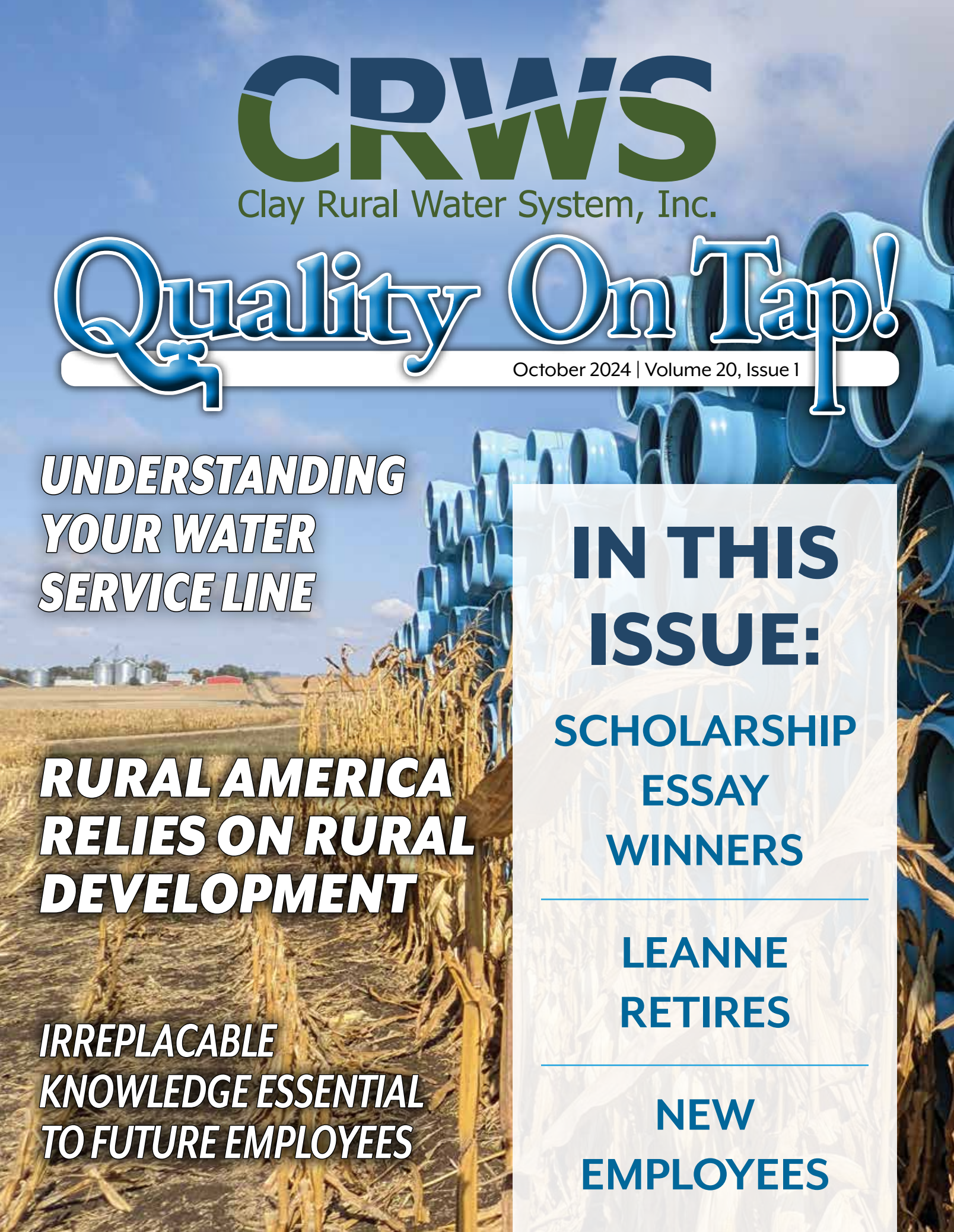

CRWS

Clay Rural Water System, Inc.

Quality On Tap!

October 2024 | Volume 20, Issue 1

UNDERSTANDING YOUR WATER SERVICE LINE

RURAL AMERICA RELIES ON RURAL DEVELOPMENT

IRREPLACABLE KNOWLEDGE ESSENTIAL TO FUTURE EMPLOYEES

IN THIS ISSUE:

FROM THE MANAGER

Steve Muilenburg
Manager, Clay Rural Water System, Inc.

Clay Rural Water System has definitely faced our share of challenges in 2024. We are currently trying to wrap up the pipeline portion of Phase I, and we are preparing to advertise for bids to complete two new ground storage reservoirs and a new booster station. We plan to award this bid within the next few months. Phase II, which is a new water treatment facility, has been in the planning stages since early spring. This is quite a detailed process that will take most of 2024 to complete. Our goal is to be able to start construction of the new plant next year, with a completion timeline of 18-24 months. That would make the current water plant around 48 years old once the new plant is completed. Our current plant is starting to show its age, with repairs becoming more frequent, and production limits decreasing. As we fight these battles, CRWS staff do, and will continue to do, a great job keeping this system operational while producing a fine quality product for our customers.

While we try to wrap up the Phase I projects and get started on Phase II, it seems Mother Nature likes to remind us of just how vulnerable we really are. Even though it is October, we as a rural water system are still recovering from the aftermath of late June rains that overwhelmed the Sioux and Vermillion Rivers in eastern South Dakota. Even with many roads and bridges still closed due to flood damage, the day-to-day operations of a rural water system must go on. Even with our Wakonda Water Treatment facility sitting on a hill along HWY 19, some staff members that live as little as 8 miles away had to travel some 53 miles around flooded roads just to get to the office. As much of a nuisance as it may have been for our team here at CRWS, it does not compare at all to what residents in Elk Point, Jefferson and North Sioux City area had to endure. To date, there are still residents left without homes or even a sense of where to turn after such devastation. Fortunately, there are still many people in our communities that have small town values and a willingness to help those in need. It is impressive to witness these people in action and makes you proud to be part of such communities. When CRWS received a call for help from North Sioux City, our staff, along with the help of a great local contractor, were able to get a temporary service connection installed on the west side of McCook Lake. This connection was crucial to the homes on the west side since virtually all water, power and gas infrastructure were destroyed as the flood waters cut a massive trench through North Shore Drive into McCook Lake. Historical events such as this that cause so much devastation and destruction will be in the hearts and minds of many for years to come.

