

APRIL 2017

ServiceLine

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



WEST RIVER EXPO AGENDA | NEW SDARWS EMPLOYEES



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President's Message

Ron Gillen, SDARWS President



Water Technology EXPO

South Dakota Rural Water is pleased to host the 2017 Water Technology EXPO. The EXPO will be held in Rapid City at the Best Western Ramkota Hotel and Conference Center (605-343-8550) on April 26-27, 2017.

The EXPO is open to all water and wastewater utility staff, board/council members, engineers, State and Federal employees. The training will consist of twenty presentations, 30 minutes each, thus allocating ten contact hours for those individuals who are licensed operations specialists. Along with the training sessions, the EXPO will showcase many of our industry's manufacturer and supplier leaders. These professional companies will be set up in the main EXPO training center for attendee easy access and to provide answers to those pressing questions. Many will be displaying the recent advances in technology our industry has witnessed over the past several years.

The EXPO will kick off at 8:00 am Wednesday April 26th and conclude at noon on Thursday, April 27th with lunch provided on the first day. Registration is \$40, and SDARWS is able to bill for this fee after the conference. Please pre-register by visiting our website at www.sdarws.com/west-river-expo.html. The full agenda can be seen on page 11.

2nd Annual Fishing Tournament

SDARWS will be hosting a fishing tournament in Oacoma on Saturday, April 29th at the Cedar Shores Resort on Lake Francis Case. This tournament is limited to the first 50 teams of 2-3 fishermen, and is open to current water/wastewater, associate or corporate members of SDARWS. The cost is \$100/team and includes lunch. More information can be found on page 35.

Fleet Program

The National Rural Water Association has created partnerships with the Ford Motor Company and the Chrysler Group to offer special fleet discounts to State Rural Water Associations and their utility system members. This partnership combines the buying power of 31,000 individual utilities to provide reduced fleet pricing on utility vehicles.

The Rural Water Ford Fleet Program is a valuable member benefit for water and wastewater utilities. State Rural Water Associations determine eligibility for their members, and provide a fleet code that allows access to substantial vehicle discounts to fill the need for reliable work vehicles.

Member utilities should contact their State Rural Water Association to access the Rural Water Fleet Program. Vehicles may be purchased at your local dealer or through the national fleet auto group at www.nrwafleet.com. Incentive discount pricing is available on fuel efficient cars, vans, SUVs and trucks. Systems can save up to \$6,750 off factory invoice per vehicle.

- Entities must be current members of South Dakota Rural Water to be eligible
- There is no limit to the number of vehicles that can be purchased under the program
- Incentive pricing is deducted off the factory invoice
- Fleet vehicles must be in service for a minimum of 12 months or 20,000 miles
- Vehicles must be registered and operated in the United States
- Call SDARWS (605-556-7219) today to get your Fleet Identification Number.

ServiceLine

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Training Calendar

APRIL

25-27 – BASIC WATER TREATMENT

Sioux Falls Water Purification Plant

2100 N. Minnesota Avenue, Sioux Falls, SD 57104

This course covers the Association of Boards of Certification “Need to Know” requirements for the Class I & II Water Treatment Exams. Class begins each morning at 8:00 a.m. local time and wraps up around 4:30 p.m. on Tuesday and Wednesday and approximately 11:30 a.m. on Thursday.

26-27 – WEST RIVER EXPO

Rapid City Ramkota

2111 N. LaCrosse Street, Rapid City SD 57701

This 1-1/2 Day event includes presentations and features exhibit displays. Lunch is included on day 1. \$40/registrant. Registrants will be billed for registration after the event, or may pay by check at the event.

MAY

4 – SUSTAINABLE MANAGEMENT OF RURAL & SMALL SYSTEMS WORKSHOP

Lennox City Hall

107 South Main Street, Lennox SD 57039

Participants will conduct a guided self-assessment of their system and identify areas for improvement that are critical to success at your utility. This self-assessment will help you prioritize actions when resources are limited. You will also learn from other utilities who have faced similar challenges.

The workshop focuses on ten key management areas of effectively managed utilities, which make up a framework for a complete and well-rounded management approach. By making operational improvements in any of these areas, your utility will be able to deliver increasingly efficient, high quality services to your community

MAY

9 – SMALL WATER TREATMENT

Huron Crossroads Hotel

100 4th Street SW, Huron, SD 57350

This course covers the material on the Association of Boards of Certification Small Water Treatment Exams. This is a single day workshop starting at 8:30 a.m. local time and wrapping up around 4:30 p.m.

11 – SMALL WATER TREATMENT

Rapid Valley SD/WS

4611 Teak Drive, Rapid City SD 57703

This course covers the material on the Association of Boards of Certification Small Water Treatment Exams. This is a single day workshop starting at 8:30 a.m. local time and wrapping up around 4:30 p.m.

16-18 – ADVANCED WATER TREATMENT

Lewis & Clark Regional Water Plant

31474 SD Hwy 19, Vermillion SD 57069

This course covers the Association of Boards of Certification “Need to Know” requirements for the Class III & IV Water Treatment Exams. Class begins each morning at 8:00 a.m. local time and wraps up around 4:30 p.m. on Tuesday and Wednesday and approximately 11:30 a.m. on Thursday.

**REGISTER
FOR CLASSES
ONLINE AT:**

go.activecalendar.com/sdarws

Course agendas, maps and registration are all available online at 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.

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John Willis, wastewater plant supervisor, Ventura, California



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James A. Brown, water production manager, Newton County, Georgia



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Curtis Rooth, foreman, Sewer Dept., Cromwell, Connecticut

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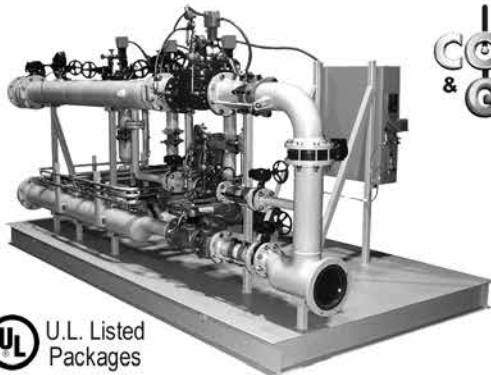
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ARTICLE SUBMISSIONS

Does your company have information to share that would be of value to our readership? If so, we would welcome your article submission for *ServiceLine Magazine*.

