of sight out of mind. To do this, however, is to risk damaging septic tanks, wastewater collection system, and wastewater treatment centers, as well as causing toxic environmental pollution and the embarrassment that comes if you are found to be the cause of the problem. People don't think about this until one day they have a huge clog or septic tank problem and must spend lots of money to fix it.

WHAT NOT TO FLUSH

To help you save embarrassment, thousands of dollars in repairs, and avoid polluting the environment, pay attention to this list of things that you must never, EVER, flush down the toilet:

"Flushable" Wipes • Baby Wipes • Cleaning Wipes • Paper Towels • Tissues

These so-called "flushable wipes" are becoming increasingly popular nowadays. They are also frequently causing clogs and backups in sewage collection pipes and wastewater treatment equipment. Although some of these brands might say they are flushable on the box, DO NOT FLUSH them down your toilet. If you use these products, dispose of them in a trash can.

The other paper products (paper towels and tissues) are designed to stay together when wet and absorbs moisture and don't dissolve quickly in water.

Disposable Diapers • Feminine Hygiene Products

Just because there is human waste inside does not mean that they are ok to flush. Baby and adult diapers, as well as feminine hygiene products, are made to absorb and expand when they come in contact with liquids – not break apart in it. Dispose of all these items in the trash, not the toilet.

Fats • Oils • Cooking Grease

Grease should never be poured down any drain, period. It may look like a liquid that can easily be dumped down a drain, but when it cools, it will solidify and clog up your pipes and cause blockages within the collection system. Collect your grease in a container and throw it in the trash.

Hair • Dental Floss • Rubber Bands • String

Most of these items are not biodegradable and can cause severe clogs and environmental damage. Hair, for one, will never dissolve in water – it floats and easily gets caught on its way out into the collection system, snagging whatever comes its way.

Medications

Unused drugs, pills or pharmaceuticals, medical salves, and ointments, should never be flushed! Although some believe this to be a safe way to dispose of these things, it is not. Toilet water cannot destroy the active ingredients in medicines. The wastewater treatment facilities are not designed to remove various chemicals found in drugs, and that means they are not removed and get pumped back into creeks, rivers or groundwater aquifers. These chemicals are dangerous to people, animals, aquatic life and the environment.

Food

When disposing of leftover food, never flush it down the toilet. Some may argue that food is biodegradable, and it is, but it can lodge in plumbing and create one powerful clog.

Cleansers • Stains • Solvents • Thinners • Pesticides • Fertilizers • Automotive Products

If it is not meant to clean the toilet, don't flush it down. Combinations of these can be acidic, caustic, poisonous fumes or even cause explosions.

Animal Excrement • Cat Litter

Some product say their cat litter is flushable, but with newer water saving toilets, there is just not enough water to keep the litter moving within the collection system which can cause blockage. Dried animal feces gets dehydrated and becomes hard as a rock and may not dissolve – which can get caught somewhere in the collection system.

The list can go on and on, and it's time to take responsibility for using toilets as they were originally intended. What does that leave? Not much! Human excrement and regular toilet paper are the only things you should flush down your toilet.

Even the very thick and plush toilet paper can sometimes be tough to break down. A courtesy flush is occasionally necessary to avoid clogging the drain. We love Charmin Ultra too, but be conservative with your toilet paper use.

Please think twice about flushing these everyday items down the toilet, not only will it save you from causing blockages, but will also keep your community's wastewater system in good working order.

"Flushable" wipes that were causing issues and were pulled from a wastewater collection system in South Dakota.

This sewer main was found to be completely clogged with grease in Madison, SD.

CLAY RURAL WATER SYSTEM

In January 1975, Clay County Extension Agent Bob Schurrer conducted a survey of every farm and landowner in the county requesting information on water quality and availability. They were also asked if they were interested in developing a rural water system. Over half of those surveyed indicated they were interested in such a system.

Wells in parts of the county were very high in minerals. At the time, many rural residents had their water hauled to cisterns on their farms and acreages.