CRWS
Clay Rural Water System, Inc.

BOARD OF DIRECTORS

Randy Huot, President
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Patricia Manning, Secretary/Treasurer
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Pam Lunning, Controller
Rob Ganschow, Chief Treatment Plant Operator
Andy Ganschow, Chief Distribution Operator
Phil Iverson, System Operator
Lane Severson, System Operator
Jennifer Badke, GIS Tech

CONTACT INFORMATION

30376 SD Hwy 19
Wakonda, SD 57073
Phone: (605) 267-2088
Fax: (605) 267-2085
email: office@clayruralwater.com

MISSION STATEMENT

The mission of the Clay Rural Water System is to provide high quality water service to the consumers of the corporation at the lowest possible cost consistent with sound business practice.

Quarterly Calendar

SEPTEMBER 24

Monthly Board Meeting, 7:00 p.m., System Office

OCTOBER 22

Monthly Board Meeting, 7:00 p.m., System Office

NOVEMBER 11

Office Closed in Observance of Veteran's Day Holiday

NOVEMBER 25

Monthly Board Meeting, 7:00 p.m., System Office

NOVEMBER 28 & 29

Office Closed for Thanksgiving Holiday

LEAK REWARD

Members who report a water leak on one of the system pipelines will receive a $50 leak reward. With over 1,350 miles of pipeline in the distribution system, members can play a key role in assisting system personnel in locating water leaks.

– NOTICE –

CRWS utilizes a remote meter reading application to facilitate customer billing. This application is not available to the customers. CRWS does not monitor the water usage data for customers to determine if there is an unreasonably large water usage by any one customer. The customer shall not rely upon the remote meter reading application, utilized by CRWS for billing purposes, as a substitute for their own diligence in monitoring their water usage. The customer is responsible for all water loss on the customer's side of the meter, whether or not detected by the remote meter reading application. The customer is required to make a physical inspection of the customer's own system on a regular basis to avoid unintended water loss.

CRWS
Clay Rural Water System, Inc.

TRIVIA CHALLENGE

Three winners will be drawn from all that answer these trivia questions correctly and will each receive a $10 water credit. Last issue winners were Rickie Mork, Ron Peterson, & Louise Gregoire.

1. **What Year was the song "Monster Mash" released?**
   a. 1962 b. 1965 c. 1968
2. **What Year did "A Charlie Brown Thanksgiving" debut on television?**
   a. 1971 b. 1973 c. 1975
3. **In total, how many gifts were given in the song "Twelve Days of Christmas"?**
   a. 78 b. 144 c. 364

Do We Have Your Number?

Please make sure that Clay Rural Water System has a current phone number for you. We periodically need to call members for water outages, scheduled maintenance, etc. and quite often we find we do not have a current phone number.

You can reach us at **605-267-2088** or via email at **office@clayruralwater.com**.

PAYMENT OPTIONS

We offer a variety of ways to pay your water bill:

1) Cash, check, or money order
2) Automatic bank deduction – no charge to customer
3) Online – www.clayruralwater.com – click on Customer Portal (fees do apply)
4) Credit/Debit Cards – fees apply

Call our office for more details on any of these options at 605-267-2088.

CONGRATS LEANNE ON YOUR RETIREMENT!

Clay Rural Water would like to congratulate Leanne Brown on her retirement! Leanne celebrated her last day with a fun party at the office where the staff enjoyed cake, burgers & brats.

Leanne was a favorite among customers and staff, and she will be missed dearly.

Thank you, Leanne! We are grateful for your nine years of service at CRWS!

WELCOME JENNIFER & ZACH!

CRWS would like to welcome two new team members to the staff. Jennifer Badke and Zach Moydell.

Jennifer joined CRWS in March 2024 as our GIS Tech. Zach joined the team in late April 2024 and filled the accounting position left open by Leanne's retirement. Welcome to the team!

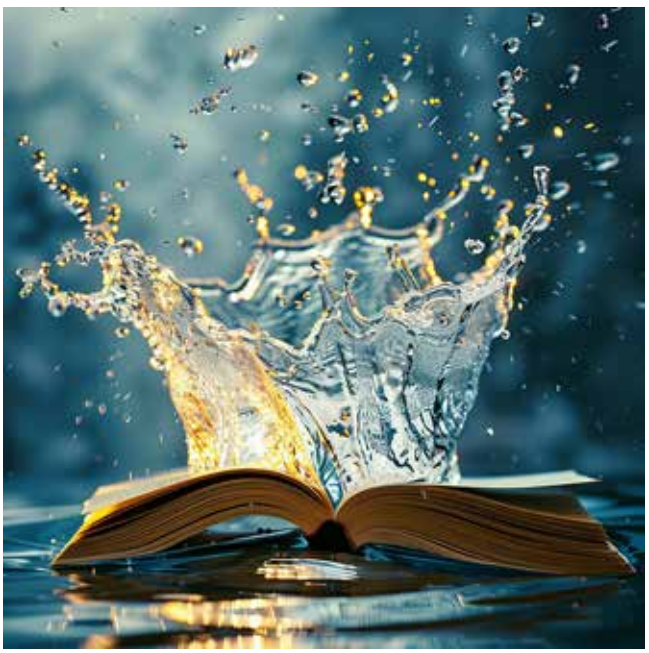
DID YOU KNOW...

