May/June 2015

ServiceLine

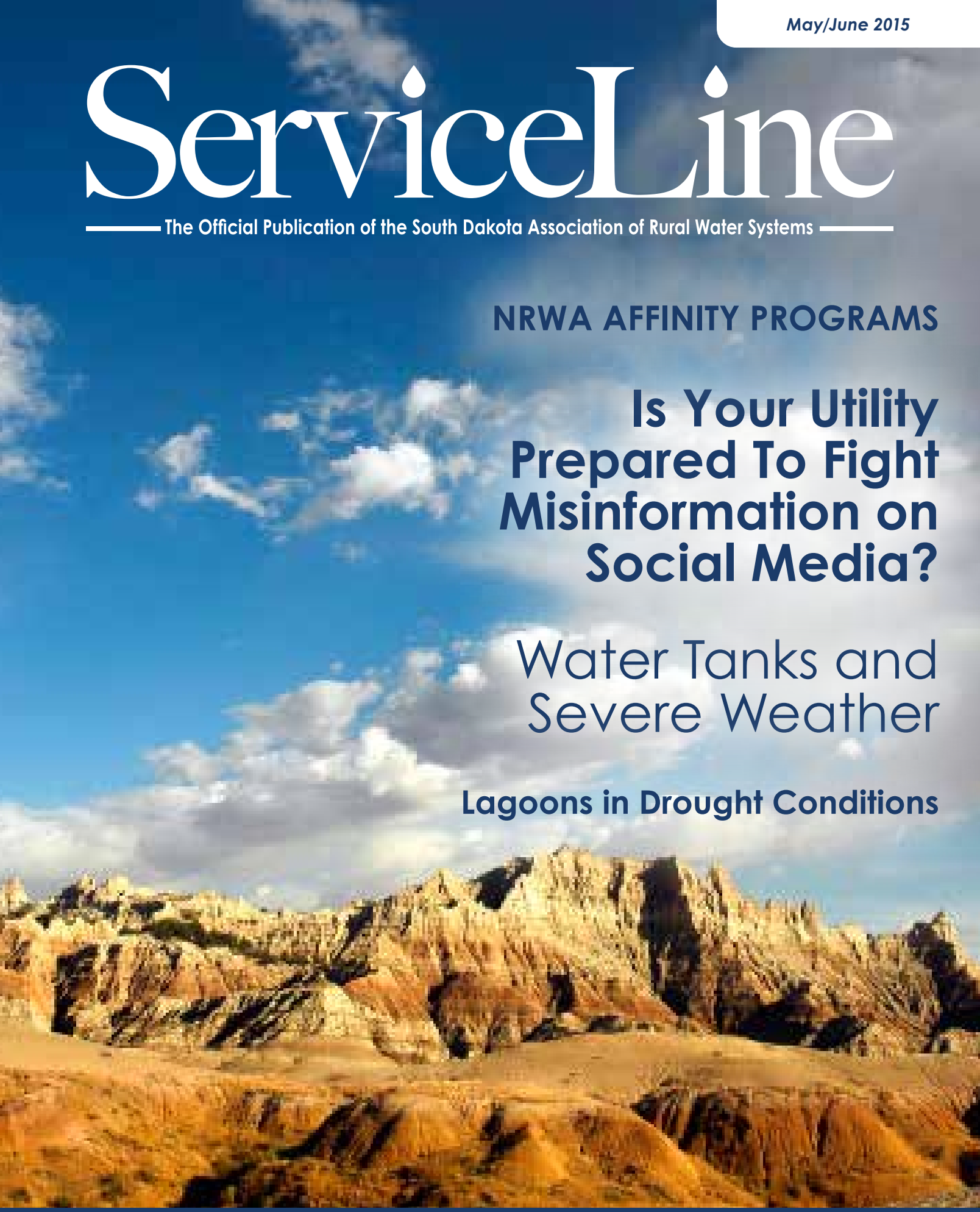
The Official Publication of the South Dakota Association of Rural Water Systems

NRWA AFFINITY PROGRAMS

Is Your Utility Prepared To Fight Misinformation on Social Media?

Water Tanks and Severe Weather

Lagoons in Drought Conditions



EXPO HIGHLIGHTS | WATERPRO ONLINE COMMUNITY

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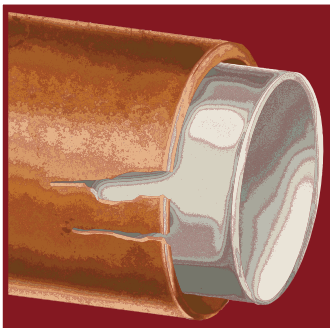

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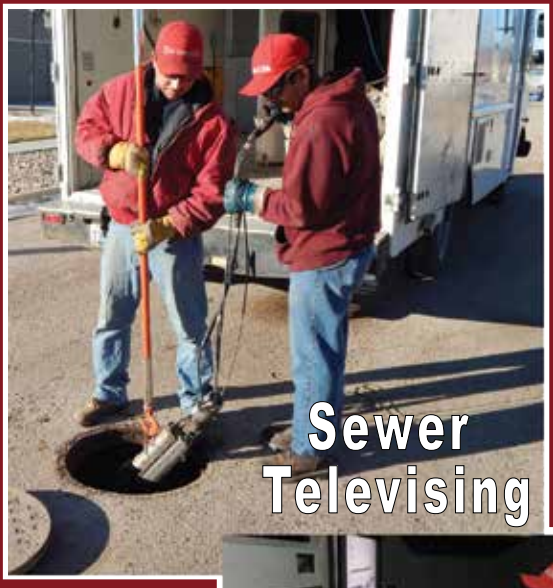

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President's Message

Dan Carlson
SDARWS President

This past April, after serving seven years as the Association's President, I made the decision to step down as President of the South Dakota Association of Rural Water Systems. I have enjoyed my tenure and will continue to help serve the needs of the Association as Past President, as well as continue my service with the Big Sioux Community Water System Board as President. I want to thank all of the members of the executive committees who have served over the past seven years. They were some of South Dakota's finest directors. I am pleased to announce that Ron Gillen of the Aurora-Brule Rural Water System has been elected to take my place. Ron previously served on the SDARWS board as secretary; Jim Thyen of Sioux Rural Water was elected to take his place.

The Association has come far in the past seven years – and has seen many changes and improvements. I'd like to highlight a few of these below:

- Seven years of operating the budget in the black
- Purchased three buildings – Main office and storage facility in Madison; office/storage building in Spearfish
- Established an emergency response component to the Association
- Received financial assistance for equipment – DENR $100,000; Water Development Districts – $45,000
- Equipment purchases to support emergency response and more in-depth technical assistance
- Established a safety training program for rural water systems
- Conducted an AC Pipe Study on the Pine Ridge and Rosebud Reservations – $100,000
- Continue to occupy a strong legislative program
  - Battled the Corps of Engineers charge for Missouri River water withdrawal
  - Lobbied for railroad legislation – and succeeded
  - Received continuous legislative support through the Water Omnibus Bill – which makes possible the Lewis & Clark, Minnehaha CWS, and Big Sioux CWS hookup to Madison
- Rural Water Center, Inc. was established to meet specialized Association needs

I am proud of the work we have accomplished and look forward to see where the Association grows and succeeds under the leadership of the new board.

