



KINGBROOK
RURAL WATER SYSTEM

Quality On Tap!

July 2024 | Volume 20, Issue 1

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FROM THE MANAGER

Heath Thompson, General Manager
Kingbrook Rural Water System, Inc.



The 2022 System Improvement Project continues to progress. As reported in past *Quality On Tap* issues, the project consists of nine projects. Initial funding for the project is a Drinking Water State Revolving Fund loan of \$22,850,000.00 at 2.125 percent interest for thirty years and received a \$9,900,000.00 American Rescue Plan Act Grant. Following this year's 2024 Legislative Session and the passage of Senate Bill 53, an additional appropriation of \$89,384,221.00 American Recovery Plan Act funds for water and sewer infrastructure was made. The Board of Water and Natural Resources determined that eligible projects for consideration are those that received a previous ARPA grant, provide service to a regional area, and have eligible costs remaining for reimbursement. Kingbrook was informed that the 2022 System Improvement Project could be eligible to receive up to an additional \$5,400,000.00 in ARPA grant funds. Kingbrook has submitted the required documents requesting additional grant funding.

To date, two major piping projects and the addition of the Bryant Booster have been completed. The DeSmet Treatment Plant Expansion and Badger Station Replacement are being constructed, and the Arlington Elevated Tower is under contract. The Chester Treatment Plant Improvements and Orland Station Improvements will be let for bid in June, followed by the Oakwood Station Improvements.

Another area of work Kingbrook is focusing on is completing a Lead and Copper Survey. The EPA released a fact sheet that describes the 2021 Lead and Copper Rule Revisions requirements that public water systems must comply with starting on October 16, 2024. The initial requirements were outlined in the Lead and Copper Rural Improvement proposal. Based on the proposal, Kingbrook started collecting data for the Lead and Copper Rule Revision early this year. A mailer was sent to 5104 system members requesting data, which Kingbrook must include in its Lead and Copper Survey. To date, with the memberships' help and the effort of Kingbrook staff, 2981 services have been verified. The task that Kingbrook is required to complete by October 16, 2024, will be a heavy lift. All the help the members can give Kingbrook regarding the Lead and Copper Survey is extremely helpful and important. Operators are reaching out to members in their respective areas and are willing to help you, help Kingbrook, in this effort. Thank you to everyone for reaching out and sending Kingbrook this much-needed information; your efforts are making this effort possible.

I want to take the time to recognize the staff at Kingbrook. Kingbrook currently has 16 dedicated individuals working on running, maintaining, repairing, and growing the members system. The effort and commitment this takes is considerable and often goes unnoticed due to the nature of how a regional water system operates. Many complex and detailed tasks are required of office staff to ensure the system's administrative function and compliance are met daily. The same is required of the field staff, which may times fix issues before any service interruption. These efforts lead to accessible water 24/7 or the repair or correction if it should stop promptly and efficiently. I am grateful to work with such a great group of individuals.

Projects and daily processes involve much coordination and collaboration between all staff members and support professionals. Nevertheless, their completion will enhance, ensure, and expand water service to existing and future members. This is a continued focus of Kingbrook's long-range planning efforts and dedication to supply service to members.



BOARD OF DIRECTORS


- Scott Tolzin**
Chairman – District 2, DeSmet, SD
- Brian Christensen**
Vice-Chairman – District 3, Arlington, SD
- Corey Dorhout**
Secretary/Treasurer – District 6, Madison, SD
- Norman Andenas**
District 7, Howard, SD
- Barry Loomis**
District 4, Bruce, SD
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District 5, Nunda, SD
- Damon Stormo**
District 1, Lake Norden, SD

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- Heath Thompson**, General Manager
- Brian Callies**, Operations Manager
- Jon Ekern**, Treatment Plant Manager
- Jerrud Kruse**, Senior Operations Specialist
- Cole Munger**, Treatment Plant Specialist
- Chad Bjerke**, Operations Specialist
- Mike Warner**, Operations Specialist
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- Craig Brownell**, Operations Specialist
- Alan Brown**, Operations Specialist
- Nick Kramer**, Operations Specialist
- Aaron Jeffrey**, Operations Specialist
- Tabitha Duffy**, Office Manager
- Danielle Zeck**, Bookkeeping & Accounting Specialist
- Teresa Mohr**, Accounts Receivable Specialist

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(1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov. This institution is an equal opportunity provider.



PAYMENT OPTIONS

There are several convenient methods for customers to pay their water bill:

- 1) Mail your payment
- 2) Drop your payment off at our office (there is a drop box on the east side of the building for 24-hour convenience)
- 3) Sign up for ACH payments (visit our website or call the office for more information)
- 4) Pay your bill online at www.kingbrookruralwater.com and click the "Pay My Bill" button
- 5) Sign up for the customer portal (call or email the office for more information)

LEAK REWARD

Members who report a water leak on any of Kingbrook's mainlines will receive a \$25.00 leak reward. With approximately 2,900 miles of water line in the distribution system, members can play a key role in assisting system employees in locating water leaks.

