



Quality On Tap!

January 2023 | Volume 18, Issue 3

Quality
On Tap!

**FINANCIAL
SUSTAINABILITY
FOR WATER
UTILITIES**

**PFAS COST
RECOVERY
PROGRAM**

**WATER & WASTEWATER
OPERATIONS SPECIALISTS:
A WORKFORCE CRISIS**

A MESSAGE FROM THE PRESIDENT OF THE BOARD

Ron Gillen, President
South Dakota Association of Rural Water Systems



2023 ANNUAL TECHNICAL CONFERENCE

Our Annual Technical Conference is approaching fast, and the staff at South Dakota Rural Water are busy behind the scenes gearing up for the event which kicks off Tuesday, January 10th at the Best Western Ramkota in Pierre. The full agenda can be found on pages 3-4.

Online registration is open, so check sdarws.com/ATC for everything you need to know – agendas, hotel information, and news regarding the upcoming conference.

ATC REGISTRATION FEES

ATTENDEE REGISTRATION (MEMBER)

Full Conference Registration: \$300

Tuesday Only: \$180

Wednesday Only: \$230

Awards Banquet: \$35

Spouse Registration: \$25

ATTENDEE REGISTRATION (NON-MEMBER)

Full Conference Registration: \$390

Tuesday Only: \$255

Wednesday Only: \$325

Awards Banquet: \$40

ATC KEYNOTE SPEAKER - HOLLY HOFFMAN

The third time is hopefully a charm to welcome our keynote speaker Holly Hoffman after COVID-19 prevented her attendance in 2021 and 2022. Holly was the last remaining member of the Espada Tribe and the last woman standing on Season 21 of CBS' hit reality show "Survivor: Nicaragua." Through that experience, and others throughout her life, Holly was inspired to share her message of survival.

WATER TASTE TEST CONTEST

This year's Exhibit Hall will feature a public judging of the top three finalists in the SD Rural Water Taste Test. The winner chosen at this taste test will go on to represent South Dakota in the National Rural Water Taste Test held at the Rural Water Rally in Washington, DC in February of 2024. If your water system is interested in participating in the taste test, please make sure that they bring a quart-sized glass jar filled with water from your water system to the Registration Desk by 2:00pm on Tuesday, January 10th.

FIRST ANNUAL ATC METER CHALLENGE

This year we are excited to host the first annual ATC Meter Challenge. This competition will test and measure how quickly, totally, and accurately you can assemble a working water meter. There is no cost to participate, and there are cash prizes for the top three. Timed trials will take place on Wednesday, January 11th from 8:00 AM - 3:00 PM at the SD Rural Water Booth. The top 5 finalists will compete at 4:30 PM in the Exhibit Hall. A full list of rules can be found at sdarws.com/meterchallenge.

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Les Hinds

West River/Lyman-Jones Rural Water System
Rick Doud

Class B East River
VACANT

Class B West River
VACANT

Class C
Jay Gilbertson



JANUARY 10-12, 2023 | RAMKOTA HOTEL
 920 W. SIOUX AVENUE, PIERRE, SOUTH DAKOTA

TUESDAY

- 8 AM – 4 PM REGISTRATION DESK OPEN
- 8 AM – 2 PM WATER TASTE TEST REGISTRATION
- 8 AM – 4 PM WATER PAC RAFFLE – LOBBY AREA

10:00 AM

- GALLERY D-E** CATCH LEAKS BEFORE THEY CATCH YOU!
– Jo-El Moore, Kamstrup Water Metering LLC
- GALLERY F** MONOFORM+
– Ryan Horn, HK Solutions Group
- GALLERY G** CERTIFIED STENNER TECHNICIAN SERVICE REPAIR TRAINING
– Mike Pontrelli, Stenner Pump Company

10:45 AM

- GALLERY D-E** THE EVOLUTION OF UTILITY LOCATING, TRACER WIRE SPECIFICATIONS, PRODUCTS
– Joe Rubbelke, Utility Logic
- GALLERY F** CAPTURING SEDIMENT ON THE GO, ENABLING CLEAN WATER TO FLOW
– Corydon J. Coppola, CPESC, Flo Water LLC
- GALLERY G** CERTIFIED STENNER TECHNICIAN SERVICE REPAIR TRAINING
– Mike Pontrelli, Stenner Pump Company

12:00 PM

- GALLERY A-B-C** AWARDS LUNCHEON



AWARDS LUNCHEON SPONSOR



EDUCATIONAL SESSIONS SPONSOR

1:00 PM

- GALLERY A-B-C** KEYNOTE ADDRESS
– Holly Hoffman

2:30 PM - BREAK TABLE

3:00 PM

- GALLERY D-E** WATER SERVICE LATERAL FITTINGS AND METER APPURTENANCES
– Calvin Williams, A.Y. McDonald Mfg. Co.
- GALLERY F** WASTEWATER EFFLUENT MONITORING AND LIMITATIONS OF DISSOLVED SOLIDS
– Rachel Kloos, ISG
- GALLERY G** WHAT'S THE RIGHT SCADA SOLUTION FOR YOUR SYSTEM
– Damon Chmela, PE, AE2S
- LEWIS & CLARK** WHEN DEMAND EXCEEDS AVAILABILITY: WHERE WILL THE EXTRA WATER COME FROM?
– Jay Gilbertson, East Dakota WDD
- AMP. II** KEYNOTE BREAKOUT
– Holly Hoffman

3:45 PM

- GALLERY D-E** THE IMPORTANCE OF LARGE METER HEALTH
– Kali Kocdemir, Olea Edge Analytics
- GALLERY F** MAGNETIC ION EXCHANGE SYSTEMS PRE-TREATMENT
– Craig Steve, IXOM Watercare
- GALLERY G** THE COST OF DOING NOTHING
– Dewey Prinzing, KLM Engineering

This schedule is tentative and subject to change.

