ServiceLine

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



SDARWS Assists City of Delmont After Tornado Devastates Town



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President's Message

Ron Gillen, SDARWS President



t is an honor and privilege to be elected by the South Dakota Rural Water Board of Directors to be the Association's President for the next year. I joined Aurora-Brule's board and began my tenure on the Association's board in 2008. While serving as a SA Director, in 2013, I was elected to serve as Secretary, and am now looking forward to growing our Association while serving as President.

Being a voice for SDARWS and Rural Water is a challenging and rewarding endeavor. If you were wondering where we are headed under this leadership, it would be best described as steady forward. I believe the demographics in this state are changing. We must recognize the needs of not only the Class A members, but those of all South Dakotans. You might ask what I am suggesting. All federal funding is either going away or at risk of significant reductions. We have to figure out how to sustain or improve our infrastructure and grow our influence in the water world on our own.

We are in the position to lead the industry with our resources and staff. Knowledge and experience is key. Being able to pass this on to our constituents through training and technical assistance can influence funding and regulatory agencies reliance on our abilities. We want to be the first organization they call if they need help.

In the last few months, I have heard that systems are asking what are they getting for their membership dues. It is disturbing that our member directors are not seeing the big picture. A single system may be in a good financial position and have the equipment and staff to serve their users, but can they muster and sustain the lobbying effort both at the state and national arenas? This is just one of many attributes of SDARWS and being a member of an association.

As the year continues, this will be only one of many issues we look at and talk about. Everything we do is intended to move the Association's mission forward and serve the needs of our member systems. Nothing else matters.

Mueller Water Products to Host Class

South Dakota Rural Water and Milbank Winwater will be hosting training provided by Mueller Water Products training van on July 30th at Lake Area Tech in Watertown. Participants will be able to physically see the interworkings of the different items covered in the training. The workshop will cover a variety of different products in the water industry including hydrants, hydrant security devices, gate valves, corp. stops, curb stops, service fittings, meter valves, meter boxes, butterfly valves, leak detection, automated flushing systems, service saddles and repair clamps. This class will cover a lot of material for a one day class and will definitely be worth your time. You can register online at sdarws.com.

Golf Tournament

I hope you will consider joining us on July 21st for the 29th Annual SDARWS 4-Person Scramble Golf Tournament at Elmwood in Sioux Falls. This 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 sdarws.com, by emailing golf@sdarws.com, or by calling 605-556-7219. More information on the golf tournament can be found on page 30. We hope to see you on the course! ♠

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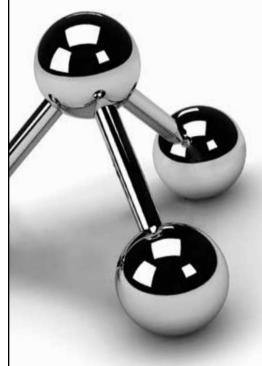
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Events Calendar

JULY

21 **SDARWS Rural Water Open**

> Elmwood Golf Course 2604 Russell Street – Sioux Falls, SD

30 **Hydrant & Distribution Workshop**

> Lake Area Technical Institute 1201 Arrow Ave. NE – Watertown, SD

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

> Davs 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 605-367-7092

OCTOBER

20-22 Wastewater Collection/Water Distribution

Ramkota Hotel 2111 North LaCrosse Street – Rapid City, SD 605-343-8550

NOVEMBER

17-19 Basic Water Treatment

Sioux Falls Water Purification 2100 N. Minnesota Ave. – Sioux Falls, SD 605-373-6940

DECEMBER

17-19 Basic Water Treatment

Sioux Falls Water Reclamation 4500 N Sycamore – Sioux Falls, SD 605-367-8188

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Coming Soon!

SDARWS is transitioning to a new online class registration software... soon you will be able to search for upcoming classes based on topic, date and location, add classes to your calendar with the click of a button, set up email reminders and alerts - and share classes on social media. Stay tuned for more details!

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.



The Legal Side of Wastewater Treatment

Reprinted with permission from Wisconsin Rural Water By Chris Grob - Wastewater Trainer, WRWA

The new Sanitary Sewer Overflow (SSO) rule requires that each municipality review their operation and maintenance plans for their collection systems. One requirement of the SSO rule is for each municipality to establish a Capacity Management Operation and Maintenance (CMOM). There has been many questions on this document and the DENR has covered all the aspects of the plan on their website, and in training sessions across the state. One of the more important parts of the plan is determining the legal authority of the municipality, and in that section is the review of your sewer use ordinance. This document is very important, and very few operators have ever reviewed theirs.