Job postings

We have quite a few job openings available around the state currently posted to our website including a Training/Technical Assistance Specialist for SDARWS. To view these positions visit our website at www.sdarws.com and click on the "Member Services" tab on the left hand side, and then choose "Job Openings."

Golf Tournament

Join us on July 21st for the 29th Annual SDARWS 4-Person Scramble Golf Tournament at Elmwood in Sioux Falls. The tournament is a great opportunity to gather together with other Rural Water folks for a day of camaraderie and fun. You can register your four-person team online at www.sdarws.com, by emailing golf@sdarws.com, or by calling 605-556-7219. More information on the golf tournament can be found on page 29. We hope to see you on the course!

In This Issue

Corporate Sponsors

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Phone (605) 556–7219, Fax (605) 556–1497
email: info@sdarws.com

Events Calendar

MAY

19 **Small Water Treatment Workshop**
Best Western Ramkota Hotel
2111 North LaCrosse Street – Rapid City, SD
605-343-8550

21 **Small Water Treatment Workshop**
Crossroads Hotel
100 4th Street SW – Huron, SD
605-352-3204

JUNE

16 **Water Distribution Workshop**
Rapid Valley SD/WS Office
4611 Teak Drive, Rapid City, SD
605-393-1050

17 **Water Distribution Workshop**
Oacoma Community Center
100 E 3rd Street – Oacoma, SD
605-734-4455

18 **Water Distribution Workshop**
Crossroads Hotel
100 4th Street SW – Huron, SD
605-352-3204

JULY

7-9 **Basic Water Treatment**
The Watertown Event Center
1901 9th Ave SW – Watertown, SD
605-886-6127

21 **SDARWS Rural Water Open**
Elmwood Golf Course
2604 Russell Street – Sioux Falls, SD
605-367-7092

AUGUST

4-6 **Wastewater Collection/Water Distribution**
Best Western Ramkota Hotel
1400 8th Ave NW – Aberdeen, SD
605-229-4040

18-20 **Basic Wastewater Treatment**
Crossroads Hotel
100 4th Street SW – Huron, SD
605-352-3204

SEPTEMBER

1-3 **Intermediate Water Treatment**
Days Inn
2500 E 6th Street – Brookings, SD
605-692-9471

28-30 **NRWA WaterPro Conference**
Oklahoma City Convention Center
Oklahoma City, OK
www.waterproconference.org

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Course agendas, maps and registration are all available online at www.sdarws.com. All classes are free unless otherwise noted. For more info on these and other events, visit www.sdarws.com or call 605-556-7219.

DID YOU KNOW...

The Safe Drinking Water Act Is 40 Years Old!

2015 Marks the 40th Anniversary of the Safe Drinking Water Act (SDWA). Throughout the past four decades, significant improvements in public health have been attributed to the SDWA requirements – despite occasional regulatory disagreements. SDARWS is here to help our members not only comply with the act through training and technical assistance, but also lobby our Government along with the National Rural Water Association to negotiate reasonable accommodations with EPA on how drinking water regulations are interpreted and executed.

History of the Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.

The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids.

• The first use of chlorine to disinfect drinking water in the US was in Jersey City, NJ in 1908.

• The first regulation of the biological quality of drinking water took place in 1914 by the US Public Health Service – and only applied to interstate facilities (trains and ships)

Before the Clean Water Act, only about a third of U.S. water was safe for fishing or swimming; the rest was contaminated by sewage, oil, pesticides and heavy metals. The United States was losing up to 500,000 acres of wetlands per year, and 30 percent of tap water samples exceeded federal limits for certain chemicals.

• Public Heath Service began regulating the first 28 contaminants in drinking water in 1962, with the regulations being adopted by all states.

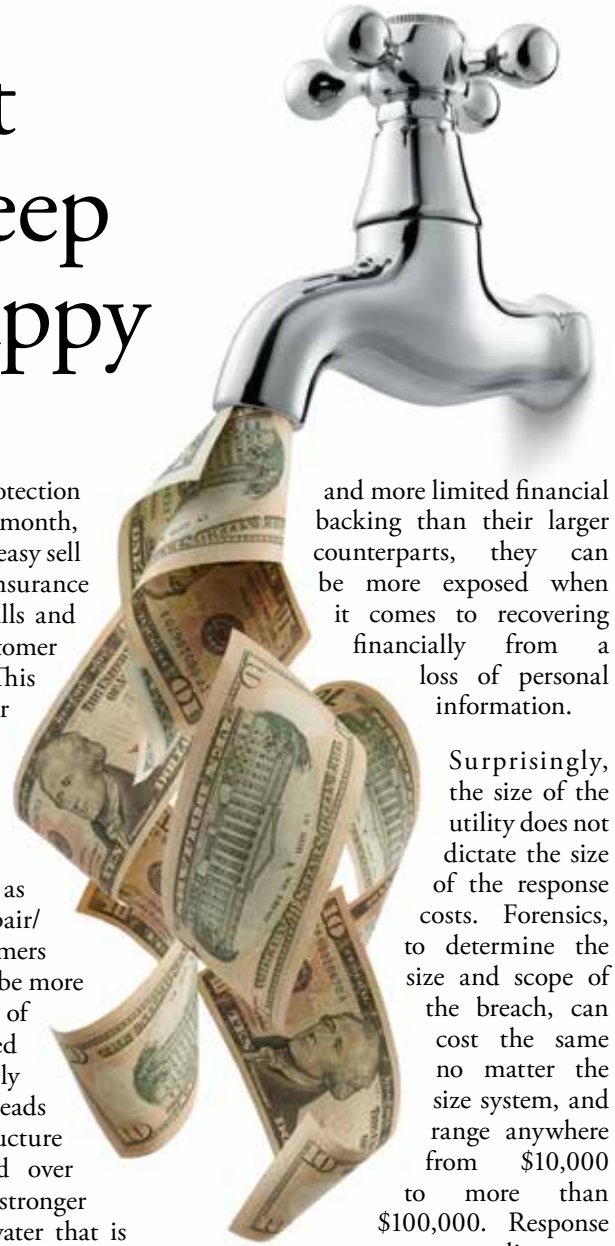
• President Richard Nixon established the EPA in 1970 in response to studies completed by the Public Health Service and events such as the Cuyahoga River in Ohio catching fire due to its high levels of pollutants.

In 1972, the Public Health Service released a treated water study taken from the Mississippi River where 36 chemicals of concern were detected. This set the stage for the development of the Safe Drinking Water Act, which was proposed in 1973 in Congress and passed into law in 1974. The first rules written under the SDWA – the National Interim Primary Drinking Water Standards – focused on coliform and turbidity. Since 1975, new rules have been added with some frequency, and the SDWA itself was amended in 1986.

Since the SDWA was put into action, an estimated 65 percent of waterways in the US now pass the fishable/swimmable test, average wetland losses have fallen below 60,000 acres per year, and, in 2011 90.7% of community water systems met "all applicable health-based standards."