WEDNESDAY

8 AM – 4 PM	REGISTRATION DESK OPEN
8 AM – 7 PM	WATER PAC RAFFLE – LOBBY AREA
8 AM – 3 PM	METER CHALLENGE PRELIMINARIES – SDARWS BOOTH

8:00 AM

LEWIS & CLARK	WATER SYSTEM SUSTAINABILITY & IMPACTS ON AFFORDABILITY – Jared Huibregtse, Bartlett & West
L. FRANCIS CASE	CMAR PROJECT DELIVERY – Darin Pfingsten, PKG
AMP II	IMPORTANCE OF EFFICIENTLY, AND EFFECTIVELY, METERING WATER SYSTEMS WITH NEW AND DIFFERENT TECHNOLOGIES – Matt Kosorok, Metron-Farnier Smart Water Meters

8:15 AM

AMP I	48TH ANNUAL MEMBERSHIP MEETING <i>This is the Official Membership Meeting of the South Dakota Association of Rural Water Systems. Delegates and Alternates are encouraged to attend. Pre-Assigned seating arrangements have been reserved based on the number of voting members per system.</i>
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8:45 AM

LEWIS & CLARK	AMMONIA AND MANGANESE – WHAT NOW? – Julie Sievers, ISG
L. FRANCIS CASE	TOWERS – Chad Edwards, Maguire Iron
AMP II	TRANSITION FROM WELL WATER TO TREATED SURFACE WATER – PIERRE CASE STUDY – Delvin DeBoer, AE2S

9:30 AM - BUTLER CAT BREAK TABLE

10:00 AM

LEWIS & CLARK	REGULATORY UPDATE – State Plumbing Commission
L. FRANCIS CASE	METERS – Farrell Anderson, Metering & Technology
AMP I	RURAL WATER CENTER ANNUAL MEETING <i>This is the Official Membership Meeting for Rural Water Center</i>
AMP II	CYBER SECURITY FOR WATER & WASTEWATER – Anthony Bramante, In Control, Inc.

10:45 AM

LEWIS & CLARK	SD GROWTH – LET’S DO IT RIGHT – Terry Wright, ISG
L. FRANCIS CASE	OVERVIEW OF WATERSMART – Michelle de Leon, US Bureau of Reclamation
AMP II	FUNDING CAPITAL RENEWAL – WHY IT’S NOT JUST ABOUT FUNDING RESERVES – Miranda Kleven, AE2S

1:00 PM

LEWIS & CLARK	ISO CREDIT SUPPLY SYSTEMS – Randy Downs & Rob Holso, Verisk
L. FRANCIS CASE	EARTHTEC QZ FOR MUSSEL CONTROL IN ST. PAUL, MINNESOTA – Paul J. Besenti, Earth Science Labs/EarthTec
AMP I	LEGISLATIVE PANEL – Staff of Senator Thune, Senator Rounds, and Representative Johnson
AMP II	SRF UPDATE – Mike Perkovich, DANR

1:45 PM

LEWIS & CLARK	IMPACTS OF DROUGHT ON RURAL WATER SYSTEMS – Banner Associates
L. FRANCIS CASE	CASE STUDY: FOUR CORNERS FOG & FOAM CONTROL – Lewis Titus, Titus Wastewater Solutions, Inc.

2:30 PM - BREAK TABLE

3:00 PM

L. FRANCIS CASE	VERSATILITY OF FLOATING AERATORS – Lewis Titus, Titus Wastewater Solutions, Inc.
AMP I	LEGISLATIVE PREVIEW, NRWA RALLY ORIENTATION – SDARWS
AMP II	SDWARN UPDATE – Barb Friedeman, SDWARN Board

EXHIBIT HALL SCHEDULE

4:00 PM	EXHIBIT HALL & LEGISLATIVE RECEPTION OPENS
4:30 PM	METER CHALLENGE FINALS
7:30 PM	RURAL WATER TASTE TEST FINALS
7:45 PM	WATERPAC WINNERS ANNOUNCED

THURSDAY

7:30 AM

GALLERY A-B-C	SD LEGISLATURE OPEN FORUM BREAKFAST
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SPOUSE ACTIVITIES WEDNESDAY RAMKOTA COURTYARD

8 AM - 10 AM	CONTINENTAL BREAKFAST
11 AM - 1 PM	SOUP/SANDWICH LUNCHEON

FOR MORE INFO ON WHAT TO DO/SEE IN PIERRE VISIT
THE CHAMBER OF COMMERCE DIGITAL VISITOR CENTER
pierre.org/visit-pierre/digital-visitor-center/



PFAS COST RECOVERY PROGRAM

When U.S. EPA issued the 2016 health advisory, the National Rural Water Association Board of Directors voted to engage the Napoli Shkolnik law firm to file a cost recovery action that would allow all utilities to register and recover any current and projected future expenses for testing, treatment, and remediation due to PFAS contamination upon any potential settlement or judgment in your favor. For clarification, this is not a class action lawsuit as there are multiple classes of plaintiffs; thus, they are combined into what is called multidistrict litigation. The three points stressed to utilities are:

1. The action is cost recovery, not punitive.
2. The litigation is filed against the global manufacturers of the compounds and does not impact local companies who may have used them.
3. **There is zero upfront cost to register the utility onto the cost rolls; however, a system must be registered prior to any settlement or judgment being reached in order to benefit.** While there is no timeframe as to when a settlement may be finalized, those settlement talks are underway. The recently announced revised health advisory from EPA will further place pressure on a

potential settlement being reached.

There is no threshold or cost to register onto the cost recovery rolls; we encourage all systems to register and protect their system and ratepayers from a potential increased financial burden. Systems should register regardless of testing or detection status. Registering onto the cost recovery rolls is like an insurance policy without a premium and, if your customers ask, a strong positive message that the system has undertaken action to lessen any financial burden resulting from PFAS contamination.

Time is of the essence; the latest health advisory levels have been lowered to non-enforceable levels of 2 and 20 per quadrillion. The EPA is establishing an enforceable maximum contaminant level (MCL) under the Safe Drinking Water Act, which means that a system with any level of detection is likely to be out of compliance with the federal standard. Considering PFOS and PFOA are labeled as hazardous substances, there is sure to be a large financial impact on utilities if these “**forever compounds**” are detected.

SDARWS is encouraging all utilities to take the first step and register at www.napolilaw.com/nrwa-pfas.