To send us an article, please email: jbame@sdarws.com.

NOTE: SDARWS reserves the right to refuse any and all article requests.

MAKE PLANS TO ATTEND



April 26-27, 2017

**BEST WESTERN RAMKOTA HOTEL
2111 NORTH LACROSSE STREET
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Contact Hours • Door Prizes
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REGISTER ONLINE

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April 29, 2017

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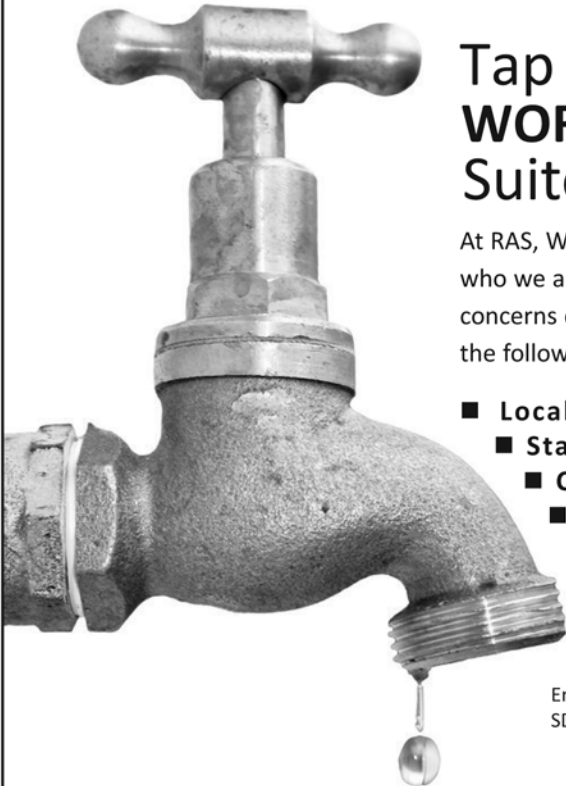


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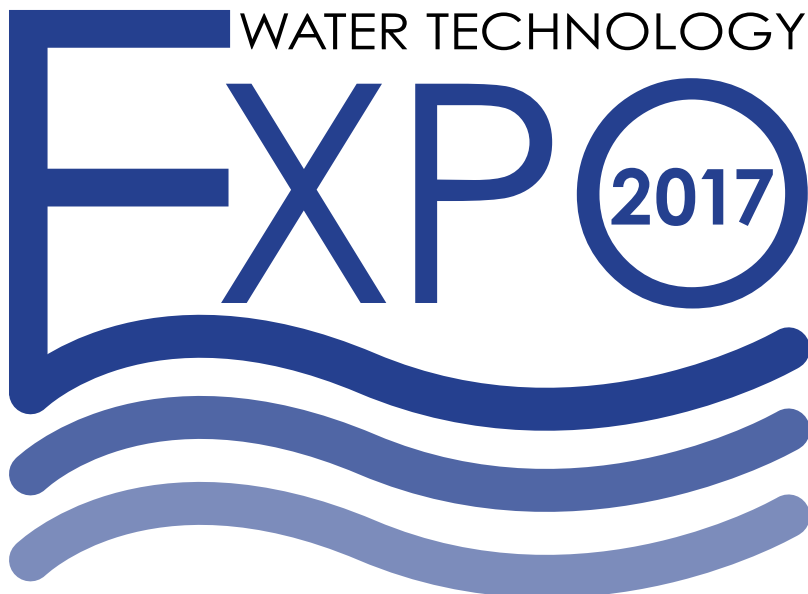
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Door Prizes • Lunch

\$40 Registration Fee

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west-river-expo.html](http://www.sdarws.com/west-river-expo.html)



April 26-27, 2017

BEST WESTERN RAMKOTA HOTEL - RAPID CITY

Wednesday, April 26, 2017

7:30am **Registration – Refreshments – Visit Displays**

8:15am **Welcome, Agenda Review**

8:30am **Internet Access to Your Laboratory's Database**
– Dean Aurand, Mid Continent Testing Labs, Inc.

9:00am **Using Ice to Pig Water and Wastewater Force Mains**
– Nichole Grasma, SUEZ

10:00am **Refreshment Break – Visit Displays**

10:30am **How Chlorine Storage and Heaters Don't Mix**
– Al Hansen, Hawkins Water Treatment

11:00am **Addressing Lead & Copper**
– Erin Dreis, SD DENR

11:30am **Gas Chlorine Head and Ejector Maintenance**
– Bruce Barnett, Regal Chlorinators

12:00pm **Deli Bar Buffet Lunch**

1:00pm **Ground Storage Tanks**
– Rob Gravett, Great Plains Structures

1:30pm **Tank Maintenance**
– Rich Kemmis, Maguire Iron

2:00pm **Assistance in Hiring Guard and Reserve Members**
– Lona Christensen, ESGR

2:30pm **Refreshment Break – Visit Displays**

3:00pm **The Basics of Submersible Pumps**
– Bob Reinmund, Grundfos

3:30pm **Accessing your GIS data in the Field**
– Justin Huntley, Banner Engineering

4:00pm **New Technologies in Leak Detection**
– Michael Carothers, Leak Locators of Montana

4:45pm **Door Prizes – Adjourn**

Thursday, April 27, 2017

7:30am **Coffee, Juice, & Rolls**

8:00am **RD Programs & Requirements**
– Tim Potts, USDA Rural Development

8:45am **Ever Changing Trenchless Rehabilitation**
– Michelle Barrett, Hydro-Klean

9:30am **Refreshment Break – Visit Displays**

10:00am **Radio Nuclei Treatment Options**
– Ted Schultz, AE2S

10:30am **Potable Water Tank Mixing & Aeration for Better Water Quality**
– Darrin Tessier, Medora

11:00am **Alternative Wastewater Treatment System**
– Justin Petersen, Clark Engineering

11:45am **Door Prize – Adjourn**

This is a tentative agenda. Topics and times are subject to change.