In testament to both the SDWA and water utilities across the nation, the Centers for Disease Control and Prevention, and the National Academy of Engineering, has declared water treatment as one of the most significant public health advancements of the 20th century. As drinking water standards continue to evolve and change with new technologies and procedures, we raise a glass in thanks to the EPA and utilities for their accomplishments over the past 40 years.

Save Money, Protect Your System and Keep Your Customers Happy



NRWA and State Rural Water Associations are launching three new Affinity Programs designed specifically for Rural Water members. These programs offer unique services by reputable companies that will be around for the long-term to help you and your system. THIS is the "Power of Association!" Your National and State Rural Water Associations are working together to provide member utilities products, benefits and services to make all of us stronger. Every day your utility is faced with new challenges, new products, new services and it can be hard to tell which of these offerings are truly valuable. But, because of your membership in the Rural Water Family, you can be assured that the products and services offered by Rural Water Associations are of the highest quality available.

Utility Water Loss Insurance

Most water utilities have some kind of leak adjustment policy, for example a once-per-year forgiveness of half the leak cost per homeowner. This lost revenue can add up substantially, not to mention the time involved in dealing with unhappy customers. Rural Water has partnered with Sunbelt Insurance Group to provide the only insurance-backed program on the market. This service removes all cost you are spending on leak adjustments on your residential customers, and offers them the option to add protection for water and sewer line repairs. It is offered through your utility only – Sunbelt will never bypass you and market anything to your customers.

Participating is easy – utilities work directly with Sunbelt to customize the program to your needs. An introductory letter is sent to all customers explaining the program. For example, one utility was able to offer $1,000 leak protection policy per year for $1.85 per month, with no deductible. This is an easy sell to most customers. Sunbelt Insurance takes on the rest – all the calls and work associated with customer leaks, sign up and questions. This frees up your staff to do other important functions.

This program offers the lowest cost coverage for your customer, and allows them to add additional coverage such as water line and sewer line repair/ replacement coverage. Customers that choose this program will be more apt to make the right decision of repairing their lines as opposed to ignoring or not adequately repairing the problem. This leads to an improving infrastructure among your customers, and over time will make your system stronger and reduce the amount of water that is lost each year. All marketing materials help educate your customers not only to their responsibilities but also how they can protect themselves in the future. Email mark@sunbeltinsurance.com for more information.

Cybersecurity Insurance

Could your utility weather a data security breach? Small and midsize businesses are the top targets of cyber criminals, actually suffering breaches more often than their larger counterparts. A data breach can also result from something as simple as a lost flash drive. When a data breach occurs, small systems must move swiftly – not only to protect their reputation, but to assure customers that they will do everything they can to help protect their personal information. And since small utilities have fewer resources and more limited financial backing than their larger counterparts, they can be more exposed when it comes to recovering financially from a loss of personal information.

Surprisingly, the size of the utility does not dictate the size of the response costs. Forensics, to determine the size and scope of the breach, can cost the same no matter the size system, and range anywhere from $10,000 to more than $100,000. Response costs – sending out notices, call center services, and the offer of credit monitoring, can go up to $30 per record. Add to that the expense of hiring an attorney to review the breach as well – not including legal fees if a claim is involved. All told, a small system could face up to $200,000 in costs associated with breach response services.

Rural Water Cybersecurity Insurance is offered through Bailey Special Risks, Inc. Your system can secure comprehensive coverage for the expenses incurred to respond to a breach and have experts standing ready to deliver the well-coordinated response you need to mitigate financial damages and protect your reputation. The insurance encompasses forensic investigation, legal services,

...continued on page 29

LAGOONS IN DROUGHT CONDITIONS

Above: Algae bloom with shallow depth

Below: Discharge from structure from lagoon

By Jerry Hemeyer, SDARWS Wastewater Technician

If you could predict the weather this summer, it would be easy to maintain a lagoon system. Between seepage and evaporation, a wastewater pond can lose two to three inches of water per day when temperatures reach 100 degrees. In drought conditions, the water in the lagoon evaporates causing the anaerobic layer to come closer to the surface of the lagoon. Wind and waves can stir this layer causing odors to blow through the area. Since higher temperatures usually accompany a drought, water in the primary lagoon may reach temperatures of 80 degrees Fahrenheit, and the warmer the water, the less oxygen is in the water – causing the primary cell to turn septic – and smelly.

Operators know how their system operates better than anyone – but here are some tried and true suggestions that may help keep your lagoon working.

1. Discharge small amounts of water from the primary cell to the second cell. Four feet of water in the primary cell will help with treatment and odor control. It is easier to open a valve to move the water to cell two than discharge too much – requiring water to be pumped back to cell one.

2. Keep track of the water levels on the depth gauge. The main thing to remember is that the lagoon has a slope of 3 to 1; for every inch of depth lost, it will show three inches on the depth gauge.

3. Do not have a pipe half full of water going into the lagoon in winter. This could freeze the pipe and the valve making it difficult to transfer water in the colder months.

The primary cell in the lagoon system is the most important as this cell removes most of the nutrients. Keeping the oxygen and the bacteria happy in this cell should be a high priority. Records of what work was completed, when it was completed and the depths of the lagoon cells will help with continued maintenance as the summer ends.

If you have any questions about this or any other wastewater issue, please contact South Dakota Association of Rural Water Systems at 605-556-7219, and we will be happy to work with you.

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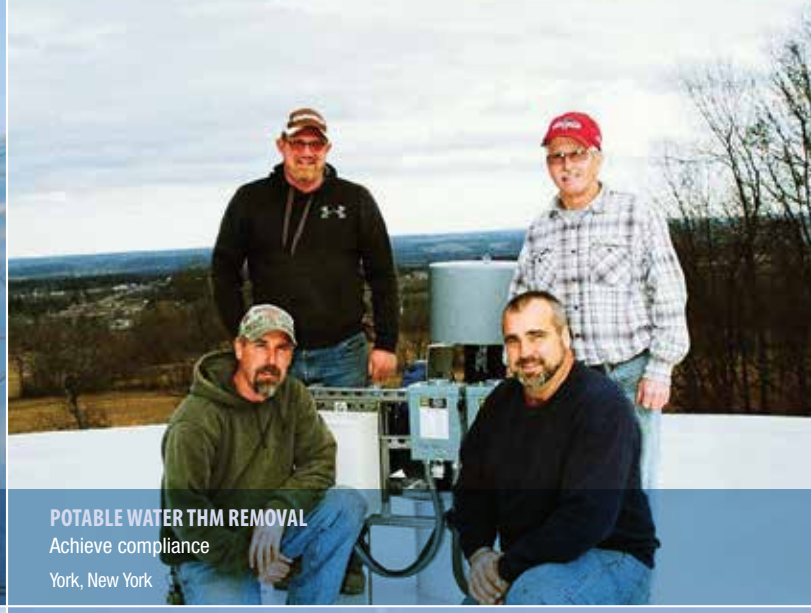