All members who received a leak reward in 2024 will be entered into a drawing for a cash prize of \$100.00. The drawing will take place at our 2025 Annual Meeting. Members need not be present to win.

The winner drawn at our 2024 Annual Meeting was Leonard Hinker.

KINGBROOK'S 48TH ANNUAL MEETING HELD

On Monday, April 8, 2024, at the Edgar L. Herrick American Legion Hall in Arlington, South Dakota, approximately 155 members attended Kingbrook's annual meeting. Everyone enjoyed a delicious meal prepared by Midwest Fresh Catering. Chairman Marvin Antonen called the meeting to order, and Attorney Reed Mahlke handled the election of the directors. The following directors were elected to their respective districts; District 1 – Damon Stormo and District 4 – Barry Loomis. The financial condition of the Corporation was presented along with reports from Chairman Antonen and General Manager Heath Thompson. A drawing for the door prizes was held with Sheila Huntimer of Oldham the lucky winner of \$250 cash. Other door prizes in the amounts of \$100, \$50 (2), and \$25 (4) were awarded. Other prizes donated by Jeremy Fox were awarded.



Sheila Huntimer (left), pictured with Kingbrook employee Tabitha Duffy (right), received the \$250 cash prize.

HOLIDAY HOURS

The Kingbrook Rural Water office will be closed on the following dates:

THURSDAY, JULY 4, 2024 - INDEPENDENCE DAY
MONDAY, SEPTEMBER 2, 2024 - LABOR DAY

In case of an emergency, please call the office at 605-983-5074 or toll free at 1-800-605-5279 and you will be forwarded to our after-hours answering service.

2024 KINGBROOK RWS SCHOLARSHIP WINNERS



EMILY EVERSON is the daughter of Paul and Monica Everson of Hayti currently attending Hamlin High School. Extra-curricular activities that Emily has been involved in are volleyball, basketball, student council, school play, and book club. She is also a member of Hamlin Unified Champion School (HUCS) and the National Honor Society of which she has been President the past two years. Emily is a member of her church's Senior Luther League helping with church services, events, and activities. She also volunteers her time at blood drives, the local assisted living, and volleyball and basketball camps. Emily plans to attend South Dakota State University where she will major in Business Economics with a minor in Accounting and then pursue her master's degree in Accounting.

KATHRYN KLEIN is the daughter of Lee and Christina Klein of Madison currently attending Madison High School. Kathryn's extra-curricular involvement includes FFA and statistician for basketball and volleyball. She is a member of the National Honor Society, the Fellowship of Christian Athletes, and 4-H, being the club's President for the past four years. Kathryn has been active in her community by serving at the Gathering Meal, volunteering with Meals on Wheels, the Knights of Columbus and at Prairie Village. Kathryn plans to attend Mitchell Technical College where she will major in Agricultural Business.



KELLEN KUETER is the son of Dean and Tracy Kueter from Montrose currently attending Montrose High School. Kellen's involvement in extra-curricular activities includes, FFA, student council, and the National Honor Society (NHS). He is a tutor through the NHS and has received several awards during his time with FFA. Kellen is also a member of his local Sons of the American Legion squadron volunteering his time for Veterans Day and Memorial Day programs, fundraising events, and a renovation project. He volunteers at church, for the Humboldt Threshing Show, and helped organize and execute a Feed the Farmers event. Kellen plans to attend South Dakota State University and obtain a degree in Agronomy with minors in Precision Ag and Ag Business.

EMMA SCHULTZ is the daughter of Todd and Abigail Schultz of Lake Norden currently attending Hamlin High School. Emma has been actively involved in track, basketball, book club, and more. She is a member of the National Honor Society, the Fellowship of Christian Athletes, and the Hamlin Unified Championship School (HUCS). As a member of HUCS she advocates for inclusion for special needs students and serves as a Unified Partner in the Special Olympics. Emma has volunteered in several ways including refereeing and working concessions for the Special Olympics, working blood drives, and teaching Sunday School. Emma plans to attend South Dakota State University where she will major in Nursing with a minor in Health Science.



MITCHELL VANDERWAL is the son of Jeff and Beth VanderWal from Howard currently attending South Dakota State University. Mitchell was active in high school in FFA and FBLA, holding offices at the chapter and district levels for FFA. Since attending college he has joined the Collegiate Cattleman's Club, currently serving as their President, and is an SDSU Ambassador. He was also named the 2023 Outstanding Junior of the Red Angus Association of America. Mitchell has volunteered by cleaning ditches, preparing and serving food at the Harvest Table, and cleaning Frost Arena seats after games. Mitchell is double majoring in Animal Science and Agricultural Science.