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Click on the logo to return to sdarws.com

Click here to search for classes based on keywords, locations or dates

Choose how many classes to see

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View classes as a summary, calendar, or list (shown) AUGUST 27, 2015 - NOVEMBER 25, 2015

Tuesday, September 1, 2015

Intermediate Water Treatment - Brookings
Starts: 9/1/2015 8:00 AM (CT)
Ends: 9/3/2015 11:30 AM (CT)

Click on the class title for details and registration info

email a class to a friend

Tuesday, September 29, 2015

Hydrant & Flushing Workshop - Rapid City
9/29/2015, 8:30 AM - 4:00 PM (MT)

tweet class to your Twitter followers

Wednesday, September 30, 2015

Hydrant & Flushing Workshop - Oacoma
9/30/2015, 8:30 AM - 4:00 PM (CT)

share a class with your Facebook friends

SHARE IT

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Subscribe and be the first to know when new classes are available

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enter how many people you are registering and then click REGISTER

Name	Description	Quantity	Update
Intermediate Water Treatment - Brookings	Topics covered include: wastewater lab testing & microbiology; activated sludge, trickling filters, sludge handling; anaerobic digestion; aerobic digestion, sludge land application, sedimentation, stabilization ponds; distribution, DMR's Surface Water Discharge Permits and advanced wastewater treatment math. Day 1 & 2 - 8:00 a.m. to 4:30 p.m.; Day 3 - 8:00 a.m. to 11:30 a.m.	<input type="text"/>	Update

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YOU MAY ALSO LIKE

Keywords: water intermediate water treatment certification Brookings ← similar classes shown here

ADDITIONAL INFO

Attachments: Intermediate Water Treatment Agenda ← Agendas can be found here

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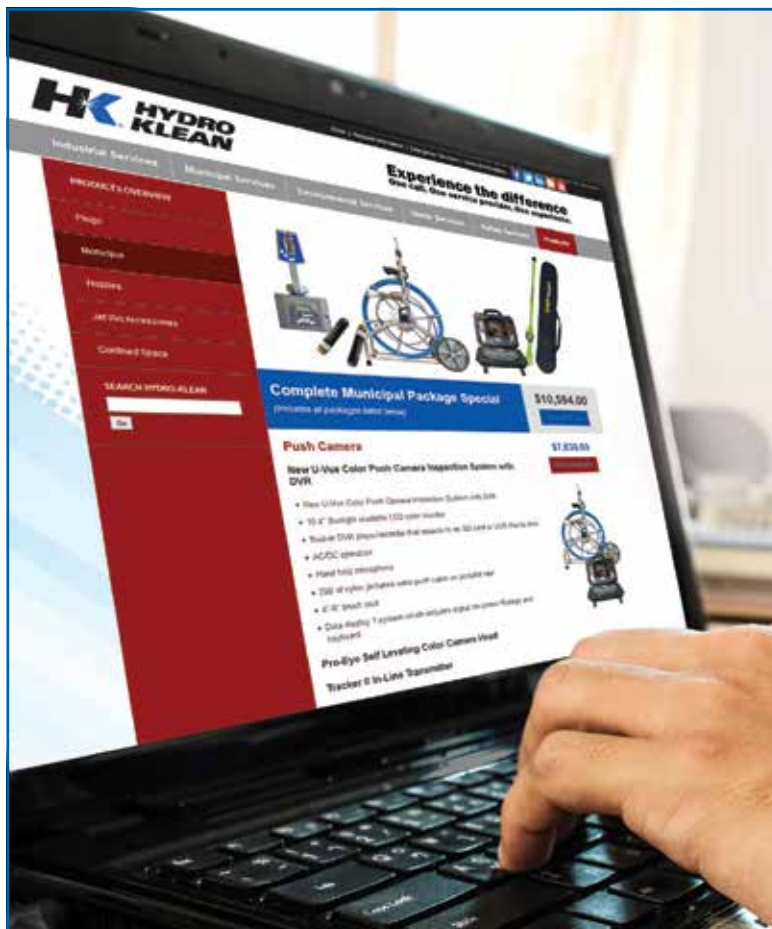
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RURAL WATER



Q: What is an illegal discharge?

A: Any time water leaves the sanitary sewer system, it is a violation of the South Dakota Sewer Discharge Permit. The Environmental Protection Agency (EPA) in Denver requires this permit. The state of South Dakota oversees these permits with approval of the EPA.

The proper way in an emergency to discharge is in this order

1. First, protect the system from backing into homes.
2. The permit requires a call to the South Dakota Department Environment and Natural Resources (DENR). The phone number is in the permit.
3. Take a sample. If you do not have a sample package buy a bottle of distilled water, empty it and take a sample. Remember the sample must arrive at a lab and analyzed within 24 hours.
4. Record what action was taken and why. For instance, the system had five inches of rain in three hours causing the sewer system to overflow. The duration of the discharge is a requirement of the permit. Make sure the public is aware that the water you are pumping may be contaminated and that the proper steps to protect the public. DENR is required to receive a copy of the report with an explanation of solutions that may solve the problem in the future.

DENR understands that a system cannot do anything about six inches of rain in a short period. On the other hand, smoke testing or televising the sewer system gives the regulatory and insurance company confidence that the system is trying to fix the problems that are occurring.

Q: What is a Sanitary Survey?

A: Drinking Water Program staff with Department of Environment and Natural Resources (DENR)

conduct sanitary surveys of public water systems every three years. The survey is an on-site review of the water source, facilities, equipment, operations, and maintenance.

Among the main reasons and benefits of a sanitary survey is that it allows the inspector to work with the system operator to:

- evaluate and document a public water system's ability to provide a safe and reliable water supply
- identify any deficiencies that may adversely impact the delivery of an adequate quality and quantity of safe drinking water
- identify existing and potential sanitary risks to help water systems protect public health, and
- determine compliance with drinking water regulations

Q: What would you recommend to water systems that want to develop a Wellhead Protection Plan?