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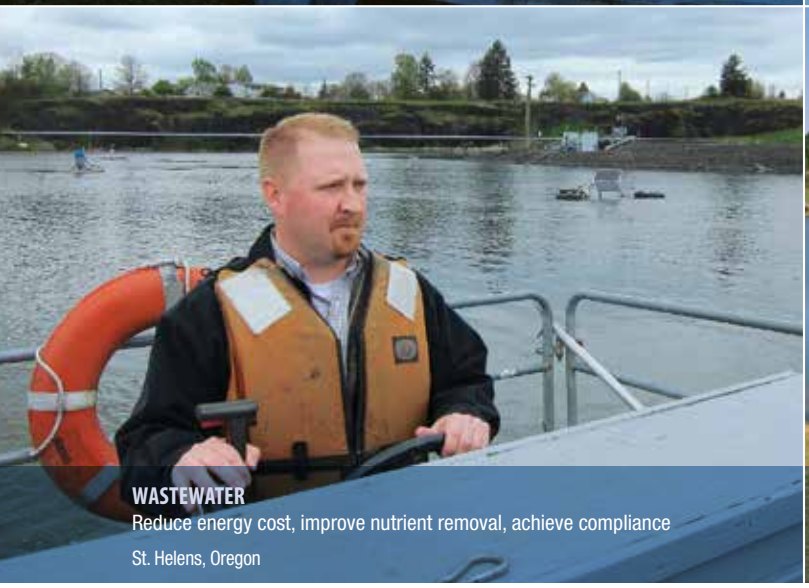
York, New York



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New Kubota/Valve Exerciser

By Nick Jackson, SDARWS Circuit Rider

Health and safety are every systems great concern to our employees, especially when it comes to exercising main valves. Valves are neglected in most water systems. As exercising them can be a back-breaking task – after a few valves, it is easy to find something else that needs to be done – leaving many of our valves un-operated and soon forgotten. It seems we are most concerned with the operation of our valves only under emergency conditions – especially in the event of a leak when mains need to be shut down.

South Dakota Association of Rural Water Systems (SDARWS) recently purchased a Hurco Spin Doctor model SD800 Valve Exerciser. This new tool offers a safe and easy solution to keep your valves in good operating condition. The valve exerciser is mounted on the rear of a new Kubota RTV-X1100C 4-wheel drive utility vehicle. The Kubota is powered by a powerful 24.8 HP, 3-cylinder liquid cooled diesel engine with a variable hydraulic transmission. The Kubota front and rear independent suspension along with a high ground clearance of 10.4 inches, allows the unit to go virtually anywhere.

The SD800 valve exerciser unit will operate most any valve from 4" to 60," capable of up to 950 ft. lbs. of torque. Equipped with an extendable boom, it has a reach of 9' allowing exercising multiple valves in close proximity without repositioning the valve exercising unit. The SD800 operates a rotation speed from 0 to 60 RPM's. By operating with gas assisted shocks, the exerciser is virtually finger tip light, and the unique design of the boom absorbs the torque from operating those tough valves – virtually eliminating worker injuries and fatigue.

During the recent flooding of the Missouri River, SDARWS was called upon to assist with the Operation Specialist of Fort Pierre with their water distribution system. Several main valves needed to be closed to isolate the distribution system into zones. Many of these valves would not turn; a few valves would turn a few times with a key, and then stop. It was back breaking work to close the valves even with the use of cheater bars.

A trial run of the valve exerciser was done in Ft. Pierre when the water department requested our assistance opening and closing various valves. After turning these valves open and closed repeatedly, the valves soon would close and open all of the way with ease. Afterwards, utilizing a regular main valve wrench, one could operate the valve with ease using one hand.

Palmer Gulch, located in the Black Hills, was the next system to utilize the exerciser. It had been many years since a lot of their valves have been turned, with the exception of a few for seasonal shut-down. Utilizing the exerciser, most of the valves turned easily. The valves that were frozen were exercised open and closed a little at a time until the valve was fully functional. One such valve was only open a few turns in the open position, after a few minutes the valve would open an additional 12 turns.

If your system would like to exercise all of your valves or even those few problem valves, please contact SDARWS and we would be happy to help.

Water Tanks and **SEVERE WEATHER**




By Erika Henderson, Pittsburg Tank & Tower Group

Severe weather can be devastating, and according to numerous weather sources – is occurring more frequently and widespread. Tornadoes are now occurring anywhere from the Rockies to the East Coast. Currently, the southern pacific coast is experiencing a severe drought, many areas in the east coast are flooded, and thousands of people were killed in the Nepal earthquake.

Severe weather does not discriminate and it can damage or destroy everything in its path – including water tanks. Necessary water supply for consumption, fire protection, and emergency needs is crucial to everyday well-being, and even more when a severe weather event occurs. Therefore, water tanks should be designed, constructed, maintained, and inspected to withstand severe weather.

Lightning strikes could cause power outages that could affect the ability to receive water.

Tanks that have experienced winter storms and freezing should obviously be inspected for damage, but seismic activity, high winds, lightening, droughts, and flooding also occur in the summer months and tanks are susceptible to damage from them as well.

High Winds/Lightning Strikes

National Fire Protection Association (NFPA) states, "Anchor bolts shall be arranged to securely engage a weight at least equal to the net uplift when the tank is empty and the wind is blowing from any direction (1)." Lightweight tanks definitely need to be anchored against high winds in areas that experience them, and elevated water tanks should have their windage rods inspected and tightened regularly to maintain winds of 150 mph, blowing from any direction.

Tanks not grounded are subject to lightening damage. Lightning strikes could cause power outages that could affect the ability to receive water. Water pumps and alarms could malfunction, or a complete tank failure could occur. NFPA 780 states, "Tanks shall be grounded to conduct away the current of direct strikes and the buildup and potential that cause sparks to ground (2)."

Drought/Flooding

When a drought occurs, aggressive water conservation measures are often taken; but tanks still need to be inspected and cleaned. To conserve precious water, Robotic Operated Vehicles (ROVs) can be used to inspect and clean tanks without draining them, thus saving the water.

Foundation damage can easily occur if tanks are subjected to flooding for prolonged periods. Tank sites should have good drainage to minimize or prevent possible foundation damage from flooding. The site design should also include provisions for draining the tank and the discharge from the tank overflow without damaging the tank site or neighboring properties.

Seismic Activity

Tanks are designed and constructed for resisting earthquake damage by complying with the earthquake design load provisions of American Water Works Association (AWWA), in accordance with its Seismic Use Group (SUG) and site class. The SUG is a classification assigned to a tank based on its intended use and expected performance; Tanks that serve multiple facilities use the highest SUG. Site class accounts for the effect of local soil conditions on the ground motion and are based on the soil present and their engineering properties as established by a geotechnical investigation. The SUG and site class help determine the appropriate freeboard and the number of anchor bolts needed. Freeboard is the distance from the Maximum Operating Level (MOL) to the lowest level of the roof framing

and is determined by the sloshing wave height that could occur (3). Freeboard is taken into consideration to prevent a tank from overturning or causing roof damage due to sloshing.

The design of the piping system connected to the tank should consider the effects of foundation movements and potential movement of the connection points during earthquakes. Sufficient flexibility should be provided to avoid release of the tank contents due to failure of the piping system. The piping system and supports shall be designed so as not to impart significant mechanical loading on the attachments of the tank. Mechanical devices that add flexibility, such as bellows, expansion joints, and other flexible apparatus, may be used when designed for the seismic displacements and defined operating pressure (4).