One of the best ways to get information pertaining to emergency shut offs, outages, or scheduled maintenance is to check our Facebook page or website. We diligently update our website and Facebook page with up-to-date information when we have unexpected situations arise, as well as any scheduled repairs we may have. So, search Clay Rural Water System on Facebook and like our page so you can stay informed! And be sure to check out our website at www.clayruralwater.com.

IRREPLACEABLE KNOWLEDGE ESSENTIAL TO FUTURE EMPLOYEES

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

We've probably all heard the statement that "everyone is replaceable" at some point in our careers. The part that can be true is that an employer can physically hire someone else to do a particular job. However, when replacing someone with years or decades of knowledge and experience, finding a "warm body" to fill that position still leaves the employer with a huge loss and an uphill battle. That's why passing some of that extensive knowledge down to future generations is vital before it is too late.



The state's rural water industry faces significant workforce challenges, including an aging workforce, skill gaps, and difficulty attracting and retaining talent. It is estimated that the water industry is expected to lose between 30-50 percent of its workforce to retirement in the next ten years. Many of these professionals have worked at the same utility for the majority of their careers and have a plethora of valuable "irreplaceable" institutional knowledge. The National Rural Water Association (NRWA) is helping address the need to train the next generation of skilled workers for the water industry through its Apprenticeship Program. The Apprenticeship Program aims to pair an apprentice with a mentor at a municipality or water system to help incorporate and pass on the training needed for that apprentice to become a successful Water or Wastewater System Operations Specialist. There are 36 states with registered apprenticeship programs, and South Dakota is one of three states with programs currently under development. Nationwide, there are over 500 registered apprentices, with 540 participating employers as part of the Apprenticeship Program. More than 220 apprentices nationwide have completed the program so far, according to the NRWA, with the first apprentice graduating in 2019 as part of the Alliance of Indiana Rural Water's Apprenticeship program.

The Apprenticeship Program takes approximately two years to complete. The program includes four thousand hours of on-the-job training and 288 hours of related technical instruction. The U.S. Department of Labor recognizes the NRWA Apprenticeship Program. NRWA provides the guideline standards of apprenticeship to state Rural Water Associations, like the South Dakota Association of Rural Water Systems (SDARWS), for their approval and adoption. 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 program's functions.

The SDARWS has a website dedicated to information regarding careers in the water industry, including the Apprenticeship Program. This website will be updated as the Association moves through the process of getting the program registered and implemented. You will want to visit sdarws.com/WaterWorks to stay current as this exciting new opportunity for the state's water and wastewater industry takes shape. As the SDARWS Apprenticeship Coordinator, I am also happy to visit with potential employers or apprentices who are interested in or have questions regarding what South Dakota's Apprenticeship Program will entail. I can be contacted via e-mail at sbergheim@sdarws.com, office phone at 605-556-7219, or cell phone at 605-501-9208.

Workforce development is critical to maintaining the quality and reliability of water services across the state. Continued investment and collaboration will ensure South Dakota's rural communities can access safe and clean drinking water, supporting residents' health and well-being.

UNDERSTANDING YOUR WATER SERVICE LINE:

From the Water Utility Main to Your Home

By Jim Vavra, Technical Assistance Training Specialist – South Dakota Association of Rural Water Systems

For many of you, the Lead Service Line Inventory mailer has probably come in the mail and has been or needs to be filled out. What most people don't realize is that not only is the customer side of your line needed but also the supplier side of the line needs to be determined as well. With communities and rural water systems having different ordinances it can become confusing as to which party owns what when it come to the service line. In this article we are not going to dive into who owns what or who is responsible for each piece of the line, but we are going to discuss how the water gets from the city water main into your residence.

To get from the water main to the house usually requires a few basic parts and pieces, some municipalities and rural water systems will differ with this but we are going to look at the very basic parts of the service line to a typical residence.

The first part of the service line is what is known to the water industry as a saddle, and no it is not the kind you put on your horse, but it does as the name applies. The saddle is a fixture that wraps around the water main to start the connection. There are several variations of saddles but they all perform the same basic job. The saddle wraps around the main and clamps down to make a water tight seal. The saddle is the piece that houses the corporation stop which is the next part of the service line system and we will discuss its job next.

The corporation stop is the second piece of the puzzle and is basically a ball valve that is attached to the saddle. The purpose of the corporation stop is to allow installation of the service line so that when the service line is being installed there is no interruption to other services on the water main. After the corporation stop is attached to the saddle, a special tool can be used to drill a hole into the water main so very minimal water will be lost during installation, after the hole is drilled the tool is taken out and the corporation stop is shutoff until more of the water service is installed.