A: Operations Specialists and Managers should seek technical assistance in identifying the requirements of wellhead protection and the source water assessment process. Contacting adjacent landowners to discuss the need for protection and management is also a good idea. Secondly, take the information provided by the Source Water Assessment Program and SDARWS to heart, find out what it means, realize the effects of what is around you, and act accordingly. Talk to SDARWS and DENR to get a better understanding of your water resources - or even your Water Development Districts. The EPA's 5-step process for wellhead protection planning is also another good resource. If your system would like to develop a Wellhead Protection Plan, please give our Source Water Protection Specialist Jeremiah Corbin a call at 605-270-3894. ♦



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STAY SAFE WHEN WORKING WITH CHLORINE

What is Chlorine?

The chemical symbol for elemental chlorine is Cl. Chlorine gas is not explosive or flammable, but as a liquid or gas it can react violently with many substances. Chlorine is slightly soluble in water. As a gas it has a greenish-yellow color and has a characteristic disagreeable and pungent odor, similar to chlorine-based laundry bleaches and is detectable by smell at concentrations as low as 0.02 to 0.2ppm. It is about 2 ½ times as heavy as air. Consequently if chlorine gas escapes from a container or system, it will seek the lowest level in the building or area.

Liquid chlorine is amber in color and is about 1 ½ times as heavy as water. Chlorine is seldom seen as a liquid because it boils and converts to a gas at about -30° F at atmospheric pressure.

Responding to a Leak

Self-contained breathing apparatus (SCBA) and appropriate protective suits are required when responding to a leak. If chlorine is escaping as a liquid from a cylinder or a ton container, align the tank so that the leaking side is up. In this position the chlorine will escape only as a gas, greatly minimizing the leak.

If a valve is leaking through the valve outlet, install an outlet cap with gasket and open and close the valve. Sometimes this will clean the stem seat and stop the leak. After closing the valve, remove the outlet cap and check for leaks. If the leak will not stop, put the outlet cap back on and notify the chlorine supplier.

When the packing gland is the source of the leak, first close the valve and then tighten the packing nut. If it still leaks, make sure the valve is closed and re-tighten the packing gland. Care must be taken when tightening the packing gland. Over tightening may bind the valve or strip the threads and it will not close or open. Testing for leakage must be repeated after every attempt to stop the leak. Fifty foot-pounds of torque should stop most leaks.

If the source of the leak is at the valve threads, use a crowfoot wrench from the appropriate Chlorine Emergency Kit to

tighten the valve into the container. Care should be taken to avoid stripping the threads. Do not tighten the valve if its integrity is in question. Application of other suitable devices from kits to cap leaks or use of a cylinder containment vessel may be necessary.

Regular training with SCBA and the use of appropriate emergency kits or cylinder containment vessels is essential. Comply with all applicable local, state, and federal regulations relating to both training and response requirements.

First Aid for Chlorine Inhalation

When responding to a leak, chlorine inhalation is one of the health risks. If this happens, prompt action is essential. Remove the exposed person to fresh air and summon professional medical assistance immediately. If breathing has ceased, begin artificial respiration. Trained personnel should administer oxygen as soon as possible.

If breathing, the person should be placed in a comfortable position, either seated in a chair or, in severe cases, lying down with the head and body trunk elevated at a 45- to 60-degree angle. Encourage the person to take slow, deep, regular breaths. Administer oxygen as soon as possible. Keep the person warm and at rest.

Use these tips to keep you and your employees safe from chlorine accidents:

- Extensive Operator Training
- Securing/locking devices on tank loading lines
- Check lists that your operator must complete before each chemical delivery is accepted.
- Change the fittings on the loading lines to different sizes or types.
- Color coding and labeling of process lines and fittings. ♦

Chlorine, Effects on Health and The Environment: The Chlorine Institute, Inc. 3rd Edition – November, 1999.

Water and Wastewater Operators Chlorine Handbook: Edition 1 March 1999.

SDARWS LEAK DETECTION TRAILER USED TO SUPER CHLORINATE A WATER MAIN

By Mike Moeller, SDARWS Circuit Rider

South Dakota Rural Water Association (SDARWS) was contacted by a rural water system to assist with the chlorination of a water main. The water main had been sitting for five years without any use or maintenance done on any portion of the line. The water main was going to be put back in operation and needed to pass a Bac T test before it could provide water to consumers.

The water main we were called to service contained 7.8 miles of 12 inch pipe, 9.42 miles of 14 inch pipe, 38 hydrants and 50 air release valves. SDARWS informed the owner of the water main that they should first check all the air release valves to make sure they were still operational, operate all the main line valves, operate all the hydrants for proper operation, and then directionally flush the system to bring it back up to operating pressure. SDARWS also requested that the system isolate zones

of the water main and to install a pressure gage on the isolated zone as a form of leak detection to make sure there wasn't a big leak on the water main. The reason for not wanting a big leak is so that when the line is super chlorinated the big leak would use up all the chlorine before it can pass through the entire pipe. The rural water system performed all the tasks that SDARWS recommended and were soon ready for the super chlorination procedure.

SDARWS and the rural water system met at the chlorine injection site with the SDARWS leak detection trailer and 400 gallons of 12.5 percent liquid chlorine. While on site we had a discussion on how many milligrams of chlorine per liter of water should the line be dosed at. After we ran some calculations, we came to the conclusion that 300mg/l would be the best dosage, and would take six hours to feed the chlorine into the water main at a rate of .84 GPM with a 450 gpm available flow rate of water from the system.



Leak detection trailer hooked up to pump station and hose running to the chlorine injection point.



Chlorine being pumped from the leak detection trailer to the injection point.



Chlorine being transferred from 55 gallon drums to holding tanks in the leak detection trailer.

After the 400 gallons of chlorine was injected into the water main, it was a waiting game because at a 450 gpm flow rate into the beginning of the main it would take 24 hours for the super chlorinated slug to pass through the 17 miles of pipe before it would be completely flushed out through the other end.

SDARWS and the rural water staff came back the following

morning and started to work from the discharge end of the water main and checked chlorine levels in the main at points along the way. After the 300 mg/l slug was found, we then continued to work back to the point of injection to make sure the slug was six to seven miles in length like was planned. The trailing end of the super chlorinated water was found with the total length of slug being seven miles long.