In March of 1975, three informational meetings were held across the county to explain the idea of a rural water system. Convenience was one of the main themes touted at the meetings. Response at the informational meetings was favorable, and a steering committee was formed to further investigate the idea of a rural water system.

On April 29, 1975 the first organizational meeting was held at the 4-H Center in Vermillion. Approximately 60 rural residents were in attendance. With a favorable outlook, the steering committee was elected as a 12-member Board of Directors. Ken Mockler of Vermillion was elected Chairman. Jack DeVany, a rural resident and interested member, volunteered to guide the group as the water system attorney. Clay Rural Water System was officially incorporated on July 21, 1975.

The Board of Directors, along with Schurrer and DeVany, were about to undertake one of the greatest efforts since rural electrification some 40 years earlier. With little to guide them in the way of previous rural water system experience, the board and others set out to bring quality water to rural Clay County.

The main question the young Board had to answer, was "Why a rural water system?" Many rural residents hauled their water from some nearby community. A rural water system would bring water directly to their farm or residence. Improved quality would save on plumbing fixtures and pipes. Livestock would have a dependable supply of water during periods of drought. Pressure from the rural water system would be constant. But the demand was not limited to Clay County, so the scope expanded to include surrounding areas, including Union County.

The water system hired the engineering firm DeWild Grant Reckert and Associates (DGR) of Rock Rapids to ensure they had sound technical advice. A feasibility report was completed by DGR in January 1976. It stated the prospect of a system was feasible and the decision was made to move forward. The study indicated there were 3,000 persons, 1,700 head of dairy cattle, 59,000 head of feeder and stock cows and 94,000 head of hogs and sheep in the project area.

The first annual meeting of the water system was also held in January of 1976. Ernest Schmidt of Vermillion was elected Chairman. The system wasted no time in signing up members. Meetings were held in Wakonda, Garryowen, the SE Research Farm and in Vermillion. In three days, 730 locations signed up. Later signups would bring the total to 980. Each individual was asked to pay a $200 hookup fee.

The Board submitted a loan and grant application to the Farmers Home Administration in February 1976. Good news came in the fall of 1977 as funding was secured. A total of $4.5 million dollars was received. The financing consisted of a $3,350,000 loan and a $660,000 grant. A $300,000 grant from the state was later received. Hookup fees paid by new members covered the balance of the funding needs.

Construction began quickly and was evident all around Clay and Union Counties.

At the end of construction, Clay Rural Water was serving nearly 1,000 members. The total population supplied with quality rural water was approximately 3,500 people and thousands of head of livestock. From an idea to reality, the entire undertaking took just five years.

Since 1976, Clay Rural Water has more than doubled its membership and greatly increased capacity. Initial system treatment capacity was 1.2 million gallons per day (MGD), and current capacity is 1.5 MGD. Storage capacity has increased from 760,000 gallons to 1.21 million gallons. In 1996 the water plant was remodeled into a softening plant, greatly improving water quality.

The majority of the system is served by the Wakonda Water Treatment Plant. This 1.2 MGD plant utilizes lime softening and is supplied by two wells located in the Lower Vermillion-Upper Missouri Aquifer. Each well has a capacity of more than 1,000 gallons per minute (gpm). Users located in southern Union County are served by the Wynstone Water Treatment Plant. This plant utilizes reverse-osmosis treatment and is supplied by two wells located in the Missouri Elk Point Aquifer. Each well has a capacity of 350 gpm. Total membership is now 2,430.

CLAY RURAL WATER SYSTEM

The first Board of Directors 1975 - 1980

2018 Clay Board of Directors: Back L to R: Jim Schurdevin, Russ Lilly, Randy Ronning, Dave Reiff, Duane Holoch. Front Row L to R: Glen Gilbertson, Vice President; Robert Wood, President; Randy Huot, Sec.-Treas.; Pat Manning.