The Rain Barrel – An Old Idea That’s Still Useful

While browsing online recently, I came across something that instantly transported me back to my childhood – an old rain barrel. It reminded me of the days spent at my grandparents’ house, playing in the yard. In one corner, under the waterspout, stood the rain barrel, a symbol of a time when water was hauled to the house and its quality was unpredictable. Back then, early American water systems required fetching water from a central supply. Today, thanks to innovations like well digging, piping, and pumps, water flows directly to our homes through one of the 155,000 public water systems across the U.S.

The discovery that triggered this nostalgic journey was a city program called the “Green Barrel,” which offers residents discounted rain barrels. Imagine cutting your water bill by capturing rainwater for free! In this city, watering lawns and gardens accounts for 40% of household water usage. With each barrel saving approximately 1,300 gallons over the summer, the impact on your wallet and the environment is significant.

Modern rain barrels are a far cry from the ones of the past. Gone are the makeshift screens and weighted lids. Today’s

barrels feature a sleek inlet that directs water into a small opening and an outlet that easily connects to a watering can or hose. These design improvements not only prevent evaporation and keep bugs out but also make collecting and using rainwater effortless.

Think about the possibilities: watering your houseplants, gardens, and lawns with pure rainwater, especially during dry spells. Droughts, with their abnormally low rainfall, lead to water shortages. A rain barrel ensures you always have a supply of water on hand. Plus, the benefits are immense – reducing your water usage, cutting down on water sent to sewers, and saving money.

Investing in a rain barrel isn’t just about conserving water; it’s about connecting to a tradition of resourcefulness and sustainability. It’s about making a positive impact on the environment while enjoying the simplicity and efficiency of nature’s own irrigation system. So why not bring a bit of that old-world charm into your modern home? Get a rain barrel today and start reaping the benefits – your garden, your wallet, and the planet will thank you.

WHY IS MY LAKE GREEN?

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

Summer has arrived, and summers include visits to the lake for many people. Whether you enjoy boating, swimming, fishing, or simply take in the scenery, lakes and state parks offer an excellent setting for weekend getaways. Regardless of the lake or waterbody you visit this summer, there is a common denominator – algae. What is algae, and why does it turn our waterbodies unappealing at times during the hot summer months?

The term “algae” encompasses many organisms, from microscopic single-celled entities floating in lakes to seaweed in oceans. The prevalent variety of algae in lakes is known as “Green Algae,” specifically the single-celled type. These microorganisms thrive on lake nutrients and utilize sunlight for photosynthesis, similar to above-water plants and trees. Along with chlorophyll, the pigment responsible for the green color in plants, these algae play a crucial role at the bottom of the lake’s food chain. As you swim in the lake, imagine yourself as a complex bit of algae floating in the water, albeit without chlorophyll and the ability to photosynthesize.

Understanding what algae are reveals the cause behind lakes’ murky and unpleasant green appearance. This transformation typically occurs in the hottest parts of summer and is identified as an “algal bloom.”

An algal bloom signifies a significant increase in algae organisms in the lake. While numerous algae species may exist, a bloom typically comprises one or two dominant types. These blooms result from optimal lake conditions, where one algae species experiences rapid reproduction due to abundant nutrients, particularly phosphorous and nitrogen. The excess nutrients and consecutive sunny days in summer create the ideal environment for a substantial algal bloom.

Beyond the green color and unpleasant odor, an algal bloom is a natural and essential phenomenon for maintaining lake health. The excess plant life generated by the bloom serves as abundant food for other microorganisms and fish, as the algae convert free-floating nutrients into a form edible by lake residents.

While algal blooms are natural, scientists have observed troubling events known as “Harmful Algal Blooms” (HABs). HABs, detrimental to the lake ecosystem and its inhabitants, can manifest in various forms, like the thick “green soup” seen occasionally. HABs can also cause “summerkill,” a mass die-off of a lake’s fish population caused by an excessive algal bloom. Large blooms lead to oxygen depletion in the water, creating a hypoxic environment that can suffocate fish and other aquatic organisms.

While HABs occur naturally, increasing occurrences are linked to human activities. Excessive nutrients, especially phosphorous and nitrogen, disrupt the delicate nutrient balance in lakes. Human contributions to this imbalance include the overuse of fertilizers on lawns,

with runoff carrying nutrients into lakes. Awareness of the environmental impact of fertilizer use is crucial to maintaining the health of our lakes.

While algae can make you and your pets sick, most reports refer to Blue-Green algae, a type of bacteria known as Cyanobacteria. Cyanobacteria, capable of producing toxins, can cause skin irritation and stomach flu symptoms. Despite potential risks, State and County-run parks diligently monitor algae blooms, issuing warnings when necessary. Enjoy your summer responsibly and with an appreciation for the natural beauty of our lakes and water bodies.

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RECRUITING YOUTH TO THE WATER INDUSTRY

**By Sue Bergheim, Apprenticeship Coordinator
South Dakota Association of Rural Water Systems**

When asked about a career in the water industry, many high school students aren't quite sure what that means. They know they like to drink water and use water for showers, brushing their teeth, or washing clothes, but most aren't sure how that good, clean water they are using gets to their house or school.