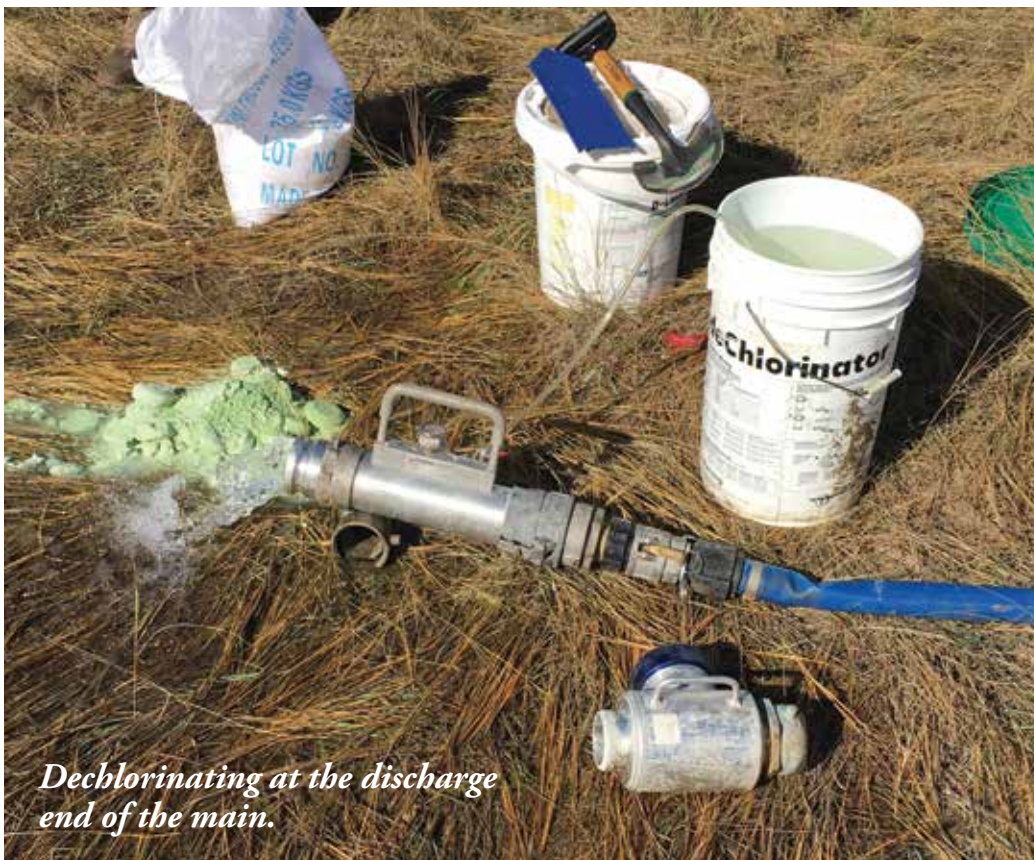
Checking for chlorine residual along the main



300 mg/l sample taken from water main

Now that the super chlorinated slug had been located it was time to go to the discharge end and remove the tablet dechlorinator to switch it out with SDARWS's big dechlorinator – a venturi-style set up that when water flows through it draws a dechlorinating liquid made up of water and sodium thiosulfate, a granular-type

that dissolves well in water and reacts with the hypochlorite (the active ingredient). The reaction with the hypochlorite causes the water to become oxidized to sulfate. The dechlorinating liquid is set at a dosage with a needle valve; the dosage is set by testing for chlorine residual in the water discharging the chlorinator.



Dechlorinating at the discharge end of the main.

The dechlorinating process was planned to take seven hours to pass through the dechlorinator, but due to location where the dechlorinator was set up, it took longer. The flow rate had to be dropped to 150 gpm, so in turn the dechlorination process was tripled in time since the flow rate was only one third of the original flow rate.

All the super chlorinated water was discharged and the line was left to sit for 24 hours. The line then had two samples taken from it at two different points, and was sent in to the State Health Lab in Pierre for testing. Both samples passed and the line is now in use and is supplying water to users.

If your system needs assistance with super chlorination, please give us a call at 605-556-7219.◆



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WATERTOWN FARM SHOW

By Jeremiah Corbin, SDARWS Source Water Protection Specialist

The 72nd annual Watertown Farm Show was held February 7-11, 2017 at the Watertown Expo Building and Fieldhouse. For the last several years South Dakota Rural Water has occupied a booth to provide outreach and educational material, promoting source water protection and general information for all things Rural Water. The 2017 farm show booth provided the traditional materials and Hershey's Kisses to commemorate Valentine's Day. Sioux Rural Water hosted a booth space next to SDARWS's booth to provide information specific to their system. This has been a great venue for Sioux to interact with members and answer their questions regarding water quality and other service related issues.

The farm show attendees came to the rural water booth with many good questions. Questions ranged from concerns about private well safety, a handful of individuals asked about signing up to their local water systems, concerns about septic systems, and agricultural nutrient management. Several visitors had a desire to discuss buffer strips and the advantages they hold in maintaining water quality.

The Watertown Farm Show has provided an opportune venue to meet with the agricultural community. Held at a slow time for most producers, the show is typically well attended and lends itself to be a comfortable place for an exchange of ideas.

If your system is interested in promoting source water protection at an event, contact South Dakota Rural Water at 605-556-7219 for more details. ♦

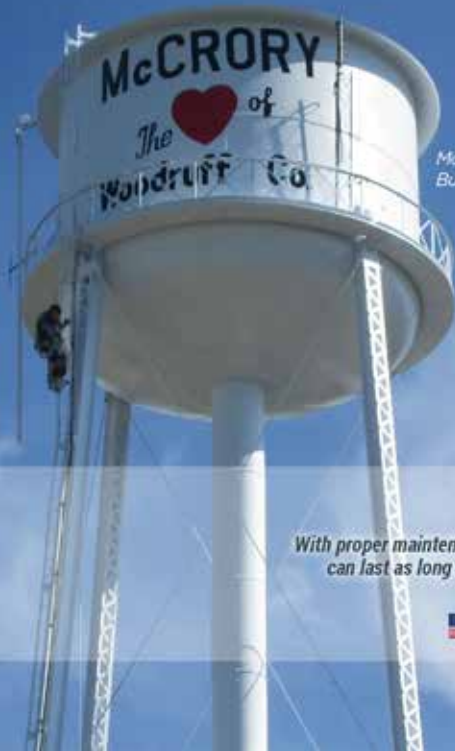


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- December 2017
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This is the time of year we need to start to think about smoking the sewer system. August, September and October are usually the best time of year to smoke test. Why is that?