WATER & WASTEWATER OPERATIONS SPECIALISTS: A Workforce Crisis

In 2012, Readers Digest named Water/Wastewater Treatment Plant and System Operators as one of the top 10 jobs Americans can't live without – second only to registered nurses. The men and women who work in the water industry have an obligation to continually provide an adequate and safe supply of drinking water to their customers with every turn of the tap. Their job is necessary for public health and critical to the viability of our communities. An important job such as this needs trained and committed individuals to provide these vital services. While a college degree is not always required, Water and Wastewater Operations Specialists in South Dakota are

The men and women who work in the water industry have an obligation to continually provide an adequate and safe supply of drinking water to their customers with every turn of the tap.

required to be certified and attend between 10 and 30 hours of training per year. To obtain their certification, they must be able to pass a certification exam – the level of which depends on the size and complexity of their system. Training for water and wastewater certification is provided through the State of South Dakota in cooperation with the South Dakota Association of Rural Water Systems. On the job they are tasked with following critical guidelines set forth by the Environmental Protection Agency (EPA), and the South Dakota Department of Agriculture and Natural Resources (DANR).

The trouble is, finding qualified Operations Specialists is getting tougher each and every year. Many of South Dakota's Operations Specialists were born during the Baby Boomer generation and entered the water and wastewater field during the 1970's and 80's. Alarming, most facility managers are over 50 years of age – and are getting ready to retire. The loss of these individuals not only creates a job opening – but the loss of years of technical skills, experience and knowledge on how to run the system they have been operating for decades. This workforce crisis is leaving water systems looking for dependable, competent, and knowledgeable workers.

Besides losing qualified personnel, another issue is the lack of people interested in taking a job in the “unglamorous” field of water and wastewater. Operator turnover has been – and continues to be – a significant obstacle in the effort to increase operational capacity of rural and municipal utilities. The most crucial component of protecting our water quality is the experienced, trained and certified workforce that operates and maintains the infrastructure of our water and wastewater systems.

One has to wonder where these replacement workers are going to come from. In this age of computer technology and electronic communications, the number of people willing to step into the water and wastewater industry has declined. Some of this stems from the low wages cities and public utilities are willing and able to offer those responsible for the quality and availability of water.

Try to convince elected officials that the miracle cure for budget deficits and aging infrastructures isn't finding cheap help, or underpaying your employees. Like all businesses,

utilities must find a balance between competitive and justifiable salaries. Low salaries will increase employee turnover. Without decent wages, benefits and working conditions, work quality can suffer due to high turnover, inadequate training and experience, and low morale.

Can utilities change the way they do business to reverse this job vacancy trend? Governing boards and management should start establishing long-range plans to assure essential services are not disrupted or sacrificed due to inexperienced staff.

It is no question that Operations Specialists are important public stewards whose jobs are necessary for public health, and critical to the economic viability of our communities. There is no doubt

that we need trained and committed individuals to provide these services. Turnover in the workforce can lead to the loss of key technical skills and expertise. As water systems

work to overcome these workforce obstacles, the most vital part of protecting our water quality is through the skilled professionals who work to treat and distribute safe public drinking water.

Turnovers may bring in lower-paid, less qualified personnel. This change can have damaging effects on service quality and work environments. Hiring inexperienced employees to make repairs or respond to customer concerns is just asking for trouble. Maintenance issues will fall by the wayside, equipment will wear out faster, and the public will complain. Deficits in your system could cause

State and Federal Environmental Standards violations – forcing your system or utility into paying penalties and fines for non-compliance issues and violations.

The most vital component of protecting our water quality is the experienced, trained and certified workforce that operates and maintains the infrastructure of our water systems.

It is no question that Operations Specialists are important public stewards whose jobs are necessary for public health, and critical to the economic viability of our communities. There is no doubt that we need trained and committed individuals to provide these services.

FINANCIAL SUSTAINABILITY:

The Case for Full Cost Pricing for Water Utilities

by *Miranda Kleven, AE2S*

Sustainability is the buzz word of the industry. Common topics include sustainable water supplies, sustainable construction methods, sustainable infrastructure, and sustainable financial management, to name a few. Sustainability is achieved when we are able to meet our needs today without compromising the opportunity for future generations to meet their needs.

“Sustainability means providing an adequate and reliable water supply of desired quality – now and for future generations – in a manner that integrates economic growth, environmental protection and social development” (American Water Works Association (AWWA), 2010).

The US Environmental Protection Agency (EPA) has developed a Sustainable Infrastructure Initiative to help utilities address the task of maintaining high quality water and wastewater services in the face of challenges such as aging infrastructure, limited funding assistance, diminishing water supplies (in some areas), increasing water quality standards, and others. The Sustainable Infrastructure Initiative places focus on four areas: Better Management, Efficient Water Use, Watershed Approaches to Protection, and Full-Cost Pricing, the latter of which is the focus of this article.

Full-Cost Pricing Defined

A utility's cost of service is defined as a system's total cost of providing service to its customers. This generally includes operation and maintenance (O&M), administrative/billing, reserves, and capital costs. Capital costs can be represented by rate-funded capital, debt service principal, depreciation, rate of return on the system's asset base, or some combination thereof. Full-cost pricing is the direct application of the calculated cost of service to the development of rates, fees, charges, and other revenue mechanisms associated with providing service. The goal of full-cost pricing is a revenue stream that adequately covers ongoing O&M requirements and reinvestment in the system.

Full-cost pricing is generally the standard in private regulated utilities. Unfortunately, rates charged by public systems are often viewed as taxes rather than fees for service. In many communities, this has created a reluctance to maintain rates consistent with rising costs and has resulted in deferral of capital investment.

Why Implement Full-Cost Pricing?

The most obvious benefit of full-cost pricing is the ability of the system to consistently meet all on-going operational, maintenance, and capital costs, providing a high level of service. It is important that utilities do not operate at a loss

or continually deplete cash reserves so that degradation of the system does not result, thereby compromising the quality of service provided.

Some communities routinely make transfers from other accounts to cover utility costs. Though this is a local policy decision and is not necessarily unfair, it is not in line with full-cost pricing strategy. Such practices may be taking funds away from another area that is then unable to meet ongoing maintenance needs. Subsidizing the utility is simply not considered a sustainable practice unless the transferred funds are somehow legally obligated to the utility.