It's this uncertainty of what an occupation in water means that is motivating me to hit the road and talk directly with students about working in the most vital industry in the world. My first event was the FFA Career Carnival, held in conjunction with the State FFA Convention in Brookings

in April. There were nearly 60 different booths filled with hands-on activities for students to gain knowledge about different careers within the world of agriculture. SDARWS Interim Executive Director Jeremiah Corbin and I had a booth at the Carnival and networked with hundreds of FFA students from across the state. Along with candy and brochures of information about water-related careers, we also provided students with the opportunity to win some fun water-related prizes. We quizzed the students on various water trivia questions for them to have a chance to spin our prize wheel and possibly walk away with one of the most





coveted pieces of swag from the event – a water gun! It was a busy and fun event and a great way for me to kick off my efforts to start getting students thinking about a career in water.

The next week I made the drive to Eagle Butte to take part in a Career Fair at Cheyenne-Eagle Butte High School. This Fair allowed me to visit with students from Dupree, Tiospaye Topa, Takini, and Eagle Butte. Dan Marshall, Operations Specialist with Mni Wasté Water Company, joined me for the event. We provided candy and other promotional items to the students, and Dan helped them get a feel for some of what his job entails by showing them a variety of on-the-job pictures, including the inside of a water tower. Some of the students and teachers attending had great questions for us and it was enjoyable interacting with them.

These two events are just the start of my effort to get the word out about the benefits of working in water or wastewater careers in the state. I plan to attend other Career Fairs or events moving forward to continue to promote working in the water industry, especially for students to utilize the Apprenticeship Program. I am interested in knowing about other events or activities like these that may be beneficial for me to attend.

I started as the Apprenticeship Coordinator with SDARWS in

February and have been working with the National Rural Water Association (NRWA) Apprenticeship Program team to get South Dakota's program up and running. The NRWA Apprenticeship Program is recognized by the U.S. Department of Labor and provides guideline standards of apprenticeship to state Rural Water Associations, like SDARWS, for their approval and adoption. Apprentices will attend an approximately two-year training program that includes classroom technical instruction and on-the-job training. During the program, apprentices will earn-while-they-learn with knowledgeable professionals who work to deliver clean drinking water to their communities and treat wastewater before returning to the environment. To be eligible for the program, applicants must be at least 18 years old; have a high school diploma or GED; have a valid driver's license; and be physically capable of performing the functions of the program. The program's goal is to have students emerge with a secure career as either a Water Operations or Wastewater Operations Specialist.

SDARWS has a website dedicated to information regarding careers in water, including the Apprenticeship Program. It will be updated as the Association moves through the process of getting the Program registered and ready to go. Be sure to visit sdarws.com/WaterWorks for the latest information and check out videos about water and wastewater careers.

DAVISON RURAL WATER

Davison's story began in May 1983 at the Davison County 4-H Building, where around 70 attendees recognized the need for a rural water system. A steering committee of eight individuals was formed, and in June, Bernie and Iris Oster donated office space at American Global Co. By August, the By-Laws were approved, followed by state approval of the Articles of Incorporation in September. With the system official, rules and regulations were adopted, and the first Annual Membership meeting took place in October 1984.

In 1985, construction began after purchasing five acres for an office building, pumphouse, and reservoir. By November, a water contract was signed with the City of Mitchell, and by January 1986, water was operational for part of the system. A permanent office/shop space was completed in December 1987, and Davison partnered with Hanson Rural Water for shared management in January.

In 1992, a new warehouse was completed alongside the first expansion project, adding a tower northeast of Mitchell

and 61 new users. In 1996, the board sought a new water source, eventually contracting with Randall Community Water District in December 2002. The second expansion, completed in October 1998, added a tower south of Mitchell and 147 users.

In December 2002, Missouri River Water was introduced, adding 29 users. The third expansion, completed in September 2003, connected Mount Vernon and added 67 users in Mount Vernon and Plankinton rural areas, shifting the water source from the City of Mitchell to Randall Community Water.

Since 2005, Davison has built a second shop/warehouse and remodeled its office. Currently, Davison services 1,220 hookups through 610 miles of pipe, covering Aurora, Davison, Douglas, and Sanborn counties in southeast South Dakota. In the years leading up to 2024 Davison has increased its member services to over 1,300 hookups selling over 148 million gallons of water in 2023.