1. Dry ground shrinks the dirt causing cracks that allow the smoke to appear.
2. This gives the winter to look at the data retrieved to determine how to fix the problem areas.
3. Much of the summer work, swimming pools, street work, grass mowing, and celebrations are ending.

A smoke test takes planning. You just don't pick a day and smoke test. After date is set, a Public Notice is sent to the paper, and paper hangers are put on resident's doors to inform the public what the smoke testing is about. Because smoke

may enter homes and business during the procedure, it can cause a panic if this step is not taken. It is important that the system promote the smoke testing in a positive manner. This procedure is not meant to harm the residents, but make sure that their home is safe from sewer gas. If smoke enters a home, sewer gas may be causing health problems, and smoke testing helps find these problem areas.

Smoke testing is one of the most efficient and cost effective ways to locate and identify the source of an inflow or infiltration problem. It is important to find and identify these sources because they may seriously affect the efficiency of the wastewater treatment facility and increase operating expenses.

If you would like me to assist in the smoke testing procedure please give me a call at 605-201-0170, and I can get your system scheduled. ♣



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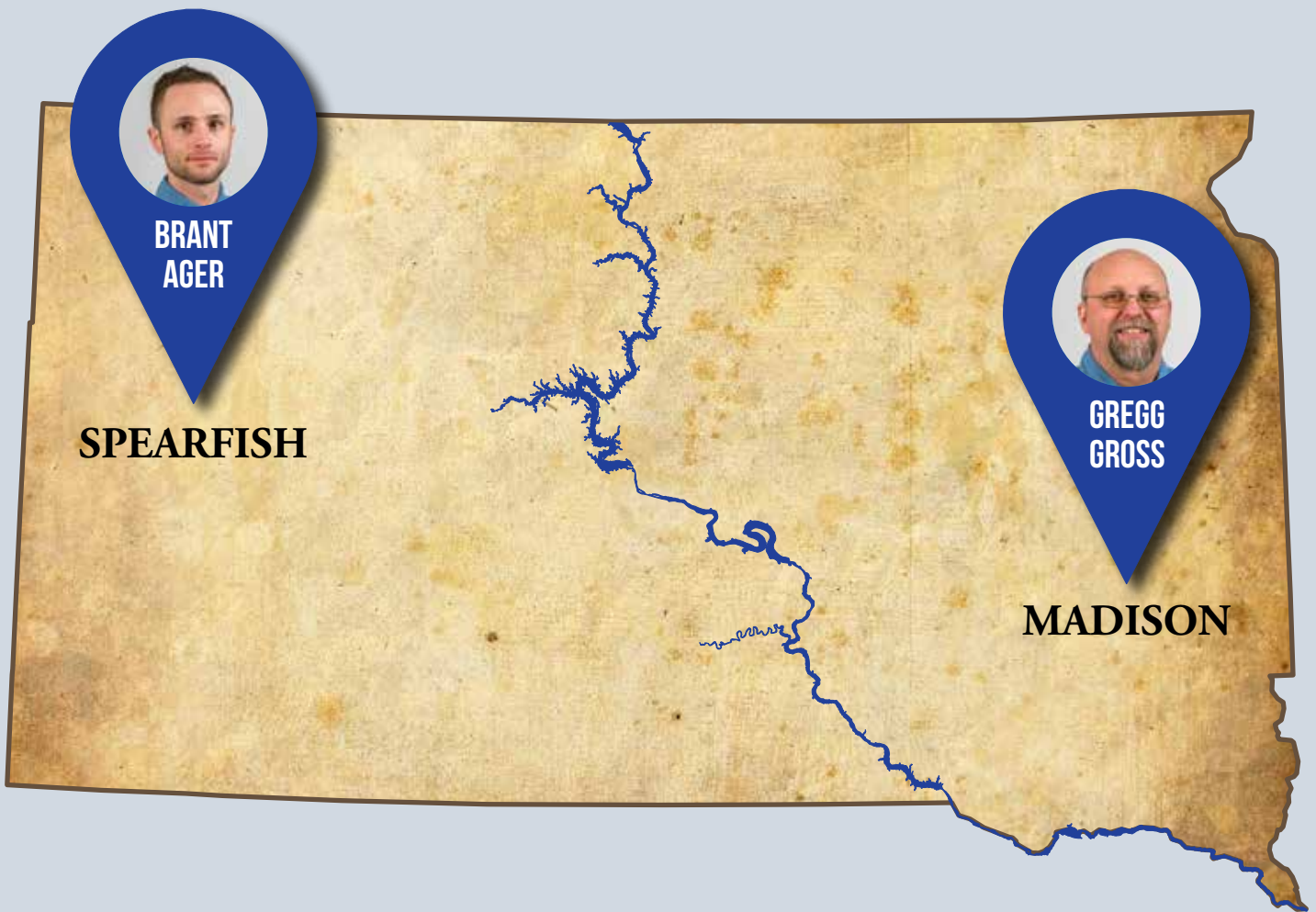
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MEET OUR NEW CIRCUIT RIDERS

South Dakota Rural Water has recently hired two new Circuit Riders – one on each side of the state. Brant Ager comes to SDARWS with eight years of experience in both water and wastewater in Belle Fourche, and a short two months in the City of Spearfish Water Department. "I am looking forward to working with the best in the state at what we do. I am also looking forward to a whole new set of experiences in our field of work when it comes to individual water and wastewater systems of South Dakota," says Brant. He has a Water Distribution II, Water Treatment I, Wastewater Collection II, and Small Pond Stabilization certificates.