Gooseneck

Saddle

Corporation Stop

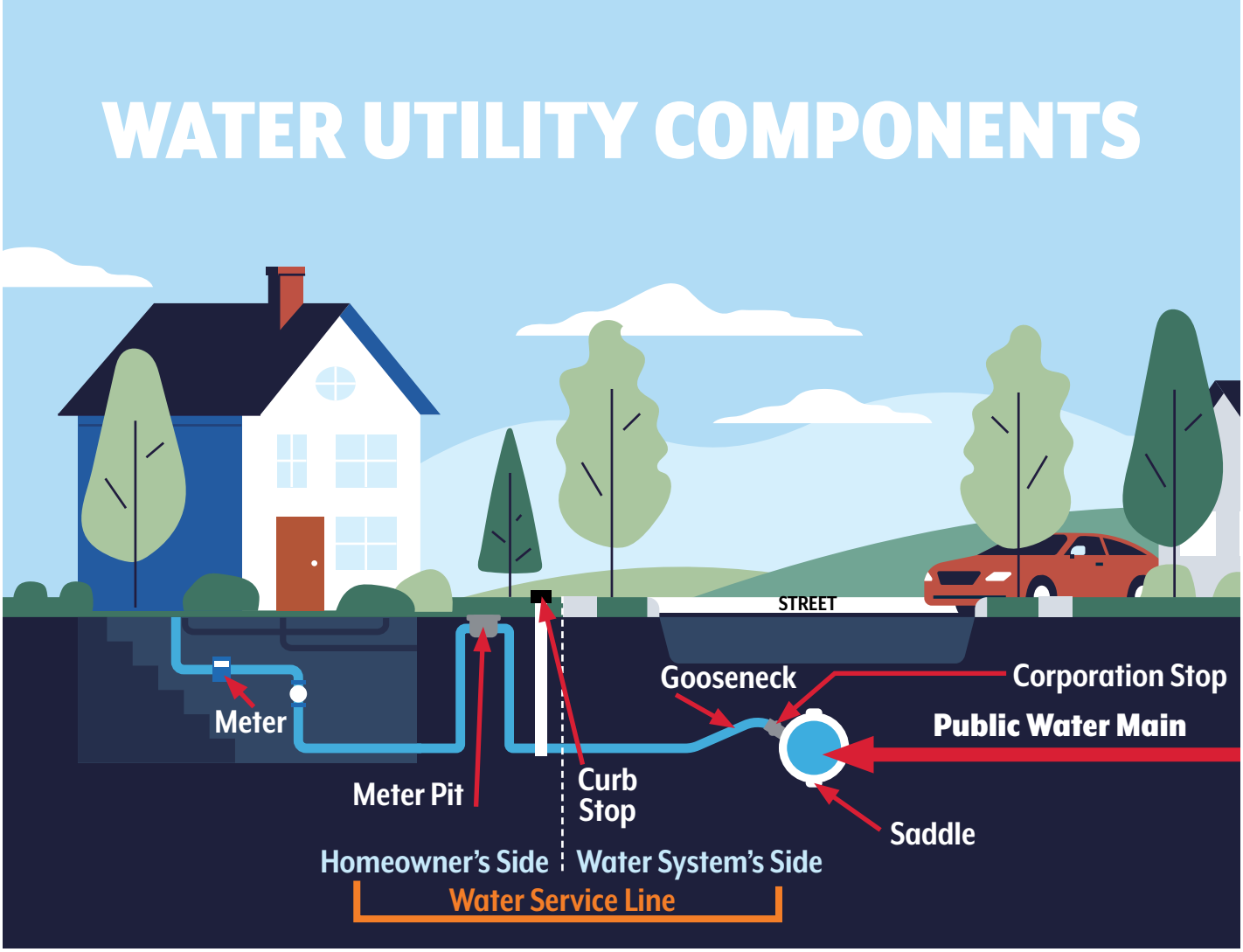
Curb Stop

Meter Pit (Outside)

Meter Pit (inside)

Meter

Service Line



Continuing on from the corporation stop you start getting into the actual water service line, and this line can be made of different materials and can be several different sizes depending upon the demand for the water service. This line is where the service side of the Lead Service Line Inventory starts for the water system supplying your water.

After you have some of the pipe laid in the ground the next normal piece of the puzzle for the water service line is the curb stop and curb stop box. The curb stop is an inline ball valve, usually within the property owners lawn. The piece which you may see sticking up in your yard is called the curb stop box, this is attached to the actual curb stop that is in the ground and what gives an operator access to be able to turn the valve on and off if the need arises.

After the curb stop is usually some type of pipe that either leads into a meter pit or into the residence. Depending again on ordinances and differing municipality codes and rural water systems, you will either have a meter pit or a meter that is in the residence somewhere before any water is used in the residence. Meter pits are commonly found out in rural water systems or in residences that are hard to access to install a meter.

A meter pit is a tube that goes in the ground and like its name suggests, is basically a pit for the water meter to sit in and is deep enough that it will not freeze in the winter time. To access the meter in the pit, there are coils of water line in the pit in the very bottom. This allows for the meter to be pulled up and worked on if needed. There is also typically a valve of some kind in the pit to shut water off if needed as well.

If you don't have a meter pit, then your next stop is into the house with the pipe from the curb stop. Just like from the main to the curb stop, this can be a variation of types of pipe and size of pipe into the house. Now this piece of pipe is what is considered the consumer owned portion of service line and is what needs to be identified for the Lead Service Line Inventory.

When the pipe finally enters the house, and not having a meter pit, you will find a spot for a meter. This is typically 1-2 feet within the house before any water is used in the house. They can be several different sizes and shapes, and even have very different technology from brand to brand in them.

This is a very broad look at a typical water service hookup, every municipality, rural water system, privately owned system, or any combination can have and will have a slightly different installation process and probably won't find any two the same.

RURAL AMERICA RELIES ON RURAL DEVELOPMENT

NRWA

USDA RURAL DEVELOPMENT WATER PROGRAMS PROTECT PUBLIC HEALTH

PUBLIC HEALTH FOR RURAL COMMUNITIES

Water is a vital resource and is required for all aspects of daily life, including drinking, cooking, washing, and flushing. In order to protect public health, all Americans should have access to this resource through reliable infrastructure.

Rural America's 46.1 million residents deserve safe drinking water and clean wastewater treatment just as much as urban or metropolitan residents. While access to basic water infrastructure may be taken for granted by many American citizens, it still is not a reality for approximately 146,000 rural households.