By recovering all utility costs through designated fee schedules, users will better understand the value of the service



provided. This transparency encourages conservation of resources by providing an accurate indication to your users of the real cost of operating and maintaining the utility and sending an accurate price signal to customers.

Recognize that It's Not as Easy as It Sounds

The development of a full-cost pricing structure sounds like a straight-forward task. Add up the O&M costs, reserve requirements, capital costs, etc., and divide by the number of users or amount of water sold or wastewater collected. Unfortunately, it's not that easy. First of all, there are several opinions on what represents the “full cost.” Sustainability is most often described as the triple bottom line – economic, social, and environmental. The successful overlap of these aspects is where sustainability is achieved. So there are questions that come up in full-cost pricing related to the triple bottom line, such as: Should you consider impacts to the environment, such as potential loss of recreation or the impact of sewage flows? Are social costs, such as those associated with electricity generation included? What about return on capital? There are a number of unaccounted costs that could be argued into the equation, potentially making

it very complex. For the most part, O&M and administrative costs, reserve requirements, and a representation of capital cost (a combination of depreciation and a return on investment or debt service principal and rate-funded capital) will give you a good place to start.

Be aware that there may be social issues that make full-cost pricing difficult. Affordability is a reasonable concern, as the availability of basic services to all users is a primary goal for all utilities. Consider the makeup of the community and whether programs to assist low-income users with a subsidy would be appropriate. By providing a subsidy for a subset of the users, you will be able to structure your rates at or slightly above the cost of service (if absorbing the subsidy within the utility), thereby achieving full-cost recovery while remaining sensitive to affordability issues.

In some areas, communities use sales tax revenues for utility repair and/or improvement costs. This practice is one that tends to be adopted by others in the area once neighboring communities demonstrate success. While not in line with full-cost pricing, this can be an effective solution for some systems if full-cost pricing of rates is not feasible.

For small and rural systems, sustainability may be a different objective initially due to limited population density and affordability issues. As a result, it is common in such systems to utilize grant or alternate funding sources initially and then strive for sustainability after initial construction.

Each community may have different objectives for its municipality. Some may desire to promote economic development by offering attractive rates to industrial users. This is another instance in which a subsidy may be an appropriate means for supporting a rate structure that is reflective of full-cost pricing but encourages economic growth. The message associated with under-pricing for economic development purposes should be considered, to avoid promoting inefficient water use by the industry. In many cases, the addition of industrial users frequently serves to improve the financial position and sustainability of utility systems.

In the end, a rate structure that does not rely on subsidies from outside of the utility is the most sustainable approach. Given constraints such as those discussed above, however, the ability of a utility to implement a purely cost of service-based rate structure will vary based on local policy and unique objectives of each municipality. Full-cost recovery still remains a worthy goal for every system.

Step Toward Financial Sustainability

How do we make this happen? Experts agree that the move toward full-cost pricing must be taken in steps. The process will require time and significant public education efforts. Consider the following tips to start easing your utility toward financial sustainability:

- If not already in place, implement accounting and reporting practices that are specific enough to facilitate cost allocation to specific user classes. Regulated private

utilities, as well as some unregulated utilities, use the National Association of Regulatory Utility Commissioners (NARUC) uniform system of accounts.

- Track usage patterns for each user class to provide data for evaluating future revenues.
- Implement public outreach initiatives to educate consumers on the value of water.
- If not already practiced, begin funding reserves to adequately provide resources to meet ongoing maintenance needs and to fund reinvestment. Reserves are an important component of the full-cost pricing rate configuration. This only works, however, if reserves are funded at adequate levels and reserve funds are not diverted to other funds.
- Complete mid- and long-range planning efforts to enable you to forecast revenue requirements into the future. As part of this, consider the degree to which you are willing to promote conservation through non-pricing means, such as rebates, consumer education programs, ordinances with usage restrictions, etc, and evaluate the potential revenue effects associated with such efforts.
- Complete a cost of service analysis, allocating all costs to the appropriate customer classes. Set rates to send an accurate price signal, while taking care to consider affordability issues applicable to your service area. Observe the effects of changes to your rate structure and track usage patterns.
- Optimize system operations. Look for means to enhance efficiencies and potentially reduce costs on the operations side. In addition, review metering and billing practices for potential ways to increase revenue collections.
- Implement a comprehensive asset management program to allow you to plan and manage responsible reinvestment in the system.

Conclusion

The result of successful transition to full-cost pricing is a system that does not divert funding from other sources, sends an accurate price signal about the value of service to customers, and provides for financial sustainability. In turn, financial sustainability is key to overall system sustainability.

For more information on sustainability initiatives and resources available through the AWWA, visit www.awwa.org/Resources/SustainableUtilities.cfm?itemNumber=54091

References:

American Water Works Association (AWWA) Government Affairs Office, AWWA and Water Utility. Sustainability, December 2010.

"Case Studies of Sustainable Water and Wastewater Pricing," USEPA, December 2005.

"Full Cost Accounting for Water Supply and Sewage Treatment: A Case Study of the Niagara Region, Canada" Steven Renzetti, Brock University, Catherines, Ontario, 2003.

"Full-Cost Pricing," Janice A Beecher, Ph.D., Institute of Public Utilities, Michigan State, 2007.

TM RURAL WATER DISTRICT

In March of 1982 an informational meeting was held in Parker, South Dakota to determine the interest and feasibility of constructing a rural water system in the area. Interest quickly spread from just a couple of farmers looking for a safe and reliable source of water for their families and livestock to several hundred in addition to several small communities in the area. By January of 1983 the final signup meetings were held at towns throughout Turner and McCook Counties within the proposed District's boundaries collecting 679 signatures in all. Soon after, a petition to organize a Water User District was sent to the South Dakota Board of Water and Natural Resources. In March of 1983 TM Rural Water District came into existence.

In order to start construction the District secured financing in loans and grants totaling \$8.22 million.