Brant is a member of the Connection church of Belle Fourche, and his hobbies include being a dad, and blacksmithing. He also used to race sportbikes in Colorado with the MRA. His family includes his Fiancé Molly, two-year-old daughter Delila, and two-month-old son Lincoln. They reside in Belle Fourche. Brant is based out of our Spearfish office and will be assisting systems on the west side of the state.

Greg Gross has joined the staff at SDARWS with a little over

four years of hands on water and sewer experience, and over five years building water booster stations and sewer lift stations for Dakota Pump in Mitchell, SD. "I am most excited about being outside and traveling all over the state meeting new people and helping in any way I can to resolve water problems," says Greg. His hobbies include: water skiing, hunting, house renovating and singing. He also enjoys officiating junior high and lower level basketball games. He and his wife Melody have three grown children; twin girls Bethany – a First Lieutenant in the United States Air Force, and Brigitte, a music major who will be getting married this summer, and a son, Andrew, who is the assistant women's basketball coach at Dakota State University. Greg is a licensed firearms dealer and he and his wife enjoy going to gun shows and sporting events all over the state. His certifications include: Small system-stabilization pond, Class I Water Treatment, Water Distribution and Wastewater collection. Greg is based out of our Madison office and will be assisting systems on the east side of the state.

Please join us in welcoming these two individuals into the SDARWS family. ♣

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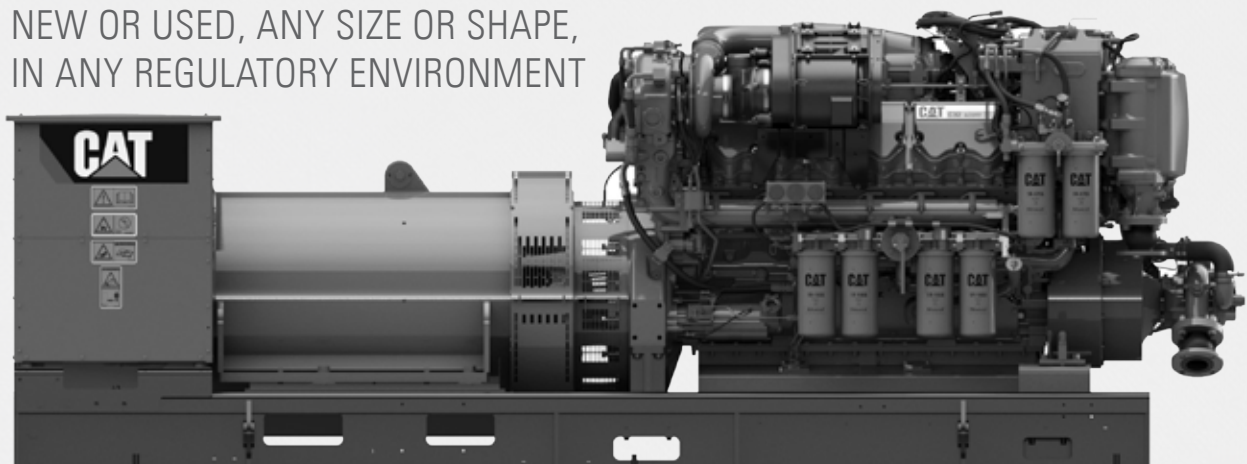
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Sid Munson Retires from SDARWS

It is with mixed feelings that we announce the retirement of Sid Munson. He will always be remembered as a hardworking, committed, and friendly person. Sid began his journey with South Dakota Rural Water in 2000 as a Circuit Rider. Building on his 22 years of expertise as a water/wastewater superintendent for the City of Tea, Sid traveled all around the state providing training and technical assistance to rural water systems and communities. In 2008 he was moved into the position of Training Specialist. Utilizing his teaching degree, he helped develop training materials and conducted certification training courses throughout the state. In 2013, he took on the challenge of developing a safety training program for the regional rural water systems in South Dakota, and spent much time on the road educating operations specialists on safety procedures.

Sid has been a great asset to our association, and his kind spirit and water expertise will be greatly missed. Thank you Sid for your time and talent over these past 17 years. Your efforts have helped improve the quality and safety of water systems throughout South Dakota. We hope that you find much success and happiness in retirement (with plenty of opportunities to hit the links). Don't be a stranger – we very much expect to see Team Munson at the Rural Water Open. ♠



SDARWS HOSTING SUSTAINABLE MANAGEMENT WORKSHOP IN LENNOX

SDARWS will be hosting a Sustainable Management of Rural and Small Systems Workshop on May 4, 2017 at the City Hall in Lennox (107 South Main Street). At this workshop, participants are introduced to the ten key management areas for small and rural water and wastewater systems. Participants will be asked to conduct a short self-assessment of their operations in relation to the management areas and identify management improvement opportunities at their systems based on the assessment. The workshop further provides an opportunity for participants to share experiences from their systems to better understand how to implement improvements and have a basis for working with staff and community members to operate more effectively. Resources will be made available to participants to help them implement the improvements identified during the assessment.

By making improvements in any of the ten key management areas through methods outlined in the Workshop in a Box and the Guidebook, at a pace consistent with their most pressing challenges, systems will be able to deliver increasingly efficient, higher-quality services.

Participants will conduct a guided self-assessment of their system and identify areas for improvement that are critical to success at your utility. This self-assessment will help you prioritize actions when resources are limited. You will also learn from other utilities who have faced similar challenges.

The workshop focuses on ten key management areas of effectively managed utilities, which make up a framework for a complete and well-rounded management approach. By making operational improvements in any of these areas, your utility will be able to deliver increasingly efficient, high quality services to your community.