What to Look For

Water tanks should be inspected regularly for proper working order and stability before severe weather hits. Overhead obstructions, trees and overgrowth that could puncture or damage a tank during severe weather should be removed, and operators should routinely look for foundation, wind, and earthquake damage. Such damage on tower-supported tanks may be indicated by cracked coating or welds at the tower connections; broken, bent, or sagging rods; buckled struts; dented or twisted columns; or missing or loose rod pins. If any of these conditions are observed, the tank should be professionally inspected. In addition, tanks in areas at high risk for wind or earthquake damage should be inspected more frequently than tanks in low risk areas (5).

References

1. National Fire Protection Association, NFPA-22 Standard for Water Tanks for Private Fire Protection. 2013

2. National Fire Protection Association, NFPA-780 Standard for the Installation of Lightning Protection Systems. 2014.

3-4. American Water Works Association, D100-11 Welded Carbon Steel Tanks for Water Storage. 2011.

5. American Water Works Association, M42 Steel Water Storage Tanks. 2013.

4th Annual WATER TECHNOLOGY EXPO 2015

South Dakota Rural Water recently conducted the 4th Annual Water Technology EXPO. This event, held in Rapid City on April 29-30, was developed to provide training opportunities for Tribal, small, and rural water systems located throughout Western South Dakota.

The EXPO objectives are to provide opportunities for small, rural, and municipal water systems to gather together and network with manufacturers, suppliers, and each other and to exchange ideas on how to properly operate and maintain their systems. Over the course of this day and a half training event, attendees were provided ample opportunity to network with EXPO exhibitors. Many of the 27 exhibitors in attendance were pleased to offer their expertise to the 55 water systems represented. Total attendance topped out at 145.

Jim Urban with Milbank Winwater started the EXPO out with a presentation on automatic leak detection technology. These systems have been around for a number of years but now they are becoming more affordable for smaller systems.

The City of Spearfish brought a new ground storage tank online

in 2014. Ted Schultz with AE_2S engineering provided a history of the project with many pictures of each step along the way. Along with the tank, control valves were installed and Ted provided information on maintenance and operation of altitude valves.

John Nelson of Romac provided information on Macro and Alpha products. After a classroom presentation on the equipment, John took the group outside to demonstrate the ruggedness of the product by pressuring a pipe until it burst – without affecting the coupler.

Next, Joe Schmidt with Hawkins Water Treatment described the existence of biofilm in water systems. Joe provided attendees with different options for improving water quality.

Our last presentation before lunch was Erin Dreis from the Department of Environment and Natural Resources. She delivered a presentation on DENR's capacity development process and resources available through the department.

After lunch, Dean Aurand from Midcontinent Labs provided an entertaining presentation on Radiation and Water Quality. Dean ended his presentation by demonstrating radiation levels in products and old dishes that many of us may have in our home.

With the wide variety of systems attending the EXPO, brings with it a wide variety of treatment options. Gregg Backstrom with Treatment Resources provided an array of options for effective water treatment.

With a multitude of elevation changes in the Black Hills, control valves are prevalent. Andy Caselli of Cla-Val gave a fundamental presentation on control valve function, best maintenance practices and configuration options.

Tim Monson with HD Supply demonstrated new equipment in the water industry. One of the innovations Tim displayed to attendees was an adjustable curb stop valve riser. This innovation has been developed by a South Dakota water system. This resulted from their frustration of having sidewalks heave over winter and having curb stop risers sticking up, now utilizing this new riser they can press the curb stop down with a foot to make it level with the sidewalk.

After Tim, Michelle Barrett with Hydro-Klean provided a presentation on the importance of pre-inspection and cleaning prior to sewer projects. Michelle showed some video from sewer cameras and described advantages of pre-inspections and cleaning. Systems will receive more accurate bids by providing contractors with accurate information.

The final presentation of day one covered Bio-Augmentation, Wastewater Treatment, and Aquatic Weed Control.

...continued on page 19

EXPO: continued from page 17...

Gary Syverson with Team Laboratories educated the group on utilizing bugs to reduce unwanted biological issues in wastewater collection and treatment facilities.

Day two started with a brief overview of NRWA's new WaterPro Online Community (OLC). Dennis N. Davis, SDARWS Executive Director, provided information on the WaterPro OLC and provided enticement by offering $30.00 off next year's Annual Technical Conference registration to anyone that registers for the OLC. You can join the WaterPro OLC by going to: waterprocommunity.org

Roger King with Midco Diving providing an overview of diving services for tank maintenance and provided a checklist of items to look for in a tank diving company. He emphasized the need to identify diving companies that are accredited and utilize current safety standards.

Mitch Kannenberg with Leggette, Brashears & Grahm discussed ground water sustainability. He gave a brief overview of the fundamentals of groundwater. Next Mitch provided the group with a case study of groundwater sustainability in a North Dakota Aquifer.

Nate Bruss with CompassTool discussed options for mapping with mobile devises. Trimble offers software that can be utilized to collect data in the field with smartphones and tablets. If accuracy is desired, high precision devises are also available.

Brian Hoellein of Bartlett & West Engineering discussed the advantages of addressing equipment procurement in project design. This strategy can help systems better plan for the future and alleviate last minute design changes – thus saving money.

A relatively new product to this area was introduced by Mike Moor of Copperhead Industries. Mike discussed their tracer wire products. They are copper wire with a steel core and a more rugged plastic cover – the steel core makes them stronger and undesirable to potential copper thieves. DSG is the regional representative for Copperhead Industries.

Our final presentation of the EXPO was Ron Rappard of Utility Service Group. Ron advocated for well asset maintenance plans. He also provided information and video on Utility Service Group's rehab process that utilizes CO_2. He briefly discussed successes they have had with Brookings Municipal Utilities and Lincoln Pipestone Rural Water.

Many of the EXPO attendees were certified operators and interested in attaining mandatory contact hours to renew their certification license. With the approval of ten contact hours by Certification Secretary Rob Kittay, attendees gained valuable knowledge and assisted with the regulatory requirement for maintaining their certification status.

The EXPO would not be possible without the support from the Bureau of Reclamation and the 31 table top exhibitors. We offer special thanks for their support in bringing valuable training and professional resources that truly benefited EXPO attendees.

The 2016 Technology EXPO is scheduled for April 27 & 28 at the Rapid City Ramkota – so mark your calendar!!

IS YOUR UTILITY PREPARED TO FIGHT MISINFORMATION ON SOCIAL MEDIA?

By Heather Syverson, AE2S

Many utilities, municipalities, and businesses successfully use Facebook, Twitter, Instagram, YouTube, and other social media channels to connect and share information with their customers. When used to augment the more traditional public information methods, social media can be one of the fastest and most efficient ways to provide information to the public. A Pew Research Center study found that nearly one third of adults in the U.S. get at least some of their news from Facebook.