DIRECTORS:

Robert Wood – President

Glen Gilbertson – Vice President/SA Director

Randy Huot – Secretary/Treasurer

Duane Holoch – Director

David Reiff – Director

Randy Ronning – Director

Pat Manning – Director

Russ Lilly – Director

STAFF:

Greg Merrigan, Manager

Donna Henriksen, Office Manager

Leanne Brown, Accounting/Bookkeeper

Tom Hollingsworth, Operations Supervisor

Phil Iverson, Operations Specialist

Rob Ganschow, Operations Specialist

Andy Ganschow, Operations Specialist

STATISTICS:

Hookups: 2,430

Miles of Pipeline: 1,350

Water Source: Groundwater (Lower Vermillion-Upper Missouri), Missouri River @ Elk Point

Counties Served: Clay, Union, parts of Lincoln, Turner, and Yankton

Towns Served Individual: Burbank, Meckling, Deer Run

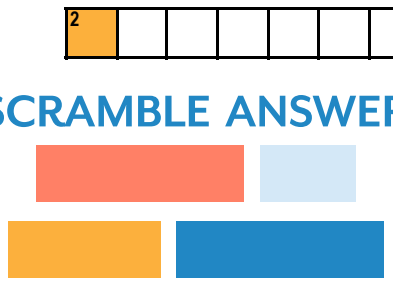
Towns Served Bulk: Wakonda, Gayville

RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

Water Quality Testing

Enter to Win $100

SCRAMBLE ANSWER



WORD BANK

- ☐ CONFIDENCE
- ☐ FLUORIDE
- ☐ LEAD
- ☐ COPPER
- ☐ CHROMIUM
- ☐ HALOACETIC ACIDS
- ☐ NITRATE
- ☐ TRIHALOMETHANES
- ☐ CONTAMINANT
- ☐ ARSENIC
- ☐ TREATMENT
- ☐ BYPRODUCT
- ☐ CHLORINATION

DOWN

1. An element that occurs naturally in rocks and soil and is used for a variety of purposes within industry and agriculture which can cause pollution in groundwater.
3. From a group of four chemicals—chloroform, bromodichloromethane, dibromochloromethane, and bromoform—formed, along with other disinfection by-products, when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water.
4. The process of adding chlorine to drinking water to disinfect it and kill germs.
6. Consumer _____ Report - 1998 rules that requires community public water suppliers to provide customers with reports of drinking water quality.
7. A substance that makes something impure.
9. Rarely occurs naturally in water; it usually gets into the water from the delivery system. _____ pipes are the main contributor to high lead levels in tap water.

ACROSS

2. Is any process that improves the quality of water to make it more acceptable for a specific end-use.
5. A controlled addition to water to help reduce tooth decay.
8. Occurs naturally in water due to the erosion of _____ deposits found in rocks and soils.
10. A compound that is formed naturally when nitrogen combines with oxygen or ozone.
11. An incidental or secondary product made in the manufacture or synthesis of something else.
12. are a type of chlorination disinfection byproduct that are formed when the chlorine used to disinfect drinking water reacts with naturally occurring organic matter in water.
13. A metal that naturally occurs in rock, soil, plants, animals and water. A trace amount of it is necessary for good health. The most common way it enters drinking water is through corrosion of _____ pipes due to acidic water.

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 8th, 2019 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 Clifford (Rick) Van Vleet who had the correct phrase of "walking in a winter wonderland" for January 2019.

Understanding Your
WATER QUALITY REPORT

The Consumer Confidence Report (CCR) is an annual water quality report that a community water system is required by law to provide to its customers each year by July 1st. Your CCR can help you make informed choices about the water you drink.

Your CCR Provides Need-To-Know Information

SUCH AS:

Where your **water comes from**—such as an aquifer, lake, river, or other source.

A list of **regulated contaminants** that the CWS detected and the level.

Potential **health effects** from consuming contaminated water and additional safeguards against water-related illnesses.

Contaminant levels in your CCR compared to national standards and any violations of health-based standards.

Questions Or Concerns About Your CCR

CALL EPA'S SAFE WATER HOTLINE at 1-800-426-4791 if you would like to know more about your CCR, how to locate your local water company, or for more resources.

CONTACT YOUR HEALTHCARE PROVIDER if you are sensitive to contaminants or if you are at higher risk of infections.