The first step in reviewing your sewer use ordinance is finding it and printing it off! Amazingly sometimes this is the hardest part to accomplish. In my travels I have only seen two or three sewer use ordinances easily available to an operator. The easiest way to get yours will be to get a copy from your clerk, director or village president. I assume they have a copy, and they know that you are assigned to review it for your CMOM. A review does not necessarily mean you are going to change the ordinances, you are strictly reading over the document and making notes as to what has to be updated and added.

Begin by reading over your ordinance with a highlighter in your hand. You will first highlight the dates the ordinance was written and last updated. Now when I say updated, I don't mean the last time someone looked at it. I mean really went through the ordinance and made some changes or improvements. You will find that this could have been a long time ago. Realistically, you should review and update your ordinances every few years. Remember that there is a question on this in your Compliance Maintenance Annual Report (CMAR). They ask if your ordinance has been reviewed in the last three years or not.

As you go through your ordinance, look for the items that you have been seeing in your collection system. Do you see a Fats, Oils and Grease (FOG) program? How are private laterals handled? Establish that only authorized personnel are allowed to open manholes or other accesses to the collection system. Have you found any "flushable" wipe problems in your system?

"Flushable" wipes have not been around that long and very few systems have addressed them. I always tell every operator I meet to at least establish that "flushable" wipes are a big problem and should be addressed in the sewer use ordinance.

You will find other areas that need updating, deletion or addition. Remember that the changes you make have to allow the operation and maintenance of your collection system to minimize wear of the system and maximize the efficiency of the system. The problems you have been seeing will determine the areas you want or need to address. You may also have a sewer use charge in your ordinance which should definitely need updating. I have found too many systems that are not charging enough fees to cover even the cost of operations.

After you have gone through your ordinances, you should discuss your work with your co-workers for their input. Sometimes you need a second set of ideas to cover everything. At that point you will want to discuss your changes with your director, president and board. They will have to have enough information to make any decisions on the changes you are proposing.

After you have talked to everyone involved, most likely the city will have to consult a lawyer. Your sewer use ordinance is a legal document and there are hoops to jump through and rules to abide by.

When the ordinance is up to date it is much easier to update in the future. The most important aspect to the sewer use ordinance is to establish the legal baseline for your collection system. For example, if you want to control FOG, you must use your determined FOG program from your ordinance to enforce grease traps, dumping grease or other problems. You cannot enforce a problem without addressing the problem in your ordinances.

Your CMOM is due to be done by August 1, 2016, and now isn't too early to begin working on it. There are quite a few other things to get together and work on, but reviewing your sewer use ordinance is one of the most important things to do. Even with a CMOM due date pushing you, it is very important to keep the legal side of wastewater treatment up to date. If you need more help with sewer use ordinances, CMOM or other issues, please call South Dakota Rural Water at 605-556-7219.





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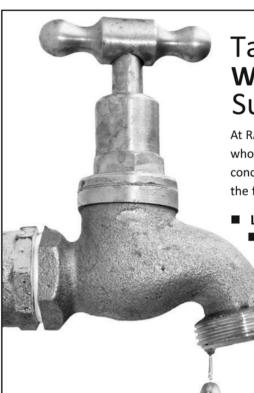
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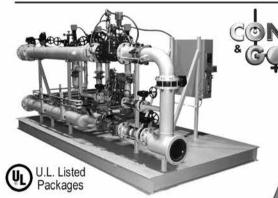
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Helpful Apps for Utility Management

here are many tools available today that a system operations specialist may find useful to do the job at hand. One of the handiest tools is also one of the most readily available – a smartphone. When paired with apps, your smartphone becomes an on-the-job solution management tool. There are developers out there who have created apps for the water and wastewater industry and have made them available for little or no cost – just to make your job easier. We have rounded up a few of these apps for your consideration. These apps can be found on GooglePlay, or in the iTunes store.