"Traditionally, utility companies have provided important information through scripted press releases. Traditional public information channels are still important, but utility companies should also build a social media presence on which they can communicate in modern, effective, and personal ways. It's no longer sufficient to just 'push out' information to the public. Information needs to become part of an ongoing conversation with the consumer, and social media is a perfect channel for that," says Daron Selvig, AE2S Communications Specialist.

One of the greatest benefits of going social is the ability to immediately share information on your own terms rather than waiting for traditional media outlets to broadcast your message. In fact, many savvy reporters follow businesses, utilities, and local government on social media because it's such a convenient way to receive information and news tips. "Social media has moved beyond the point of being an afterthought or a luxury for maintaining good relations with customers and the public. It has evolved into a mainstream channel of communication," says Selvig.

Unfortunately, rumors and misinformation can spread just as quickly as legitimate news. Just a few "tweets" or "shares" can kick the rumor mill into high gear, which can snowball into calls and emails from concerned citizens. For instance, during the peak of the Ebola scare in late 2014, false information spread on social media that the outbreak had reached Iowa. The Iowa Department of Public Health acted quickly and released an official statement to shut down the misinformation.

Here are some tips for combating misinformation online:

Monitor Your Accounts: It's not enough to just set up a Facebook page or Twitter account. At least one person should be designated to check the utility's accounts on a daily basis. The same person should be responsible for posting information and responding to posts. Employees who have their own social media accounts should also be encouraged to report misinformation or complaints that they spot online.

Get Ready: Identify worst case scenarios that could negatively affect your agency – water contamination, responses to rate changes, water main breaks, flooding or storm damage, etc. Create general guidelines for how the utility will respond.

#HotTopics: Be aware of what is going on in the news, your community, and your business. Hashtags are an easy way to search for specific topics on Facebook, Twitter, and Instagram. For instance, after an oil spill in Glendive, MT, many people used #OilSpill in their Facebook posts and tweets. Flood fighters in Fargo, ND have shared photos and information about flood conditions with #FargoFlood. Similarly, #MSPstorm was used after a powerful wind storm in Minneapolis. You can search specific hashtags on individual social media sites or use a website like TagBoard.com to simultaneously search multiple social media sites.

Don't Delay: During emergencies such as water contamination, uncertainty can spur people to find other sources of information about the situation. The longer an organization waits to respond, an increasing number of rumors will fill the gaps left by official channels of information such as your social media accounts.

Be Clear: Instead of saying "Mandatory water conservation measures could be in place for several days," it's better to say, "Mandatory water conservation measures will be in place for as many as ___ days. Until further notice, please limit water usage to essential use only." The second message conveys a time frame that customers can expect to be impacted along with specific instructions.

Consider Visuals: Be open to using infographics, photos, and videos to share information. An infographic could be the perfect way to explain what "essential use" means when water conservation is necessary. And simple cell phone photos or videos can be used to quickly clear up misinformation. As an example, let's say there are complaints that the public works department isn't fixing potholes in a timely manner. Posting or tweeting a photo of crews working on the problem can immediately convey the truth.

If you have questions about social media, contact Daron Selvig, AE2S' social media guru. The AE2S Communications team is comprised of professionals experienced in public information, crisis communication, video production, and social media as well as web and graphic design experts to serve a variety of clients and their projects.

SDARWS Hosts CompassTool GIS Training Classes

By Jeremiah Corbin, SDARWS Source Water Protection Specialist

For the fourth year in a row, South Dakota Rural Water has teamed up with CompassTool to provide Trimble, GPS Pathfinder and Terrasync software training. Fourteen eager individuals from nine different rural water systems attended the two day course; this spring there were two separate session. The first session was held in Madison and the second at Mid-Dakota's water treatment plant near Pierre.

The course provided attendees with a five step approach to a successful GPS collection project:

- Field Reconnaissance
- Mission Planning
- Equipment Setup
- Data Collection
- Data Processing

The field reconnaissance step involves planning the project. This involves creating the project within the Pathfinder office software. To start this process, the trainees first build a data dictionary which amounts to a description of the objects to be collected for a particular project or job. It is used in the field to control the collection of the spatial and attribute information about these objects. Once the data dictionary is created, attendees then learned how to transfer it to their Trimble hardware to use with the Terrasync software.

In the mission planning step, attendees learned how to use Trimble office software to plan for the optimal time to start a project by viewing where satellites will be at any particular time of a project.

For the equipment setup phase of the training, Mitch Tweedy, the Trimble Certified trainer from CompassTool walked the attendees through each setting on their Trimble unit. The settings covered include: logging settings, GNSS settings, real-time settings, coordinate systems, units and external sensors.

During data collection the classroom learning is put to the test out in the field. Data processing occurs after the data collection step and involves downloading the data that was collected in the previous step and post-processing it to insure the most accurate points possible.

The field activity gave the attendees many opportunities to have one-on-one time with the instructor to iron out specific issues. One of the best features of this two day course is the balanced mix of hands on field activity with class lecture time. The largest amount of lecture time occurred on the first morning where students learned the fundamentals of GPS and best practices for improving data accuracy.

As in past years, the class attendees left with confidence to operate the high precision GNSS. If you have Trimble equipment and would like to attend a comprehensive training session, please contact Jeremiah Corbin at 605-556-7219 or email jcorbin@sdarws.com.

Daugaard Announces Nearly $83.2 Million for Environmental Projects

Gov. Dennis Daugaard says the state Board of Water and Natural Resources has approved nearly $83.2 million for water and waste projects this past March.

The $83,176,482 total includes $14.1 million in grants and $69.1 million in low-interest loans, with $2.9 million of the loan total in principal forgiveness.

"I am pleased to announce that this money is available to assist local communities," said Gov. Daugaard. "Grant and loan awards will result in better drinking water, improved wastewater treatment and enhanced protection of the environment."

The grants and loans awarded by the board are administered through the Department of Environment and Natural Resources (DENR).

Grants were awarded to:

DENR, $350,000 grant for waste tire and solid waste cleanup program

SECOG, $500,000 grant for regional solid waste and recycling loan program

Loans were awarded to:

- Canton, $1.550 million loan for drinking water source improvements
- Howard, $1.764 million loan for lagoon expansion project
- Kennebec, $1.16 million loan for wastewater system improvements
- Northville, $140,000 loan for storm sewer improvements
- Sioux Falls, $31.45 million total for two loans that provide $11.4 million for a Brandon road pump station force main, $18.53 million for outfall sewer replacement and $1.52 million for nonpoint source improvements in the Big Sioux River basin

Loans with principal forgiveness were awarded to:

- Brandon, $15.425 million total includes a $3 million loan for sanitary sewer improvements and a $12.425 million loan for drinking water system improvements, with $500,000 in principal forgiveness
- Buffalo, $1.695 million for drinking water system improvements, with $600,000 in principal forgiveness
- Tyndall, $1.57 million loan for drinking water distribution and storage upgrades, with $200,000 in principal forgiveness
- Woodland Hills, $481,000 loan for drinking water distribution system improvements, with $384,800 in principal forgiveness

Grant and loan packages were awarded to:

- Big Sioux Community Water, $3.014 million for a project to deliver drinking water to Madison that includes a $2 million grant and $1.014 million loan
- Clark, $5.485 million total for a wastewater treatment facility that includes $3 million grant and $2.485 million loan
- Hosmer, $1.268 million total for wastewater system improvements that includes a $300,000 grant and $968,000 loan, with $714,400 in principal forgiveness
- Humboldt, $2.086 million total for sanitary sewer collection and treatment that includes a $1,668,800 grant and $417,200 loan
- Ipswich, $3.951 million total for wastewater system improvements that includes a $2 million grant and $1.951 million loan
- Lennox, $2.433 million total for Main Street storm sewer and sanitary sewer improvements that includes a $560,000 grant and $1.873 million loan
- Lesterville, $53,000 total for water meter replacement that includes a $26,500 grant and $26,500 loan
- Minnehaha Community Water Corporation, $1.8 million total for a systems improvement to deliver water to Big Sioux Community Water that includes a $900,000 grant and $900,000 loan
- Sioux Rural Water System, $4.515 million for water system improvements and to add new customers that includes a $2 million grant and $2.515 million loan
- Waubay, $1.78 million total for wastewater treatment facility improvements that includes a $700,000 grant and a $1.08 million loan, with $500,000 in principal forgiveness
- Wessington Springs, $702,000 total for Main Street infrastructure improvements that includes a $50,000 grant and $393,000 loan for sanitary sewer lines and a $50,000 grant and $209,000 loan for water mains

The grants, loans and principal forgiveness were awarded from DENR's Consolidated Water Facilities Construction Program, Drinking Water State Revolving Fund Program, Clean Water State Revolving Fund Program and Solid Waste Management Program.

The Consolidated Water Facilities Construction Program, funded in part by revenues from the sale of lotto tickets, provides grants and loans for water, wastewater and watershed projects. The Solid Waste Management Program provides grants and loans for solid waste disposal, recycling and waste tire projects. The Legislature annually appropriates dedicated water and waste funding for the Consolidated and Solid Waste programs through the Governor's Omnibus Water Funding Bill.

The Drinking Water State Revolving Fund Program provides low-interest loans for public drinking water system projects. The Clean Water State Revolving Fund Program provides low-interest loans for wastewater, storm water and nonpoint source projects. Principal forgiveness is a subsidy option that results in a reduced loan repayment amount for the borrower.

Test your knowledge
with these certification practice questions

1 How many cubic feet of water are in a 6 inch pipe 10,000 feet long?

a. 0 cubic feet
b. 1962.5 cubic feet
c. 2,457.3 cubic feet
d. 14,679.5 cubic feet

2 How many gallons of water are in the above 6 inch pipe?

a. 0 gallons
b. 1962.5 gallons
c. 2,457.3 gallons
d. 14,679.5 gallons

3 How many lbs of bleach (0.8 % pure) would it take to disinfect the pipe above to 50 mg/L?

a. 91 lbs
b. 765 lbs
c. 1235 lbs
d. 13,453 lbs

4 If the bleach solution you are using weighs 8.4 lbs/gal, how many gallons of bleach solution would be needed?

a. 91 lbs
b. 765 lbs
c. 1235 lbs
d. 13,453 lbs

5 If after 24 hours your chlorine residual is 32 mg/L what is your chlorine demand?

a. 18 mg/L
b. 32 mg/L
c. 50 mg/L
d. 0 mg/L

6 Minimum pressures in a distribution system should never be allowed to drop below?

a. 20 psi
b. 40 psi
c. 60 psi
d. 76 psi

7 Which of the following is a member of the Total Coliform group of Bacteria

a. Vibrio cholera
b. Entamoeaba coli
c. E. coliform
d. E. coli

8 What chemical can be used to dechlorinate drinking water?

a. HTH
b. Vitamin C
c. Vitamin D
d. Potassium Permanganate

9 What is the MRDL for Chorine and Chloramine?

a. 0.3 ppm
b. 0.8 ppm
c. 2.5 ppm
d. 4 ppm

10 When do you monitor for MRDL?

a. Daily
b. Weekly
c. Every time you take a Total Coliform Rule Sample
d. Every time you take a Disinfection By-Product Sample

Answer Key

1) B 2) D 3) B 4) A 5) A
6) A 7) D 8) B 9) D 10) C

compliance & public relations services, breach notifications, call center servicing, and credit & identity monitoring. This insurance program is designed specifically for water utilities and is offered exclusively through Rural Water. To obtain coverage, simply have your insurance broker contact Bailey Special Risks by calling 800-768-7475 or email questions@bsrins.com.

Rural Water Impact

Need a great website for your town or water systems? Rural Water Impact has you covered. This great company understands Rural Water and is focused on taking the headache and hassle out of creating and maintaining a website. Customized for the industry, this turnkey website solution features professional design, low cost investment, unlimited customer support, fast launch, free conversion, and best of all, you can easily edit the content yourself.

As high-speed internet service continues to expand into rural areas, more and more of your customers will prefer to go online for utility information and/or to pay their bills. A public website allows you to post up-to-date information and can even help your utility to maintain compliance. Customers have 24/7 access to your forms and reports, rates and policies, alerts, news and conservation tips, and bill payment information. By making all this information available online, you increase customer satisfaction and minimize the support calls you receive. Also, posting documents online instead of sending them out by mail saves postage, often enough to pay for your website many times over. Furthermore, offering online bill payments (optional) helps streamline your collections. Check out www.ruralwaterimpact.com or email shelly@ruralwaterimpact.com to see how your new website can work for you.

For more information on these valuable programs, check www.nrwa.org or contact SDARWS at 605-556-7219.

NEW WATERPRO ONLINE COMMUNITY

Dennis N. Davis
Executive Director

A utility manager stares at the computer monitor in his small utility office. There's a stapled packet of receipts and purchase orders for a newly-purchased pump on one corner of the desk. On the other: a stack of wastewater logs and TMDL documents printed from the EPA website.

Across the country, a wastewater superintendent is searching for pricing information on a new pump. On the corner of the desk sits a stack of reports that detail how a few procedure changes helped them meet new TMDL regulations.

In the past, these water professionals might only meet by chance at a national conference – if they ever met at all. A simple meeting could unlock valuable knowledge and experience in their overlapping areas of interest. Today though, the WaterPro Community gives these professionals a chance to network online, to ask questions and exchange experiences for the benefit of their utilities.

"Today's world is an online world," explained NRWA CEO Sam Wade. "Professional networking is no longer limited by time or geography: the Internet allows water professionals from all over the world to share their valuable knowledge and experience."