CONTACT YOUR WATER COMPANY for information on how to remove chemicals and microbes from your water source.

For more information, visit: **epa.gov/ccr**

Sample Water Quality Data Table

Your CCR will also include a water quality data table that may look similar to this:

1 **Maximum Contaminant Level Goal (MCLG):** If the value in the "Your Water" column is below this MCLG there is no known or expected risk to your health.

2 **Maximum Residual Disinfection Level Goal (MRDLG):** If the value in the "Your Water" column is below the MRDLG there is no known or expected risk to your health.

3 **Maximum Contaminant Level (MCL):** If the value in the "Your Water" column is above the MCL, the system is in violation of EPA's regulations.

4 **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

Contaminants	MCLG or MRDLG (1, 2)	MCL, TT, or MRDL (3, 4, 5)	Your Water (6)	Range (7) Low	Range (7) High	Sample Date	Violation (8)	Typical Sources
Disinfectant Residual								
Chloramine (as C12) (mg/L)	4	4	1	1	3	2008	No	Water additive to control microbes.
Inorganic Contaminants								
Antimony (ppb)	6	6	ND	N/A		2008	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	4*	1	4	2006	No	Erosion of natural deposits

5 **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in your drinking water. A certain amount of disinfectant has been shown to help control germs and microbes in the water.

6 **Your Water:** The highest level of that contaminant found in your water during sampling.

7 **Range detected:** The "range" refers to the levels—high and low—at which contaminants were detected in your drinking water.

8 **Violation:** Shows if a contaminant is present in your drinking water is above the level allowed by EPA.

Just how small is a part per million or part per billion?

In one Olympic-sized swimming pool (660,000 gallons)

1 Part Per Million (PPM) = 1 1/4 two-liter bottles

1 Part Per Billion (PPB) = 1/2 teaspoon

SCHOLARSHIP APPLICATION

Successful applicant will receive one of four $500 scholarships. Applicant must be a child of a member of Mid-Dakota Rural Water System or a resident in one of Mid-Dakota's participating communities. **The applicant must attend a South Dakota Post-Secondary educational facility and have a grade point average of 2.8 or higher (please provide a copy of transcript). This form must be completely filled out and a 250-500 word essay on what rural water has meant to the applicant or his/her community must be attached.** A current photo is also required to be used for publicity purposes. Mid-Dakota reserves the right to print any and all essays that have been submitted.

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: City of or Town 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, 2019.**

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

Rate Table Effective January 1, 2019

501 Residential 1-Unit
$42.00 per month minimum bill
$4.75 per 1,000 gallons 1st 33,000
$7.00 per 1,000 gallons over 33,000

502 Rural Household 2-Units
$52.00 per month minimum bill
$4.75 per 1,000 gallons 1st 10,000
$3.75 per 1,000 gallons next 56,000
$7.00 Per 1,000 gallons over 66,000

504 Rural Household 4-Units
$70.00 per month minimum bill
$4.75 per 1,000 gallons 1st 10,000
$3.75 per 1,000 gallons next 122,000
$7.00 per 1,000 gallons over 132,000

506 Rural Household 6-Units
$87.00 per month minimum bill
$4.75 per 1,000 gallons 1st 10,000
$3.75 per 1,000 gallons next 188,000
$7.00 per 1,000 gallons over 198,000

511 Livestock
$30.00 per month minimum bill
$3.75 per 1,000 gallons 1st 300,000 (per year)
$4.75 per 1,000 gallons 301,000 to 700,000 (per year)
$7.00 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
$24.00 per GPM per month demand charge
$0.50 per 1,000 gallons

163, 166 Special Class III
$4.69 per Pers (equiv) per month minimum bill
$4.55 per Pers (equiv) per month demand charge
$0.50 per 1,000 gallons up to contract amount
$7.00 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

After Hours or Emergencies
Call Mid-Dakota
TOLL FREE at: 1-800-439-3079
or call the answering service direct at
1-888-545-7440

For online bill paying:
www.mdrws.com

Mid-Dakota Rural Water System

Annual Water Quality Report

January 1, 2018 - December 31, 2018

Water Quality

Last year, the Mid-Dakota Rural Water monitored your drinking water for possible contaminants. 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 6,023 customer accounts, or a population greater than 32,000, an average of 5,189,000 gallons of water per day. We get our water from the Oahe Dam on the Missouri River which is a surface water source. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Mid-Dakota Rural Water public water supply system is medium.