DIRECTORS:

Chairman – Bob Weisz

Vice Chairman – Norman Neugebauer

Secretary/Treasurer – Dennis Kiner

Director – Brian Bode

Director – Harvey Fouberg

Director – Bruce Haines

Director – Brett Young

STAFF:

General Manager – Jake Jones

Office Manager – Teresa Sprinkel

Service Technician – Terry Haag

Service Technician – Bob Riggs

Service Technician – Myles Horton

Service Technician – Blake Hemminger

STATISTICS:

Hookups: 1,220

Miles of Pipeline: 610

Water Source: Randall Community Water

District (Missouri River)

Counties Served: Aurora, Davison,

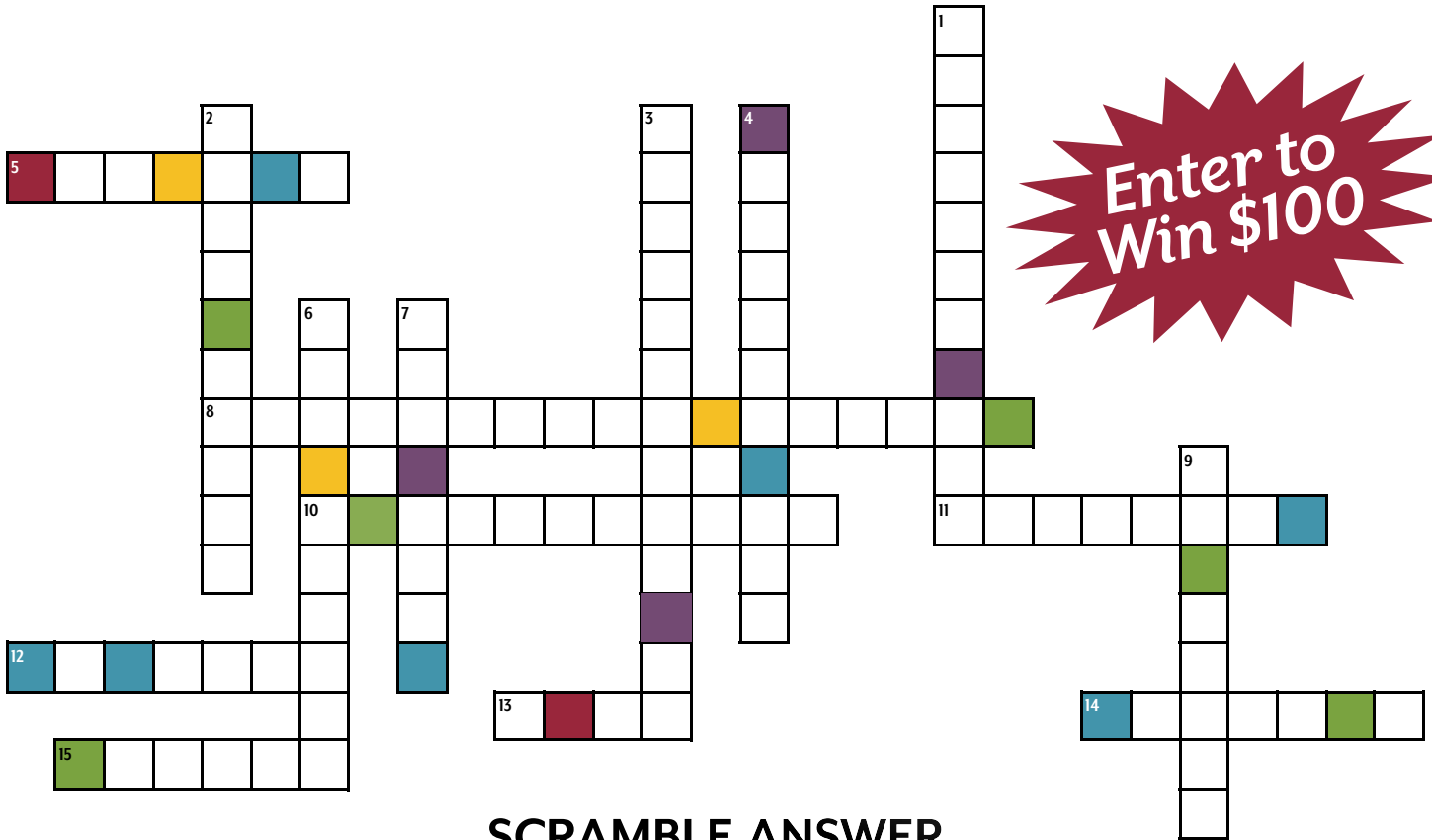
Douglas, Sanborn

Towns Served Individual: Loomis

Towns Served Bulk: Mount Vernon, Letcher

RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

NATIONAL PARKS



SCRAMBLE ANSWER



Across

- 5. Forest of giants
- 8. Named for a president
- 10. The Colorado River cuts through this deep gorge
- 11. Located in the Sierra Nevada mountains
- 12. Includes the Chisos mountain range and

the Chihuahuan Desert in Texas

- 13. Known for its steep red cliffs in southern Utah
- 14. Montana's Mountain park
- 15. Utah park known for its sandstone structures

Down

- 1. Named for its reputation of extreme heat and barren landscape
- 2. Named for its twisted bristly trees
- 3. Spans the Continental Divide in Colorado

- 4. Home of 'Old Faithful'
- 6. Protects the southern 20% of Florida's tropical wilderness
- 7. Scenic South Dakota park
- 9. SD park known for its vast underground calcite formations

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 July 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 Lynn Frey from Perkins County Rural Water who had the correct phrase of "big dreams start in a small town" for April 2024.