✓ CDBG Grant	\$850,000
✓ State Grant	\$50,000
✓ State Loan	\$400,000
✓ FmHA Loan	\$2,600,000
✓ FmHA Grant	\$3,985,000
✓ TM Sign Up Fees	\$335,000
	<hr/>
	\$8,220,000

With the first water provided to users in 1984 ramping up to completion of the original project early in 1986 the TM Rural Water District had placed over 650 miles of water line to feed over 800 rural users in addition to the communities of Canistota, Davis and Viborg. The original Water Treatment Plant utilized an Iron and Manganese removal system with a finished water softness of 7 to 8 grain hardness. The minimum charge which included 1,000 gallons of water was \$25.00/month and any water consumed in excess of 30,000 gallons/month was charged at \$.75/1,000 gallons. At that time the District supplied approximately 160 million gallons of water each year to the users on the system and over the years the amount of pipeline and users on the system continued to grow.

TM completed construction of a new 4.0 million gallon per day Water Treatment Plant in 2008. The Water Treatment Plant utilizes traditional lime softening treatment where raw water is mixed with a lime slurry which then reacts with the calcium and manganese in the water. The calcium, manganese and other solids bond to the lime and settle to the bottom leaving only clarified water that continues through the rest of the treatment process which includes carbonation, filtration, and chloramination. The plant has 900,000 gallons of ground storage at the Treatment facilities which is distributed to the entire system by utilizing eight on-site high service pumps, three remote booster stations and four elevated water towers which provide an additional 1,100,000 gallons of water storage.

TM gets the majority of its water from four wells drilled into the Dolton and Upper Vermillion Missouri (UVM) Aquifers which in some areas of the well fields the Dolton actually overlies the UVM. The Dolton Aquifer, named for its location close to the town of Dolton, South Dakota is the original aquifer that supplied the source of water for TM and provides a portion of the water utilized by our customers today. The Upper Vermillion Missouri Aquifer is the other source of ground water currently utilized by the District and is the larger of the two aquifers. The District also has an agreement with the city of Parker & BY Rural Water District to purchase supplemental water.

Today the TM Rural Water District provides potable drinking water to 1,650 rural residences, four cities and one ethanol plant. Every year additional users are added onto the water system and due to its location adjacent to Sioux Falls, it is anticipated that the District will continue to grow in the coming years. The District produces and distributes an average of 650,000,000 gallons of water each year through over 910 miles of distribution line.

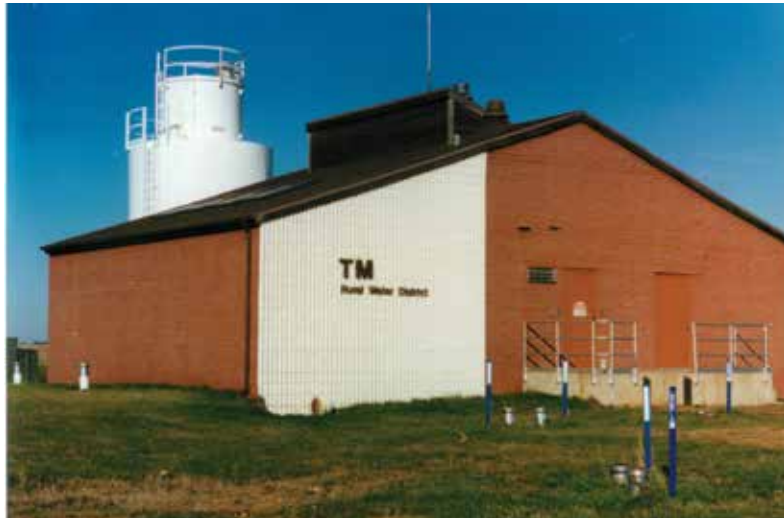
All of this would never have been possible without the past and present TM Rural Water District Board of Directors. The Board's responsibility is to create and modify the District's policies and water rates as needed. Directors are all land owners within the boundaries of the District and take their



New TM Water Treatment Plant



Aerial view of TM Rural Water tower



Original TM Water Treatment Plant



First well - still in use today



Original Construction

jobs very seriously. Serving on the Board these people continually perform selfless acts which include the giving of time and expertise in order to run a business which makes life better for everyone in the rural areas and communities that TM serves.

TM Rural Water District employs six full-time employees from three different communities in the areas that we serve. Whenever possible, TM attempts to buy our supplies and consumables locally and prefer to hire local contractors when the need arises. TM is thankful to have the ability to serve the communities and rural areas in which we live and hope that our service will continue to be a benefit to everyone within our District.

BOARD MEMBERS:

- Greg Wirth – Board President/SDARWS Director
- Dennis R. Johnson – Vice President
- Greg Nugteren – Treasurer/SDARWS Director
- Steve Knutson – Secretary
- Dennis M. Johnson – Director
- Curt Matthies – Director
- Rob Christiansen – Director

STAFF:

- Jay Jorgensen – Manager
- Tanya Wickstrom – Bookkeeper/Billing Clerk/
Receptionist
- Dave Viet – Water Treatment Plant Lead Operator
- Greg Simmermon – Distribution Lead Operator
- Jason Krumbach – Distribution Operator
- Josh Tommeraus – Distribution Operator

SYSTEM AT A GLANCE

Service Connections: 1,650

Miles of Pipeline: 910

Water Sources: Dolton Aquifer, Upper Vermillion Missouri Aquifer, BY Rural Water District, and Lewis & Clark Regional Water