For more information about your water and information on opportunities to participate in public meetings, call (605) 945-0437 and ask for Bill Sarringar.

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 contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater 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 stormwater runoff, and residential uses.

Organic chemical contaminants, 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, and septic systems.

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. Food & Drug Administration 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 EPA Safe Drinking Water Hotline at 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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants can be obtained by calling the EPA Safe Drinking Water Hotline at 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 Mid-Dakota Rural Water 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 www.epa.gov/safewater/lead.

Detected Contaminants

The table below lists all the drinking water contaminants that we detected during the 2018 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, 2018. 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.

2018 Water Quality Test Results

2018 Table of Detected Contaminants for Mid-Dakota Rural Water (EPA ID 2175)

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Sources of Contaminant
Copper	0.5	0	07/26/16	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	2	0	07/29/16	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 Sources of Contaminant
Alpha Emitters	4	ND - 4	09/27/16	15	0	pCi/l	Erosion of natural deposits.
Fluoride	0.48		10/23/18	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (RAA)	24.88		11/14/18	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Total Trihalomethanes (RAA)	37.75		11/14/18	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. Bill Sarringar with the Mid-Dakota public water system at (605) 945-0437.

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)
pCi/l – picocuries per liter(a measure of radioactivity)

Mid-Dakota Rural Water System, Inc.
608 W. 14th St., P.O. Box 318
Miller, South Dakota 57362-0318
www.mdrws.com • 605-853-3159

WATER MATTERS

Water Quality Standards

Water bodies can be used for purposes such as recreation (e.g. swimming and boating), scenic enjoyment and fishing, and are the home to many aquatic organisms. To protect human health and aquatic life in these waters, water quality standards (WQS) are established. WQS are provisions of state, tribal or federal law that describe the desired condition of a water body and the means by which that condition will be protected or achieved. Further, WQS form a legal basis for controlling pollutants entering these waters.

Standards are typically defined in terms of an acceptable concentration or level of a particular chemical, physical or biologic parameter. For example, in South Dakota, for waters designated as drinking water supplies, the concentration of nitrate (NO_3^-) cannot exceed 10 milligrams per liter (mg/L). Waters designated as cold-water fisheries (trout streams), water temperature cannot exceed 65°F. If swimming immersion recreation (in government speak) is the goal, levels of Escherichia coli (E. coli) bacteria in excess of 235 colonies per 100 milliliters of sample are considered problematic.

It is important to understand that while WQS have been established for most water bodies in the State, compliance with the WQS does not mean that the water is completely free of any possible contaminants. The established standards most often reflect the best scientific estimate of when the potential risk to human health, etc., is no longer statistically acceptable. Although the water might be considered safe from a regulatory standpoint, contaminants may be, and most likely are, still present.

When presenting water quality information, the results of a particular water quality test are often expressed as either pass or fail. A nitrate reading of 9.0 mg/L would be considered 'acceptable,' as it is below the 10 mg/L WQS. However, background nitrate levels in South Dakota waters rarely exceed 1-2 mg/L, so the 9.0 reading is strongly suggestive of a problem that ought to be addressed, even if it technically meets the WQS.

There is nothing magic about WQS that would mean that compliance translates to zero risk. Similarly, violation of WQS does not mean that interaction will result in certain harm. It is important to know not only what is in your water, but also what this really means.

What are South Dakota's water quality standards? They can be found in Chapter 74:51:01 of the Administrative Rules of South Dakota. https://sdlegislature.gov/Rules/DisplayRule.aspx?Rule=74:51:01

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East Dakota Water Development District
132B Airport Drive • Brookings, SD, 57006
(605) 688-6741 • http://eastdakota.org