Over the last 70 years, through billions of dollars in financial assistance through USDA RD, the U.S. has made great advancements in the standard of living in rural America. Millions now have access to safe drinking water that their parents did not have. Thousands of rural communities now have modern wastewater systems, eliminating millions of failed septic tanks, cesspools, straight pipes, and worse.

For the 27,500 public elementary and secondary schools, approximately 9.8 million students, and 1,810 hospitals in rural America, public health would be immediately jeopardized without safe drinking water and clean wastewater treatment.

Even for established water and wastewater systems, new regulations such as EPA's recent PFAS and Lead and Copper Rules results in costly operational and infrastructure upgrades. USDA RD WEP ensures rural America and its communities have access to funding when they are faced with making these upgrades to remain in compliance.

Today's Congressional policies and funding decisions are jeopardizing the public health of every community in rural America. Budget cuts will leave USDA WEP unable to accomplish its mission. WEP is instrumental in helping rural America ensure public health is protected for all rural people.

USDA RURAL DEVELOPMENT WATER & ENVIRONMENTAL PROGRAMS (WEP)

Since 1972, USDA RD WEP has been the consistent source of support for rural communities to complete necessary upgrades to their water and wastewater facilities.

During 2023, WEP obligated more than $1.6 billion in loans and grants, with 73.5% of projects addressing a health and sanitary issue.

The projects funded support more than 1.1 million rural residents, including approximately 28,326 new service connections.

TELL CONGRESS NOW

KEEP RURAL AMERICA STRONG!

Scan the QR Code to learn more about how you can help keep Rural America Strong!

THE IMPACT

WEP PROVIDES WATER TREATMENT PLANT FOR EAGLE BUTTE, SOUTH DAKOTA

IMPACT IN ACTION

Being located in a very rural area brings many challenges for a water company. The challenges are amplified when the area is also one of the most economically disadvantaged areas of the country.

The Mni Wasté Water Company is a tribally chartered entity with the Cheyenne River Sioux Tribe serving 14,000 members in the Dewey, Meade, and Perkins counties on the Cheyenne River Lakota Reservation in western South Dakota. The company currently processes an average of one million gallons of water per day, with peak demand near two million gallons daily. But Director Leo 'Earp' Fischer said Mni Wasté is capable of processing more than four-point-four-million gallons per day.

This increased capacity and ongoing updates have been made possible through the help of USDA Rural Development. Fischer said that Rural Development's nearly $90 million investment in the Eagle Butte area through the Water and Environmental Program was vital to Mni Wasté's success.

Mni Wasté continues to update existing pipe and extend to new areas to deliver quality water to residents and businesses across the region. The system maintains 5.5 gallons of water in storage capacity and over four million gallons throughout service lines. The company manages more than 1,600 miles of pipe, delivering water to more than 1,600 customers across the reservation, with plans to extend from Highway 63 North to serve the town of Timber Lake. Future plans include upsizing lines to the west along Highway 212, and eventually providing bulk water to Perkins County Rural Water.

Fischer said Rural Development's programs have only gotten better over time, making them even more valuable to rural communities.

RURAL AMERICA DESERVES RURAL DEVELOPMENT

"We didn't have anywhere else to go. The programs offered by Rural Development have only gotten better over time, which makes it even more valuable to our rural communities."

- Leo 'Earp' Fischer, Mni Wasté System Manager

CALL TO ACTION

Fund Water Infrastructure - Stand Up for USDA Rural Development

Rural Development will continue to play a vital role in modernizing, preserving, and protecting rural America's infrastructure and public health. You can help secure its future today by signing the pledge and writing to your Congressional representatives today.

Providing adequate support and resources necessary to protect and enhance the environment, public health, sustainability of utilities, and economic vitality of rural America with clean, affordable, and safe water service is a primary responsibility for our federal elected officials.

Visit www.ruralwaterstrong.org to learn more.

AURORA BRULE RURAL WATER

Aurora-Brule (A-B) Rural Water System started as a steering committee of farmers in 1970 that were looking for a source of good quality drinking water for the rural areas of Aurora, Brule and Buffalo Counties. The communities and farms were using artesian water that was poor in quality, and most wells were 1,000 to 1,500 feet deep. The water system incorporated in May of 1972 and a five-member Board of Directors was established. The Board hired HWS Engineering of Lincoln, Nebraska to begin designing a water distribution system. The Board and engineers also went to work trying to find financing to begin construction.

Construction of Project I of A-B Rural Water System was bid in 1977 and construction began in 1978. This project consisted of 70 rural users and a 50,000-gallon storage tank south of Kimball.

After the pipelines were installed, Aurora-Brule purchased water from the Randall Community Water District to serve those 70 farms.

In 1980, the water treatment plant was built along the Missouri River south of Chamberlain. That same year, 325 miles of distribution pipeline was installed in western Brule County, which added another 300 farms and the towns of Pukwana and Kimball to the system. In the spring of 1981, the new water plant was put into operation, providing water to all 370 users on the system. Every year from 1982 through 1986, pipelines, pump stations and storage tanks were added to provide water to farms and communities in Aurora, Brule, Buffalo, Jerauld, Davison and Douglas Counties.

Throughout the 1990s and beyond, construction continued, adding storage tanks and customers throughout the system. In 2004, Aurora-Brule collaborated with Davison Rural Water System and Randall Water District to provide water to eastern Aurora County, including the town of Plankinton

The original water treatment plant was upgraded in 2006, increasing the plant capacity from 1.2 million gallons per day (MGD) to 2 MGD. In 2011 a new Missouri River intake system was installed upstream from the old intake. The system has 560,000 gallons of treated water storage at the water plant and seven storage tanks in the distribution system holding a total of over 2 million gallons of water.

The system's latest project was a capacity improvement project that was completed in the summer of 2024, which Included a new 400,00-gallon water storage tank, approximately 20 miles of pipelines ranging from 4" to 12" dia., and a new booster pumping station.