These workshops will help utilities address a full range of challenges and improve the management of their operations and infrastructure:

- **How to deliver increasingly efficient, and high quality services**
- **How to improve long-term sustainability and increase resiliency**
- **How to use the Rural and Small Systems Guidebook to Sustainable Utility Management to make improvements at your system**

These workshops are geared towards small water and wastewater systems and finance officers, mayors, city council members, and water/wastewater management are all encouraged to attend. If your city/system is interested in attending, please call the SDARWS Madison office at 605-556-7219, or Trainer Steve Attema at 605-270-1766. 💧

WORKSHOP AGENDA

MAY 4, 2017 | LENNOX FIRE HALL

8:00 AM Sign-in/Registration

8:30 AM Introductions and Workshop Objectives

8:45 AM Session 1: Overview of Key Management Areas – Presentation

- Presentation of Key Management Areas
- Group Discussion: Other Important Management Areas for Sustainability

9:15 AM Session 2: Utility ‘Self Assessment’ Exercise

- Explain “Sustainable Management Self Assessment”
- Participants Conduct Self Assessment
 - Rate utility achievements and rank management priorities
 - Plot results: achievements vs. priorities
- Table Discussion Among Participants About Results
 - Where is your utility strong? Why?
 - Where is there the most room for improvement? Why?
 - What are your areas of focus?
- Why are they a priority?
- Why is performance low?
- Technical capacity?
- Financial capacity?
- Managerial capacity?
 - What are the commonalities and differences among table participants’ achievements, priorities, and challenges?

10:10 AM Break

10:25 AM Session 3: Plenary Discussion – Self Assessment Results

- Tables Report Out
- Synthesize Results

11:30 AM Lunch Provided

12:30 PM Session 4: Table Exercise – Improving Outcomes

- Each table completes an improvement worksheet for one low achievement/high priority management area.
- Discussion Questions:

- What will constitute “high achievement” in this management area?
- What changes will the utility need to make to improve performance?
- How could you track your performance progress?
- What will be the biggest challenges to performance improvement?

1:15 PM Session 5a: Plenary Discussion – Practices, Tools, and Measures: Result

- Tables Report Out
- General Discussion of Findings

1:45 PM Break

2:00 PM Session 5b: Plenary Discussion – Practices: Results

- Synthesis of Table Discussion Results
- Local Assistance Available in Key Management Areas
- Presentation of Additional Tips, Tools, and Measurement (prepared before the workshop during the “Prepare Meeting Materials” phase)
- Reflections: Key Lessons Learned and Near Term Steps
 - Discuss Utility Management Improvement Plan

3:15 PM Session 6: Feedback Session

- Participants Complete Workshop Evaluation Form
- Are these the right management areas, and how to improve?
- Is self assessment useful, and how to improve?
- Are tools and tips useful, and how to improve?
- Are measures useful, and how to improve?
- Overall rating of format, flow, presenters, etc.
- Collect Evaluation Forms

04:00PM Adjourn



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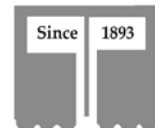
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1 What is the primary origin of coliform bacteria in water supplies?

- a. Natural algae growth
- b. Industrial Solvents
- c. Animal or human feces.
- d. Acid Rain

2 Which of the following chemicals is used to soften water through chemical precipitation?

- a. Calcium Hydroxide
- b. Calcium Bicarbonate
- c. Calcium Chloride
- d. Calcium Sulfate

3 Which of the following chemicals decreases corrosion rates?

- a. H₂S
- b. CO₂
- c. CaCO₃
- d. O₂

4 Which of the following should be used by an operator to test for residual chlorine?

- a. DPD (N, N-diethyl-p-phenylenediamine)
- b. Cresol Red
- c. Methyl Orange
- d. Sulfuric Acid

5 Which one of the following is a major part of a Turbidimeter?

- a. Objective nosepiece
- b. Reference Electrode
- c. Aspirator
- d. Light Source

6 As water temperature increases, the disinfection action of chlorine will

- a. Increase
- b. Decrease
- c. Double
- d. Indeterminate as it also depends on the pH

7 The iron content of raw water is 1.81 mg/L. What is the percent removal if the finished water contains 0.11 mg/L iron?

- a. 17%
- b. 20%
- c. 60%
- d. 94%

8 Alkalinity consists predominantly of which of the following?

- a. Bicarbonate, Carbonate, and Hydroxide
- b. Carbon Dioxide and Bicarbonate
- c. Carbonate and Carbon Dioxide
- d. Carbonate, Carbon Dioxide and Bicarbonate

9 What is the log removal or inactivation required for viruses?

- a. 1.0 log
- b. 2.0 log
- c. 3.0 log
- d. 4.0 log

10 Which of the following will most accurately measure 500 ml of solution?

- a. 500 ml beaker
- b. 500 ml Erlenmeyer flask
- c. 500 ml graduated cylinder
- d. 500 ml volumetric flask

Answer Key

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



NRWA STATEMENT ON PRESIDENT'S BUDGET

DENNIS N. DAVIS, EXECUTIVE DIRECTOR

The President's budget eliminates the USDA water and waste loan and grant program, which has been the lifeline for rural water and small communities across Rural America. Instead, the Administration is placing its confidence with the EPA State Revolving Loan Funds. This demonstrates the lack of knowledge of what is most effective in funding the majority of the nation's water and wastewater infrastructure.

There are approximately 52,000 community water supplies in the nation, of which 92% serve less than 10,000 population. In 2016, USDA Rural Utilities Service dedicated their funding exclusively to Rural America – 85% of projects were for small communities, with populations of 5,000 or less. The USDA Water and Environmental Program is a vital lifeline for rural residents funding the water infrastructure we rely on today.

We support the President's call for increased investments to address aging and dilapidated infrastructure. However, this proposal guts the USDA infrastructure budget which has funded rural infrastructure for the past 70 years. USDA has

the only water infrastructure programs specifically targeted to rural populations.

Private financing is not the solution and does not provide affordable terms for rural communities. Rural areas include lower-income, working class families with higher populations of retired residents and veterans on fixed incomes. This budget will not work for these rural Americans.

Shifting the federal portion of available financing to the EPA is unworkable, when data documents approximately 75% of SRF funding goes to systems serving over 10,000 population.

If the President is serious about assisting small and rural communities with infrastructure funding, he should utilize the USDA water programs that have a proven record in effectively and efficiently serving Rural America.

The National Rural Water Association is the largest water utility organization in the nation, with over 31,000 members. NRWA members provide safe and affordable water and wastewater services to over 34 million Americans in rural areas. ♦



Cedar Shores Marina OACOMA, SD

APRIL 29TH, 2017

Registration

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TOURNAMENT WINNERS ANNOUNCED SHORTLY AFTER
WEIGH-IN RESULTS ARE COMPILED





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