Counties Served: Turner and McCook

Towns Served Bulk: Canistota, Viborg, Hurley, and Marion

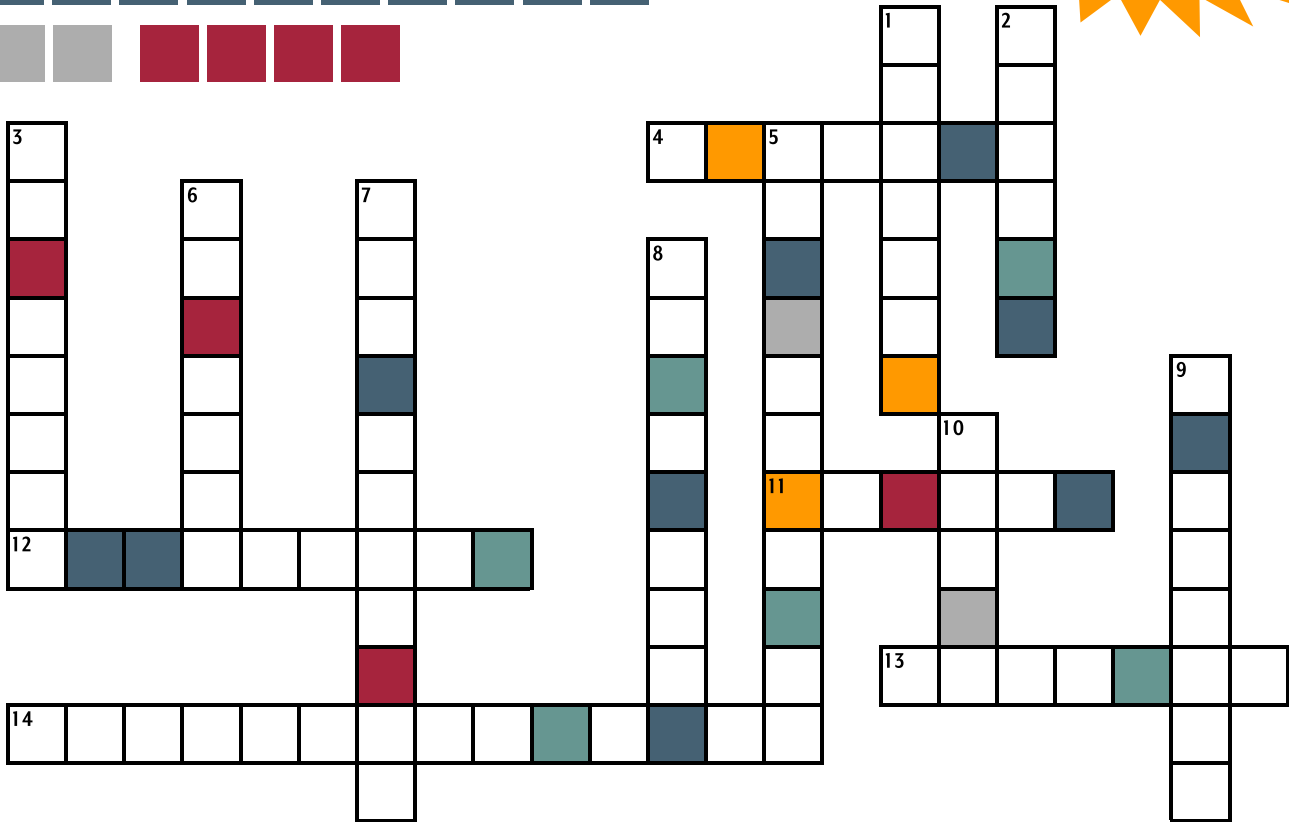
TM RURAL WATER DISTRICT'S MISSION STATEMENT

TM Rural Water District's goal is to improve the quality of life in the rural and small community areas of our state. The District is committed to providing the highest quality drinking water possible at the lowest reasonable cost consistent with good business practices. As a Water User District, the only other product that we have is the service we provide the users. The District goal is that the service is offered with the highest standards.

RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

REGIONAL DELICACIES

SCRAMBLE ANSWER



ACROSS

4. Skewered cubes of red meat (typically lamb, venison or beef)
11. Loose meat sandwich similar to a sloppy joe, without the tomato-based sauce
12. Raw beef spread (2 words)
13. A cold one with tomato juice (2 words)
14. Bison on a bun

DOWN

1. Czech sweet pastry that holds a portion of fruit surrounded by puffy dough
2. South Dakota State dessert with German roots
3. South Dakota's tasty state bird
5. Native American take on a traditionally Mexican entrée (2 words)

6. Common catch of the day in SD
7. Dessert bars with chocolate, butterscotch, peanut butter, and Rice Krispies
8. Homestyle meal prepared in a deep baking dish and baked in the oven
9. Flat dough bread fried in oil (2 words)
10. Traditional soft Norwegian flatbread

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 January 15, 2023 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 Cheryle Eichmann with Kingbrook RWS who had the correct phrase of "LEARN TO RELISH THE RIDE" for October 2022.

RURAL WATER

ACROSS SOUTH DAKOTA

STATUS REPORT: Carbon Dioxide Pipelines in South Dakota

By Darla Pollman Rogers, Riter Rogers, LLP

South Dakota state law requires that pipelines traveling through multiple states, including South Dakota, obtain a permit from the South Dakota Public Utilities Commission (PUC) prior to beginning construction. The PUC is required to make a decision on the permit within one year of the application. So far this year, the South Dakota PUC has received two permit applications for the construction of carbon dioxide transmission pipelines in South Dakota. The first permit application was submitted in February 2022 by Summit Carbon Solutions (SCS) through SCS Carbon Transport LLC. The SCS application is still pending and was halted earlier this year given the uncertainty of changes to the route. As such, this particular application will not come to a final determination within the one-year deadline. SDARWS has intervened in this docket on behalf of its member companies along with hundreds of other interested parties. This allows SDARWS to participate in the permitting process by monitoring the filings, submitting testimony and evidence as necessary, and gathering information during the discovery process.

The proposed SCS project is expansive. It contemplates the construction of over 2,000 miles of pipeline for the transportation of carbon dioxide across five states. The project would involve over 30 ethanol plants with seven of those ethanol plants located in South Dakota. As Map 1 indicates, the pipeline would enter the South Dakota border from Iowa and exit toward North Dakota. The PUC is currently seeking input from the parties to facilitate a hearing schedule. It is currently anticipated that the PUC will hold a two-week hearing to address the permit sometime in 2023.

The second permit application was submitted in September 2022 by Navigator Heartland Greenway, LLC (Navigator). The deadline to request intervention in this docket was late November and SDARWS's application to intervene as a party will be heard by the PUC on December 6, 2022. As with the SCS docket, intervention will allow SDARWS to monitor and participate in this docket on behalf of its member companies. The Navigator Pipeline is contemplated to cover 5 states with the bulk of the pipeline in Iowa. The proposed map, contemplates 1,300 miles of carbon dioxide pipeline with 112 of those miles being located in south eastern South Dakota. The project contemplates partnering with 5 South Dakota ethanol plants. At the current pace, the Navigator

permit application is moving in a more orderly fashion so the one year deadline, which would require final determination of the Navigator application by September 2023, may be met.