Manager Wade Blasius, who has been with the system for over 40 years, recalls, "Getting rural water was life changing for some, because their well water quality was very poor. Many of the farm women didn't have washing machines because of the hard rusty well water. They had to bring their laundry to a Laundromat in town."

Blasius said A-B Rural Water's service area continues to grow in numbers of people, businesses, and livestock requiring more water. The System Is continually working with their engineering firm, Banner Associates putting together projects to upgrade outdated equipment and to Increase water capacity to meet the demands.

AURORA BRULE RURAL WATER

Aurora-Brule's water source has always been the Missouri River. The treatment process utilizes water clarifiers and a chemical feed system to separate solids from the water, followed by gravity sand filtration. Chlorine and ammonia are added to generate chloramines for disinfection.

The Aurora-Brule System's main office is in Kimball and currently has 6 employees. The System provides quality drinking water to 1460 rural households, farms and pasture taps as well as the communities of Pukwana, Kimball, White Lake, Stickney, Plankinton, Gann Valley, and Aurora Center and to Aurora-Plains Academy and Grass Ranch Colony.

DIRECTORS:

Chairman – Ron Gillen

Vice Chairman – Tom Geppert

Secretary – Raymond Heath

Treasurer – Craig Swanson

Director – Paul Hettinger

STAFF:

General Manager – Wade Blasius

Bookkeeper – Mary Brainard

Plant Operator – Joe Priebe

Distribution Operator – Kraig Sinclair

Distribution Operator – Tim Pringle

System Operator – Rick Blasius

STATISTICS:

Hookups: 1,460

Miles of Pipeline: 1,000

Water Source: Missouri River

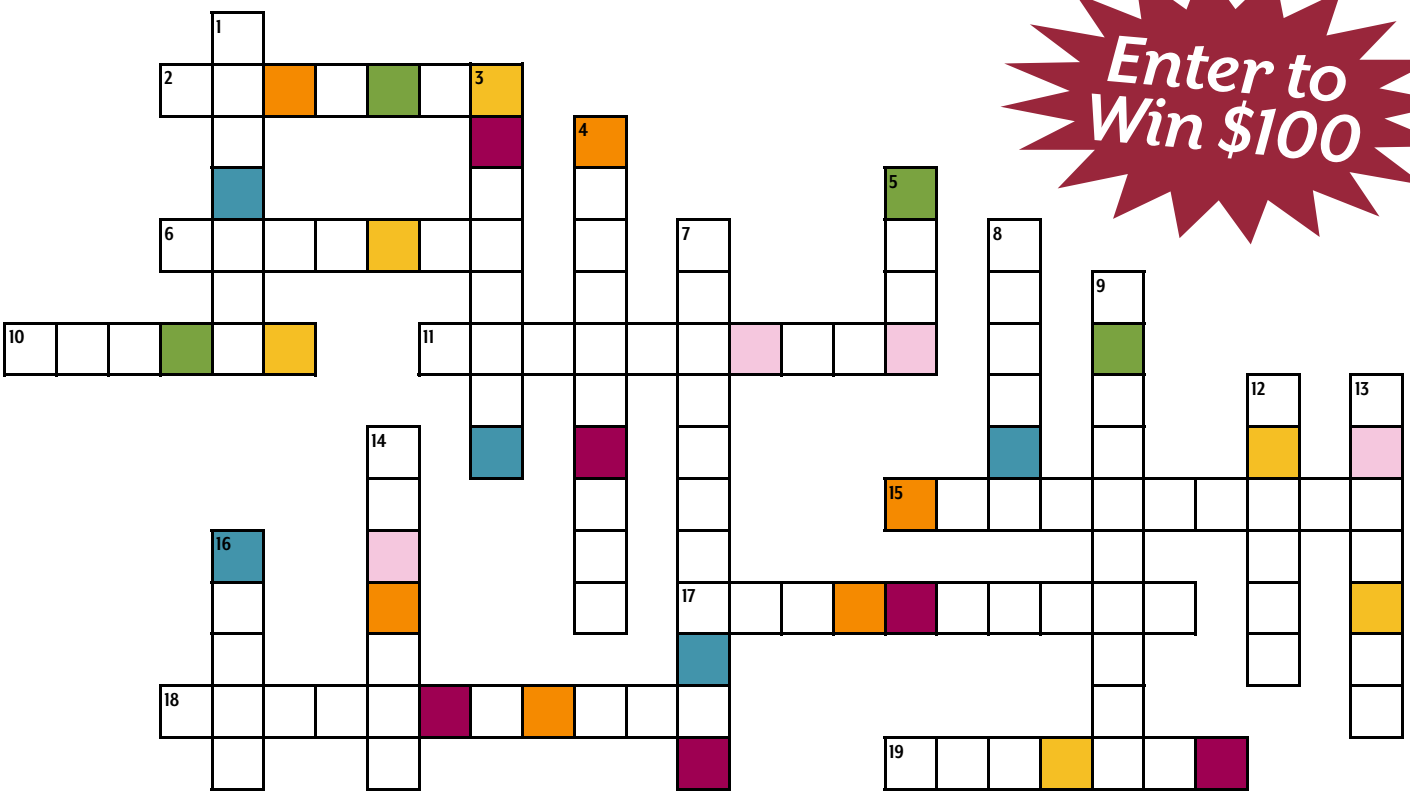
Counties Served: Aurora, Brule, Buffalo, and portions of Jerauld, Davison, and Douglas

Towns Served Individual: Aurora Center, Gann Valley

Towns Served Bulk: Kimball, Pukwana, Stickney, White Lake, Plankinton

RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

FAIR TIME



SCRAMBLE ANSWER

Across

2. Carnival workers
6. View antiques on wheels (two words)
10. Handmade wares
11. Sticky fruit on a stick (two words)
15. Alfresco alehouse (two words)
17. Hands on experience (two words)
18. A giant fairground revolution (two words)
19. Deep-fried frank