KINGBROOK

RURAL WATER SYSTEM

ANNUAL DRINKING WATER QUALITY REPORT

January 1, 2023 – December 31, 2023

INTRODUCTION

The purpose of this report is to inform you of the quality of the drinking water that we provide. We are required by the U.S. Environmental Protection Agency (EPA) to test our water frequently for the presence and concentrations of possible contaminants. The South Dakota Department of Agriculture and Natural Resources (DANR) reviews all our testing data to ensure that 1) we are providing safe drinking water to our customers, and 2) we are complying with EPA regulations. Our constant goal is to provide you with a safe and dependable supply of drinking water.

Once again, Kingbrook Rural Water System has supplied another year of safe drinking water to the public it serves and has been awarded the Secretary's Award for Drinking Water Excellence by the South Dakota Department of Agriculture and Natural Resources. 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.

We want you to fully understand the information contained in this report. If you have any questions, please contact:

*Heath Thompson, General Manager
Kingbrook Rural Water System, Inc.
P.O. Box 299, Arlington, SD 57212
Phone: 800-605-5279 or 605-983-5074*

WE WELCOME YOUR INPUT

Kingbrook Rural Water System employees work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

If you want to learn more, please attend any of our regularly scheduled Board meetings held at 7:00 P.M. on the third Monday of every month at our office in Arlington. (Please call the office for any scheduling changes.)

Please call our office if you have questions at 800-605-5279 or 605-983-5074 if you wish to attend a meeting.

WHERE DOES OUR WATER COME FROM?

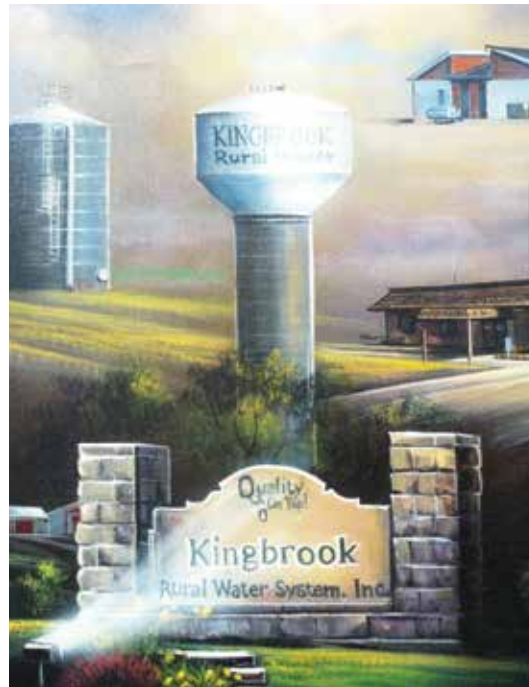
Our water system is separated into three geographic areas, each of which has its own treatment plant and water source from groundwater drawn from wells. Phase I, located north of Bruce, and Phase III, located near Chester, both draw from the Big Sioux Aquifer; and Phase II, located north of DeSmet, draws from the East Fork of the Vermillion Aquifer.

Wellhead protection areas have been defined for each of our wellfields. DANR has performed an assessment of our source water and they have determined that the relative susceptibility rating for Kingbrook Phase I is low and for Kingbrook Phase II and Kingbrook Phase III is medium. For more information about your water, please call our office at 605-983-5074.

We are pleased to report that your drinking water is safe and meets or exceeds all Federal and State requirements.

WHY DO WE TEST OUR DRINKING WATER?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. The water we pump from our wells is from underground aquifers, supplied by water that originally comes from the surface, and very slowly seeps down into the aquifer. 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.

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

INFORMATION PROVIDED BY THE EPA

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

DEFINITION OF TERMS

The following definitions are provided to assist you in understanding our water quality test results presented in the tables on page 15.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/l) - a measure of radioactivity.

Positive Samples Per Month (PSPM)

Action Level (AL) - the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Contaminant Level Goal (MCLG) - The "Goal" is 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.

N/A - Not Applicable

ND - Not Detected

***Optimum Fluoride Level - 0.7*

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 microbiological contaminants are available from the 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. Kingbrook Rural Water 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>.

WHAT TREATMENT DOES OUR WATER RECEIVE?

After we pump the water from our wells, we filter the water to remove iron and manganese. Although the iron and manganese in our water does not pose a health concern, these two naturally occurring substances can cause the water to appear brown or rust-colored and can stain clothes and plumbing fixtures. We, therefore, treat our water to remove these substances.

Once the iron and manganese are removed, chlorine is added to eliminate bacteria and fluoride is added to protect against tooth decay. The finished water is pumped into an initial storage tank called a clearwell, from there into the distribution system, and ultimately to your home.