Map 1: SCS Proposed Project Footprint



Map 2: Navigator Proposed Project Footprint

Darla Pollman Rogers is a partner at the Riter Rogers Law Firm in Pierre, South Dakota. She represents SDARWS in both of the above dockets.

¹ Map as available on the SCS website as of November, 28, 2022. See <https://summitcarbonsolutions.com/project-footprint/>.

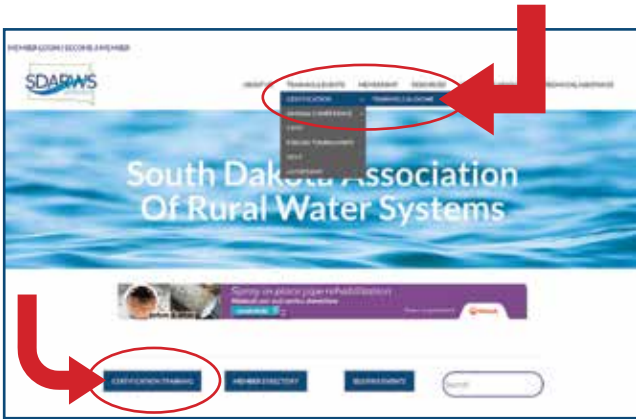
² Map as available in the SD PUC Docket. See page 4 of the Heartland Greenway Power Point presentation <https://puc.sd.gov/commission/dockets/HydrocarbonPipeline/2022/HP22-002/PowerPoint.pdf>

REGISTER FOR SDARWS CERTIFICATION CLASSES

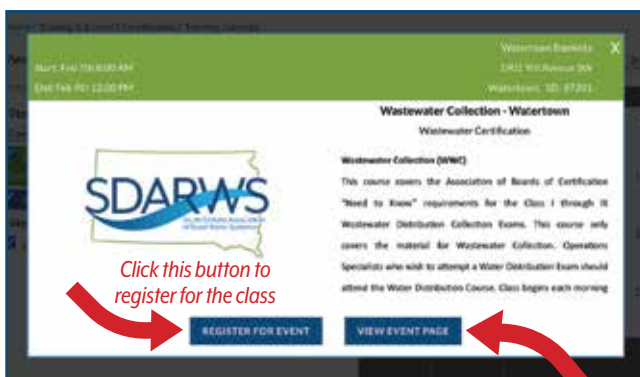
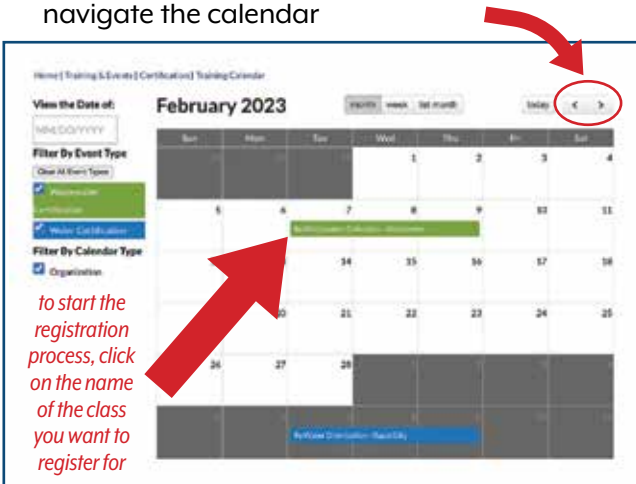
The South Dakota Association of Rural Water Systems has upgraded to a new website and class registration software. This move will allow us to better track class attendees and certification hours.

1. Navigate to **SDARWS.COM**

- Bring your cursor to the **TRAINING & EVENTS** header, and hover over **CERTIFICATION** and you'll see **TRAINING CALENDAR** pop up
- or click on the **CERTIFICATION TRAINING** button
- or navigate to **WEB.SDARWS.COM/EVENTS**

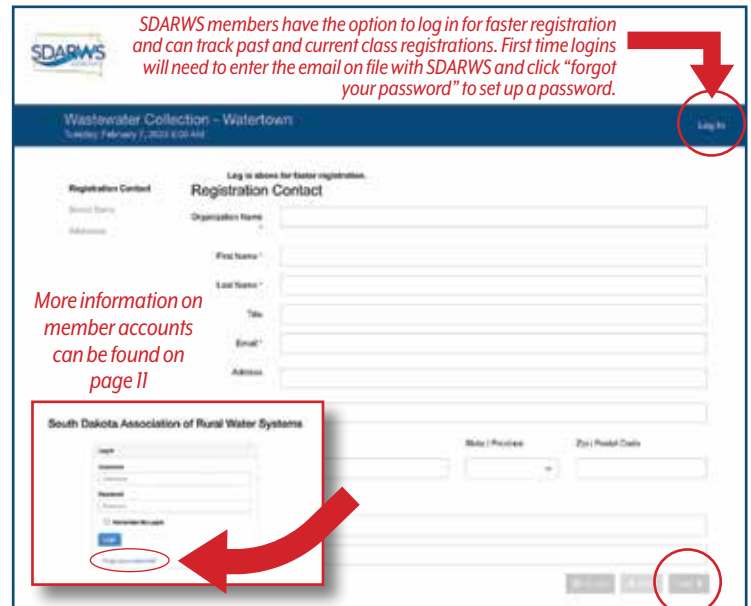


2. Browse for classes by clicking on the arrows to navigate the calendar



Click this button for more information on the class

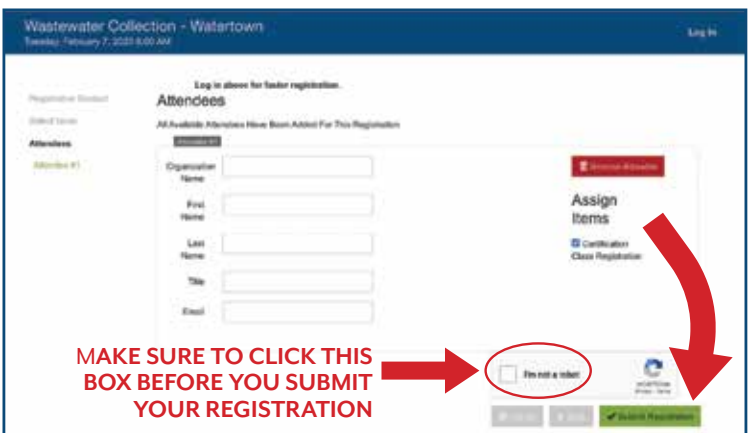
3. Fill out the form with the name and information of the person filling out the form, and click **NEXT**