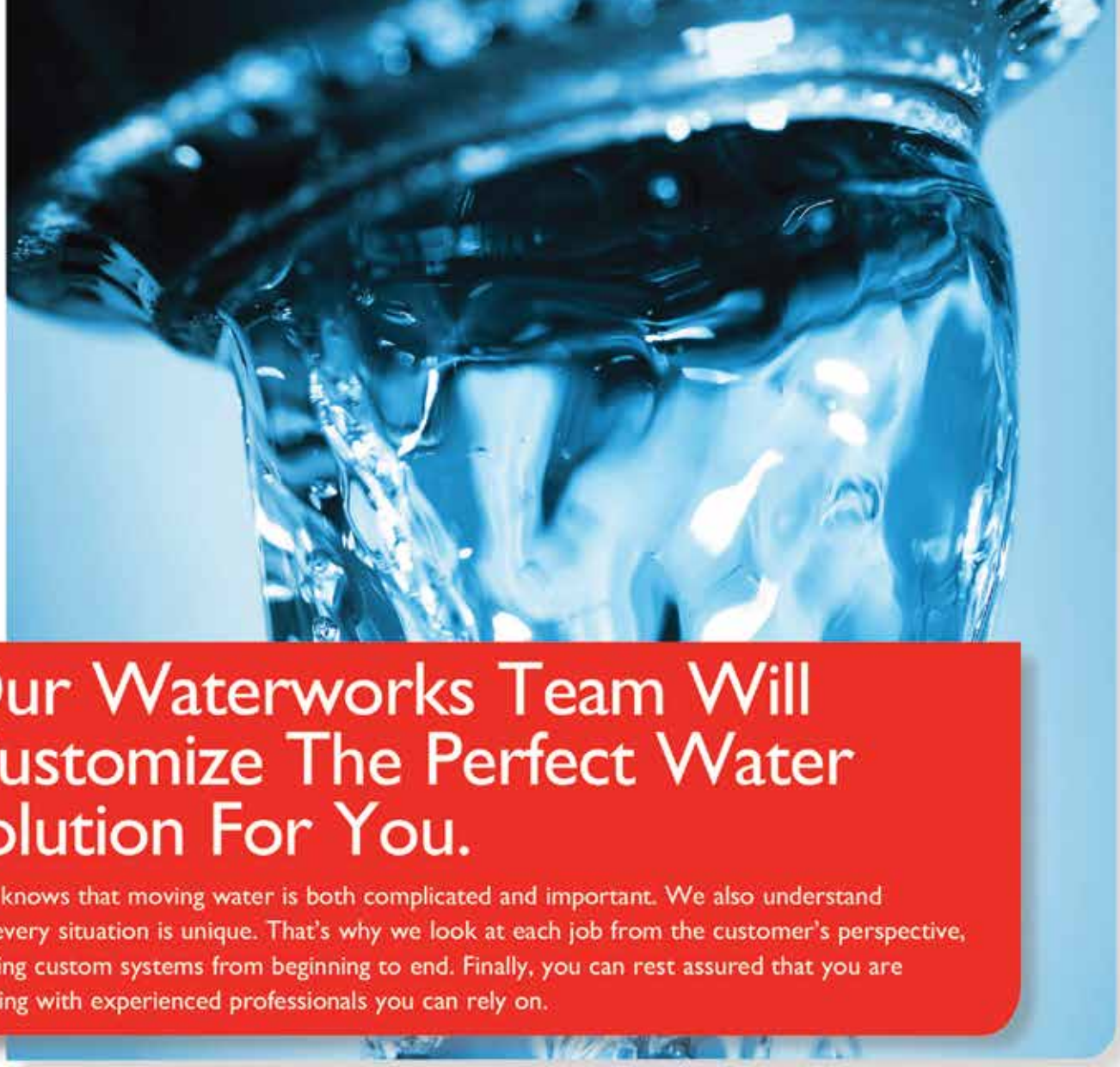
WaterPro Community forums provide more than a simple question and answer session or a quick networking session. These discussions collect into persistent, categorized, and search-able institutional knowledge – a question need only be answered one time for all members. These forums have the power to put the knowledge and experience of life-long water professionals at each member's fingertips.

The power of the WaterPro community is that it combines the power of several, commonly used tools into a single, easy-to-navigate platform. These tools include forums, blogs, file libraries, wikis, and networking tools. The community platform gives members one login to access the full array of tools. Additionally, it adds a layer of search and tag functionality that makes finding information easier than ever. A simple search for "Arsenic," for example, could yield blog posts on new arsenic regulation and new remediation technology, forum discussions about systems' experience dealing with arsenic, sample presentations on how to deal with arsenic, and links to webinars on arsenic reduction.

The WaterPro Community blogs will focus on regular updates on industry issues, ranging from technical operations to regulations and compliance. Expert authors share regular new links, insight, and analysis on various industry topics. Various subscription options ensure members are always up-to-date on the latest news in their favorite topic area. WaterPro Conference blogs also have commenting options that allow members to continue the discussion, to ask questions, and to increase learning.

File libraries are a community warehouse of documents, files, videos, and presentations. They can include everything from training presentations to official documents. The file libraries will grow dependent on the interest from the members, but could include utility documents, including sample work orders and job descriptions or a sample boil order notice.

A WaterPro Community membership also includes a free NRWA membership, which provides access to other benefits and discounts. The primary benefit is that NRWA members are helping support National's efforts to support continued utility funding, sensible regulations, and protection of water resources. NRWA members also receive special discounts on NRWA events, webinar events, and other vendor deals. This membership also includes a free subscription to Rural Water magazine, and access to special interviews with decision makers in the water industry.



Our Waterworks Team Will Customize The Perfect Water Solution For You.

DSG knows that moving water is both complicated and important. We also understand that every situation is unique. That's why we look at each job from the customer's perspective, creating custom systems from beginning to end. Finally, you can rest assured that you are working with experienced professionals you can rely on.

Hassle-free service from beginning to end.

Working with multiple suppliers can be frustrating. When it comes to water and wastewater systems, DSG offers you the entire package and we'll continue to work with you long after installation is complete.

- **One call takes care of it all.** As part of our wide breadth of products, we offer quality water pumps and pipes. From collection to pumping to treatment, we make sure that your water flows properly.
- **You're in control.** We'll design electrical control and monitoring for your systems, giving you everything you need to keep things running smoothly.
- **We're here for the long haul.** After installation is complete, you can count on our team to keep your system running smoothly for years to come.

The right water solutions starts with the right team. Call DSG today!

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South Dakota Rural Water
203 W. Center Street
P.O. Box 287
Madison, SD 57042

Engineering America

CASE STUDY

24-Year-Old Tank Installed in 1987 Gets Stunning Facelift

Installed: 1987
Client: Rochester Public Utilities
Location: Rochester, MN
Tank Type: Aquastore® Glass-Fused-to-Steel
Storage Capacity: 1 Million Gallons
Contractor: Engineering America

PROJECT OVERVIEW:

Aquastore glass-fused-to-steel tanks never need to be sandblasted and painted. However, after decades of use, some customers wish to clean up the tank cosmetically. The tank can **remain in service** during the thorough power washing, as well as during fillet replacement and installation of nut covers.

Engineering America worked with the city of Rochester, Minnesota, to give their water storage tank a "facelift" after **24 years**. The interior and exterior cleanup provides extra life to the tank and gives it a "like new" appearance.

Engineering America's professional service team power washed and cleaned the tank exterior walls, removed existing sealer and replaced it with new polyurethane sealer, then installed white HDPE plastic covers over exterior nuts and washers. This highly cost-effective process produced a refreshed looking tank in Rochester.

"We're pleased with how the project turned out."

Doug C. Rovang, P.E.
Senior Civil Engineer
Rochester Public Utilities

Power Washing, Fillet Replacement and Nut Covers

THINK TANK • *think process*

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