Down

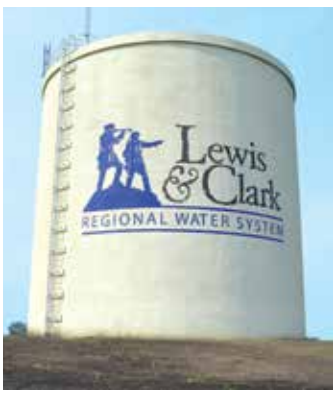
1. Miss State Fair, for one
3. Indoor animal exhibit (two words)
4. Seating arena
5. Amusement park attraction
7. Event with serious horsepower (two words)
8. Procession of floats
9. Temporary fairground lodging
12. Carnival area of a fair
13. It may fill a hall
14. Fair feature
16. Where the big "bucks" are

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 October 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 Dan Ziemer from BDM Rural Water who had the correct phrase of "nature is our biggest ally" for October 2024.

AT LONG LAST, LEWIS AND CLARK WATER ARRIVES FOR MADISON, SD



By Mackenzie Huber, South Dakota Searchlight – southdakotasearchlight.com

After waiting nearly 35 years, Madison is the last South Dakota city to connect to the tri-state Lewis and Clark Regional Water System. Local leaders, South Dakota's three congressmen and economic leaders gathered to celebrate the city's connection on Wednesday, August 21, 2024.

Madison's roughly 6,000 residents tapped into the system the beginning of August 2024.

The pipeline delivering the water covers 310 miles and spans southeastern South Dakota, southwestern Minnesota and northwestern Iowa. The roughly $700 million water system serves about 350,000 people.

The connection means better water quality in the city and economic development, because it increases water capacity, especially for agriculture surrounding Madison, said state Sen. Casey Crabtree, R-Madison.

"This just means a higher capacity for growth that otherwise wouldn't exist," Crabtree said.

South Dakota Sen. Mike Rounds told attendees of Thursday's celebration that "water development is economic development." He compared the Lewis and Clark system to the expansion of electricity and broadband in rural parts of the country.

"We're continuing to make it so that young people want to come back in and stay in the rural parts of our country — not just in the communities themselves but in the ag areas as well," Rounds said. "It would not happen if it wasn't for this type of development across multiple states."

The city will blend its existing water sources with pipeline water to ensure resiliency in supply during droughts and other disasters.

Sibley, Iowa, will be the last to connect to the pipeline. Lewis and Clark Executive Director Troy Larson expects to hook up to Sibley in the fall.

The final step in construction of the "base" water system is to build out a water treatment plant in Vermillion and reach a water capacity of 44.19 million gallons a day, Larson said.

The majority of the pipeline is funded through the federal government. It was supposed to be completed in 2016 but fell behind schedule because of poor funding, Larson said.

The pipeline is now planned to be completed in 2028, after receiving a $152.5 million boost from the 2021 Bipartisan Infrastructure Law. Bureau of Reclamation Deputy Commissioner Roque Sánchez represented the Biden administration at the celebration, touting the federal government's role in aiding the project and other rural investments across the country.

None of South Dakota's U.S. congressional delegates voted for the bill.

"While it took a long time because of federal funding to get where we are," Larson said, "the last few years we've been sprinting to the finish line."

Larson said Lewis and Clark started construction on the water system's first expansion in 2022, which is expected to be completed in 2030 and expand water capacity to 60 million gallons a day. The nonprofit aims to develop an expansion plan within the next one to two years.

The regional system has "paved the way" for similar water systems in the state and country, Larson said. Fledgling efforts in western, northern and eastern South Dakota are vying for Missouri River water for their communities.

It's to be expected, since cities and rural water systems across the state are maximizing their groundwater sources and realize other states are looking to tap into the Missouri River, Larson said. South Dakotans want to get there first.

"The only source of really untapped, reliable water in the state is the Missouri River," Larson said. "What we're all waking up to is that we need to fully utilize this resource we have."

Clay Rural Water SCHOLARSHIP WINNERS

The Clay Rural Water System Board of Directors has announced that Brody VanBeek, Joel Dahlhoff, and Andrew Sharples-Schmidt are recipients of the water systems annual scholarship program – the Jack and Arlene DeVany Scholarship Program.

BRODY VANBEEK graduated from Irene-Wakonda High School this spring and plans to attend SDSU this fall. He plans to major in Agronomy and minor in Business Ag. Brody is the son of Travis & Becky VanBeek.

Wakonda High School Senior, **ANDREW SHARPLES-SCHMIDT** is currently attending Southeast Technical Institute to complete the Construction Management degree and is taking an EMT training course. He is the son of Riva Sharples and Glen Schmidt.

JOEL DAHLHOFF, a recent graduate of Vermillion High School, is the son of Marie & Mark Dahlhoff. His future plans include attending Lake Area Aviation Maintenance Program and he looks forward to becoming a pilot and an engineer.

The Clay Rural Water System scholarship is named in honor of the water systems long-time attorney, the late Jack DeVany and his wife Arlene, a long-time educator. This is the 32nd year of the program.

As part of each application, each student was asked to submit an essay entitled, "What Rural Water Means to Me." Following are the essays of the three recipients.

What Rural Water Means to Me | Brody VanBeek

I have vivid memories, from when I was younger, of visiting my Great-Grandmother's house east of Wakonda and receiving a clear instruction: "Don't drink the water from the sink." The reason behind this caution was that the water source for the sink was well water. Consequently, my Great-Grandmother resorted to purchasing water from the grocery store for drinking purposes. However, the scenario changed significantly when Clay Rural Water connected my grandmother's house to their water network. This connection eliminated the need to depend on potentially unsafe well water, providing her with the assurance of a safe drinking water source. This experience summarizes, for me, a vital aspect of what rural water signifies – ensuring access to reliable and safe drinking water for communities.