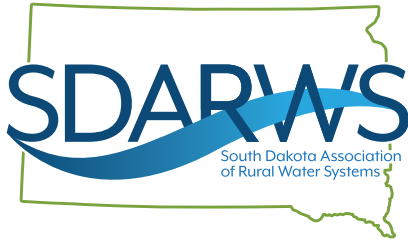


4. In the quantity box, enter the number of people you are registering for this class, and then click **NEXT**



5. Fill out the information for each attendee. Make sure to click the **I AM NOT A ROBOT** button, and then click the green **SUBMIT REGISTRATION** button. An email confirmation with registration details will be sent to each email address provided during the registration process.





OPERATOR CERTIFICATION TRAINING AND EXAMS

Course Name	Date	Location
Basic Wastewater Treatment	December 6-8, 2022	Rapid City Ramkota - Rushmore Room
OpCert Exam	December 8, 2022 @ 1:00 PM	Rapid City Ramkota - Rushmore Room
Basic Water Treatment	January 24-26, 2023	Rapid City Ramkota - Rushmore Room
Wastewater Collection	February 7-9, 2023	Watertown Ramkota
Water Distribution	March 7-9, 2023	Rapid City Ramkota - Rushmore Room
Basic Water Treatment	March 21-23, 2023	Watertown Ramkota
Basic Wastewater Treatment	April 4-6, 2023	Sioux Falls Ramkota - Harvest Room
Small Water Treatment Workshop	April 27, 2023	Rapid City Ramkota
Intermediate Water Treatment	May 2-4, 2023	Aberdeen Ramkota
Advanced Water Treatment	May 23-25, 2023	Rapid City Ramkota - Rushmore Room
Stabilization Pond Workshop	June 1, 2023	Huron - Huron Events Center

Classes start at 8:00 AM Tuesday through Thursday.

Classes end at approximately 4:30 PM on Tuesday and Wednesday, and noon on Thursday.

One-day Workshops start at 8:00 AM and end at 4:30 PM.

The Stabilization Pond class deals strictly with ponds/lagoons and is the best class for preparing to take the Small WW Exam. The Basic WW Treatment class deals with all types of wastewater treatment other than ponds/lagoons and is the best class for preparing to take the Class I WW Treatment exam. Small Systems that use ponds/lagoons for treatment can come into compliance with the Operator Certification Law by passing either the Small WW System exam or the Class I WW Treatment Exam.

Water systems serving less than 500 individuals and use wells as its source can come into compliance by passing the Small Water Treatment exam. Larger systems must pass the Class I Water Treatment exam or higher depending on the facility classification.

EXAM INFORMATION

All exams cost \$60.00 and must be taken “in-person.”

Any exam can be taken at an exam session. You can take more than one exam at an exam session; however, the exam session remains at three hours long.

All exam applications are due no later than two weeks prior to the exam date.

Questions regarding exams can be directed to Tammie Hill with DANR at 605-773-3577.

DANR Operator Certification website:

danr.sd.gov/OfficeOfWater/OperatorCert/default.aspx

STUDY MATERIALS

DANR has water exam study material to lend to operators. These include manuals from California State:

- *Water Distribution System Operation and Maintenance*
- *Small Water System Operation and Maintenance*

TRAINING CLASSES

Certification Training Classes are conducted by the South Dakota Association of Rural Water Systems. **These classes are presented at no charge.** Certified Operators can obtain contact hours for attending all of the above classes.

For more information on certification training classes, please contact Bill Thorson at 605-556-7219 (office) or 605-201-0170 (cell).

Register for training classes online at:

web.sdarws.com/events

For Study materials, visit: www.abccert.org/testing_services/ExamReferences.asp

REGISTER FOR CLASSES ONLINE: web.sdarws.com/events



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WATER MATTERS

Lakes in South Dakota



According to Webster's Dictionary, a lake is "a considerable inland body of standing water." Our neighbor to the east (Minnesota) is commonly referred to as the "Land of 10,000 Lakes," but the real count is closer to 15,000. By contrast, lakes are a relatively rare commodity in South Dakota, and even the smallest bodies of water can be treasured recreational resources.

South Dakota lakes fall into two basic categories. In the eastern part of the state, lakes exist where there are natural depressions in the land surface. In most cases, these depressions formed when one or more large chunks of the last glaciers that covered the area were left behind. When they finally melted, the resulting "hole" in the landscape filled with water and a lake was formed. Pickerel Lake in Day County, Lake Herman near Madison, Wall Lake near Sioux Falls, along with all of the Round and Mud Lakes (most eastern counties have at least one of these!) formed in this manner.

In western South Dakota, natural depressions are quite rare, and most lakes owe their existence to human efforts.

In order to create bodies of standing water, barriers have been built across the valleys of streams and river to hold back water that would otherwise flow away. These can range in scale from small stock dams holding back a few acres of water for livestock, all the way up to the Lake Oahe on the Missouri River, which covers over 370,000 acres and backs up water as far as Bismarck, North Dakota. Sheridan and Deerfield Lakes in the Black Hills, along with Lake Sharp and Lake Francis Case on the Missouri River were formed in a similar manner.

In a state where water is often a scarce resource, lakes provide opportunities of residents and tourists alike to enjoy a peaceful day or two away from the hustle and bustle of daily life. What's your favorite South Dakota lake? How was it formed?

BACK PAGE CONTENT PROVIDED BY:



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