DETECTED CONTAMINANTS AND WATER QUALITY DATA

The table at the end of the report list the drinking water contaminants we detected during the 2023 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, 2023. 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. In these cases, where the last sample was taken prior to 2023, the sample date has been provided.

Kingbrook Rural Water System participated in the EPA's UCMR5 sampling program in 2023 and this report is being used as a public notice. Any detected contaminants have been included in this report.

SUMMARY OF 2023 WATER QUALITY RESULTS

Last year, we were required to test for various drinking water contaminants. Only a very small number of these, as shown in the table, registered a detectable quantity. Additionally, in each case, the detected quantity fell far short of the maximum limit. If a specific contaminant is not shown on the table, it is because the analytical results indicate the sample tested below the detection level.

Alpha Emitters are substances that naturally occur in rocks and soil. The levels detected are well below those allowed by the EPA.

Arsenic occurs as a result of natural deposits or from runoff from orchards. The levels detected are well below those allowed by the EPA.

Barium occurs as a result of erosion of natural deposits and was detected in the Big Sioux and Vermillion Aquifers at an insignificant quantity.

Chromium occurs as a result of erosion of natural deposits and was detected at levels dramatically lower than the highest level allowed by EPA.

Fluoride is naturally present at low levels in our water. In addition, we add fluoride to the water to promote healthy teeth.

Nitrate levels in our water in 2023 were found at amounts consistent with our area land use and significantly below the highest level allowed by EPA.

Lead and Copper levels are normally a function of home plumbing fixtures. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes throughout the system as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may want to have your water tested. Additional information is available from the Safe Drinking Water Hotline at 1-800-426-4791.

Selenium is a naturally occurring substance found in the soil and rocks of this region. Detected quantities were significantly below maximum allowable levels.

Total Trihalomethanes (TTHM) and Haloacetic Acids are chemicals produced by the chlorination of drinking water. Detected levels found were well below the highest level currently allowed by EPA.

2023 WATER QUALITY TEST RESULTS

Kingbrook Phase I – Bruce Water Treatment Plant

Substance	Sample Date	Highest Level Detected	Range of Detection	Ideal Goals (MCLG)	Highest Level Allowed (MCL)	Units	Likely source of substance
Inorganic Substances							
Fluoride	11/14/23	0.83	0.5-0.83	<4	4	ppm	Water additive to promote strong teeth
Nitrate (as Nitrogen)	3/25/23	3.2	NA	10	10	ppm	Fertilizer runoff; leaking septic tanks; erosion of natural deposits
Antimony	11/8/21	0.2	ND-0.2	6	6	ppb	Discharge from petroleum refineries; fire retardants, ceramics; electronics; solder
Arsenic	11/8/21	1.0	NA	0	10	ppb	Erosion of natural deposits, runoff from orchards
Barium	11/4/21	0.092	0.071-0.092	2	2	ppm	Erosion of natural deposits
Chromium	11/4/21	1.84	0.87-1.84	100	100	ppb	Erosion of natural deposits
Selenium	11/4/21	0.9	0.67-0.9	50	50	ppb	Erosion of natural deposits

Unregulated Substances

Lithium	4/10/23	25.2	25.2-25.25	NA	NA	ug/l	
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Water Quality Tests taken throughout the Distribution System

Haloacetic Acids	8/23/23	13.8	NA	0	60	ppb	By-products of drinking water chlorination
Total Trihalomethanes	8/23/23	27.7	NA	0	80	ppb	By-products of drinking water chlorination

Radioactive Substances

Alpha emitters	6/15/21	4	ND-4	0	15	pCi/l	Erosion of natural deposits
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Water Quality Tests taken at the Consumer's Tap Located within Kingbrook Phase I

Substance	Sample Date	Level Detected (90 th Percentile)	# of Samples above the AL	MCLG	MCL	Units	Likely source of substance
Copper	8/2/21	0.2	1	0	AL = 1.3	ppm	Corrosion of household plumbing systems
Lead	7/28/21	2.4	0	0	AL = 15	ppb	Corrosion of household plumbing systems

Kingbrook Phase II – De Smet Water Treatment Plant

Substance	Sample Date	Highest Level Detected	Range of Detection	Ideal Goals (MCLG)	Highest Level Allowed (MCL)	Units	Likely source of substance
Inorganic Substances							
Fluoride	9/11/23	0.86	0.62 - 0.86	<4	4	ppm	Water additive to promote strong teeth
Nitrate (as Nitrogen)	6/14/23	<0.2	NA	10	10	ppm	Fertilizer runoff; leaking septic tanks; erosion of natural deposits
Arsenic	11/3/21	1.0	NA	0	10	ppb	Erosion of natural deposits, runoff from orchards
Barium	11/3/21	0.027	NA	2	2	ppm	Erosion of natural deposits
Chromium	11/3/21	2.53	NA	100	100	ppb	Erosion of natural deposits