Rural water's significance extends beyond human consumption; it is also crucial for the well-being of livestock. During a recent drought, the creek on our family farm that had been a longstanding water source for generations for our livestock dried up. Fortunately, our family had foreseen such situations and installed cattle drinkers in the pasture, connected to the Clay Rural Water network. This strategic decision prevented a potential crisis, as without this water access, we would have faced the challenging choice of leaving the pasture vacant or the laborious task of transporting water. For me, rural water represents not just dependability but also a constant and secure water source for safeguarding the core of our family farm and cattle livelihood.

In essence, rural water holds profound significance in my life, turning a childhood memory into an understanding of the crucial value of rural water access. It represents more than a utility; it is a dedication to ensuring the wellbeing of both humans and animals having a safe and secure water source they can consistently rely on.

What Rural Water Means to Me | Joel Dahlhoff

The rural water system has provided my family and I with clean running water for over 10 years and we have relied on the rural water system to keep our garden, livestock, and house with running water. I normally don't take for granted the impact rural water systems have when I pour water for the horses, but when my great relatives share stories of the artesian wells, gross-rusty water, and the issues of the water during their times, it shows the tremendous effort the rural water system put in to allow clean and reliable water.

When my uncle has a calf whose mother abandoned it, he sends the calf or calves out to our place. When we receive the calves, they are shivering, skinny, can't walk, and could die if not taken care of responsibly. So, keeping the water clean and free from diseases and bacteria is important in keeping the calves healthy. The rural water system has helped with the development of our young calves to grow healthy to the point when they are ready to go back to my uncle's farm, which helps my uncle to make a profit. The calves and our livestock mean a lot to my family, and we wouldn't be able to take good care of them if we didn't have Clay Rural Water.

If you don't have water, you must haul water. This winter our family's pressure reducing valve cracked. We were without water for 4 days and it was so miserable because one of those days it was -20 degrees and each day we had to haul water for the animals. When Clay Rural Water replaced our pressure reducing valve, it became so evident that the rural water systems are so instrumental for vital daily life.

What Rural Water Means to Me | Andrew Sharples-Schmidt

To be honest, I've never really spent much time thinking about the water that comes into my home. I guess you can say that I take it for granted. I drink a lot of water, and I'm always filling up my glass at the tap. I like the taste of the water that comes through the faucets in my home in Wakonda. My older brother recently returned from a mission trip to the Dominican Republic. There, they could not drink the water and had to rely solely on bottled water, even for tasks like brushing their teeth. I know there are many other countries in the world – and even some areas of the United States, like Flint, Michigan – where water quality is a concern, and the water cannot be consumed without boiling it. There are also places in the world where running water is not available in the home. In thinking about these places and imagining the hardships that unsafe drinking water and a lack of water creates, I am grateful to live in South Dakota where there is safe, plentiful, and good-tasting water always available, right from the tap.

Having reliable and safe water available to me and my family through the Clay Rural Water System allows us to do many things. First, we can cook with ease, using water from our faucet as an ingredient. I also see this at the nursing home where I am a Dietary Cook. Having safe water there saves a lot of time and money in food preparation, and aids in our ability to provide nutritious food for the residents. Additionally, having a reliable water source in the home helps keep my family healthy because running water in our home allows for sanitation and easier cleaning, which prevents the spread of diseases and illness. This is crucial for the nursing home as well as keeping the facility clean for the residents. Finally, having running water in the home is crucial for functioning toilets and bathrooms. Thank you to the Romans for inventing aqueducts! Without flushing toilets and showers, life would be very unpleasant.

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WATER MATTERS

AQUIFERS 101

For most South Dakotans, the water that comes out of your tap started out in the ground and has been drawn from something called an aquifer. As such, the importance of aquifers to all of us cannot be exaggerated, but just what are they?

WHAT IS AN AQUIFER?

An aquifer is a body of saturated rock from which water can be extracted in useful quantities. Aquifers must be both porous (have lots of open spaces in which water can be held) and permeable (able to let water move easily through it). In South Dakota, most aquifers consist of unconsolidated sand and gravel found along the course of current or former rivers and streams. In certain areas, layers of sandstone or fractured limestone are good sources of water. Rocks such as granite and quartzite are generally poor aquifers because they have a very low porosity. However, if these rocks are highly fractured, they make very good aquifers.

HOW DOES WATER GET IN AN AQUIFER?

Aquifers fill with water (rainfall, runoff, melting snow) that soaks into the ground. The amount of water in storage in the aquifer can vary from season to season and year to year. Ground water may flow through an aquifer at a rate of 1,000 feet per year or 5,000 feet per hour, depending on the permeability. But no matter how fast or slow, water will eventually discharge or leave an aquifer and must be replaced by new water to replenish or recharge the aquifer.

HOW DO WE GET WATER OUT OF AN AQUIFER?

Holes are drilled into the material that makes up the aquifer and a well is installed. Normally such water must be pumped to the surface, but in some cases the water will rise to the surface naturally (artesian aquifers). When water is pumped from a well, the water table (the top of the saturated part of the aquifer) is generally lowered around the well. Hydrologists call this a cone of depression. If water is pumped from a well faster than it is replenished, the water table is lowered and the well may go dry.

DEMONSTRATION - Take a clear glass jar and fill it with gravel. Now pour water slowly into the jar. Watch as the water fills in the spaces between the bits of gravel. A jar "full" of gravel can actually hold quite a bit of water. You have created an aquifer!

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