Water Quality Tests taken throughout the Distribution System

Haloacetic Acids	8/23/23	16.2	N/A	0	60	ppb	By-products of drinking water chlorination
Total Trihalomethanes	8/23/23	39.8	N/A	0	80	ppb	By-products of drinking water chlorination

Water Quality Tests taken at the Consumer's Tap Located within Kingbrook Phase II

Substance	Sample Date	Level Detected (90 th Percentile)	# of Samples above the AL	MCLG	MCL	Units	Likely source of substance
Copper	8/4/21	0.3	0	0	AL = 1.3	ppm	Corrosion of household plumbing systems
Lead	8/1/21	3.9	0	0	AL = 15	ppb	Corrosion of household plumbing systems

Kingbrook Phase III – Chester Water Treatment Plant

Substance	Sample Date	Highest Level Detected	Range of Detection	Ideal Goals (MCLG)	Highest Level Allowed (MCL)	Units	Likely source of substance
Inorganic Substances							
Fluoride	9/12/23	0.85	0.46 - 0.85	<4	4	ppm	Water additive to promote strong teeth
Nitrate (as Nitrogen)	6/14/23	0.5	N/A	10	10	ppm	Fertilizer runoff; leaking septic tanks; erosion of natural deposits
Arsenic	5/17/22	2.0	NA	0	10	ppb	Erosion of natural deposits, runoff from orchards
Barium	5/17/22	0.032	NA	2	2	ppm	Erosion of natural deposits
Chromium	5/17/22	0.43	NA	100	100	ppb	Erosion of natural deposits
Selenium	5/17/22	0.54	NA	50	50	ppb	Erosion of natural deposits

Water Quality Tests taken throughout the Distribution System

Haloacetic Acids	8/23/23	18.7	N/A	0	60	ppb	By-products of drinking water chlorination
Total Trihalomethanes	8/23/23	38.2	N/A	0	80	ppb	By-products of drinking water chlorination

Radioactive Substances

Alpha emitters	7/5/22	3	ND-3	0	15	pCi/l	Erosion of natural deposits
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Water Quality Tests taken at the Consumer's Tap Located within Kingbrook Phase III

Substance	Sample Date	Level Detected (90 th Percentile)	# of Samples above the AL	MCLG	MCL	Units	Likely source of substance
Copper	7/23/22	0.5	0	0	AL = 1.3	ppm	Corrosion of household plumbing systems
Lead	7/13/22	2.6	0	0	AL = 15	ppb	Corrosion of household plumbing systems



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WATER MATTERS



NITRATES IN WELL WATER - PART 1

Nitrate is a compound that occurs naturally and also has many human-made sources. Nitrate is found in some lakes, rivers, and groundwater in South Dakota. When nitrate is found in South Dakota groundwater, it is usually at very low concentrations. However, some groundwater has nitrate concentrations that present a health risk – especially for babies. Unfortunately, you cannot taste, see, or smell nitrate in your water.

Safe levels

Drinking water with concentrations of nitrate (measured as nitrate-nitrogen) below 10 milligrams of nitrate per liter of water (mg/L) is considered safe for everyone in your family. The U.S. Environmental Protection Agency, and State of South Dakota, drinking water standard for nitrate in public water supplies is 10 mg/L. Public water supplies (PWSs), such as your regional water system, are prohibited from providing water to its customers if nitrates exceed 10 mg/L. However, if you are using water from a non-public source (private well), monitoring nitrate levels is up to you.

Health risks

Consuming too much nitrate can affect how blood carries oxygen and can cause methemoglobinemia (also known as blue baby syndrome). Bottle-fed babies under six months old are at the highest risk of getting methemoglobinemia. Methemoglobinemia can cause skin to turn a bluish color and, left untreated, can result in serious illness or death.

Only recently has scientific evidence emerged to assess the health

impacts of drinking water with high nitrate on adults. A growing body of literature indicates potential associations between nitrate/nitrite exposure and other health effects such as increased heart rate, nausea, headaches, and abdominal cramps. Some studies also suggest an increased risk of cancer, especially gastric cancer, associated with dietary nitrate/nitrite exposure, but there is not yet scientific consensus on this question.



To learn more about nitrate and methemoglobinemia, you can view or download an information sheet prepared by the Minnesota Department of Health on Nitrate and Methemoglobinemia at: www.health.state.mn.us/communities/environment/water/docs/contaminants/nitratmethemog.pdf

Test your well water

If you use a private well for drinking water, even if only occasionally, it is recommended to have the water tested for nitrate concentrations annually. You are responsible for keeping your well water safe and testing it as needed. The South Dakota Health Department's State Public Health Laboratory offers water quality testing services. Information can be found at: doh.sd.gov/laboratory/environmental-testing, along with a link to other certified water testing laboratories. Contact these laboratories to get sample containers and sampling instructions.

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