Effective Utility Management

Developed By: NRWA (Free)

Works on: iOS 6.0 or later; Android 2.2 and up

Designed for macro-level insight into operations, this app helps guide municipalities to effective utility management (EUM) and sustainability. It contains assessment and benchmarking tools designed to assist utilities in effective management and sustainability that work in conjunction with EUM and Sustainability training.

cloud-based software includes a suite of applications that help water and wastewater utilities to perform asset inspection and maintenance, and manage all forms of work and data collection activities. Locate and map critical infrastructure using Geographic Information System (GIS) technology powered by Esri ArcGIS, extend the life of aging assets, and improve worker safety and productivity. Trimble Connect™ can be configured and deployed quickly on a variety of rugged mobile devices, laptops, tablets and smartphones to automate field workflows and eliminate paper-based maps and field work tracking and management.

The software is designed to automate a variety of specific water and wastewater industry workflows through individual "apps" offered within the product. The current version offers standard core apps including Map Book, Meter Change-out, Leak Repair, Incident Repair, Manhole Inspector, Valve Inspector, Hydrant Inspector, Water Mapper, Wastewater Mapper and Stormwater Mapper apps based on Esri's Local Government Information Model.

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Dosage Calculations For Water Treatment

Developed By: Missouri Rural Water Assn. (Free)

Works on: Android or Apple devices 2.0 and up

The Missouri Rural Water Association has designed an app to calculate the correct chemical dosage calculations for water treatment. The app covers the basic calculations which the water specialist will use in the water plant for the treatment of water. This app enables the system operations specialist to make on the spot calculations for necessary changes in treatment using dry chemicals, liquid chemicals, and chlorine gas. A specific gravity calculator and a solution strength mix calculator are also available on this handy app.

Trimble Connect

Developed By: Trimble Navigation (Free)

Works on: iOS 7.0 or later; Android 4.0.3 and up

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BOARD LEADERSHIP TRAINING

By Jeremiah Corbin, SDARWS Source Water Protection Specialist

The National Rural Water Association provided Board Leadership Training to SDARWS's Board of Directors on June 3 and 4 at the K Bar S resort in Keystone. Doug Anderton, Past-President of NRWA, and Claudette Attwood, NRWA CFO, were tasked with providing this comprehensive board leadership training.

The day and a half training provided by NRWA covered the keys to maintaining a successful State Rural Water Association, organizational structure, roles of the Board and CEO.

Training began with our speakers providing fundamental information essential for having a strong association. Three key leadership traits identified for a successful association. These traits are: a shared leadership amongst the board and Executive Director; a strong, knowledgeable and skilled Executive Director and a strong, knowledgeable and active Board of Directors.

One of the most powerful tools that a board uses to provide guidance to an organization are the governance documents. Two of the most important documents are the Articles of Incorporation and the By-Laws. Related to governing

documents is an organization's IRS classification. Most rural water associations are set up as either a 501(c) (3), (4) or (6). Their classifications are based on the amount of federal money they receive and the amount of federal lobbying they participate in. South Dakota Rural Water is currently a 501(c)(6). Recently, however, SDARWS established the Rural Water Center, which is classified as a 501(c) (3).

Following the organizational structure discussion, the next topic covered internal policy and procedure. Examples of these documents are:

- Board Governance Policies
- Strategic Plan
- Financial Plan
- Organizational Chart
- Personnel Policies

These documents establish the road map for joint leadership for the Board and Executive Director. Utilizing these tools and keeping them up to date are crucial measures to ensure a strong association.

SDARWS Board members were then given a brief overview of what non-profit really is. A non-profit classification means:

All profits go back into the association for its mission. If dissolved, assets go to like organization. It is becoming fairly common across the country for Rural Water Associations to form multiple organizations; there are even a couple forprofit entities that specialize in lending and insurance. These classifications help Associations as they strive for sustainability.

Next, Anderton explained the relationship that NRWA has with State Associations and the power of a grassroots, bottom-up governance structure. State Associations are the only voting members of the National Association, and each State Association has equal representation with one director to the National Board.

The next section of the training was a nice presentation on the board's responsibilities in strategic planning. Board responsibilities in strategic planning are as follows:

- Ensure strategic planning takes place
- Agreement of the direction
- Vision and mission
- Develop goals and objectives

Part of the strategic planning process is developing a vision and mission for the organization. The vision is the long term view, while the mission is the action organization will take to accomplish the vision.

The last portion of Anderton's morning presentation was

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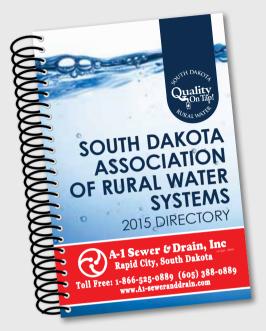
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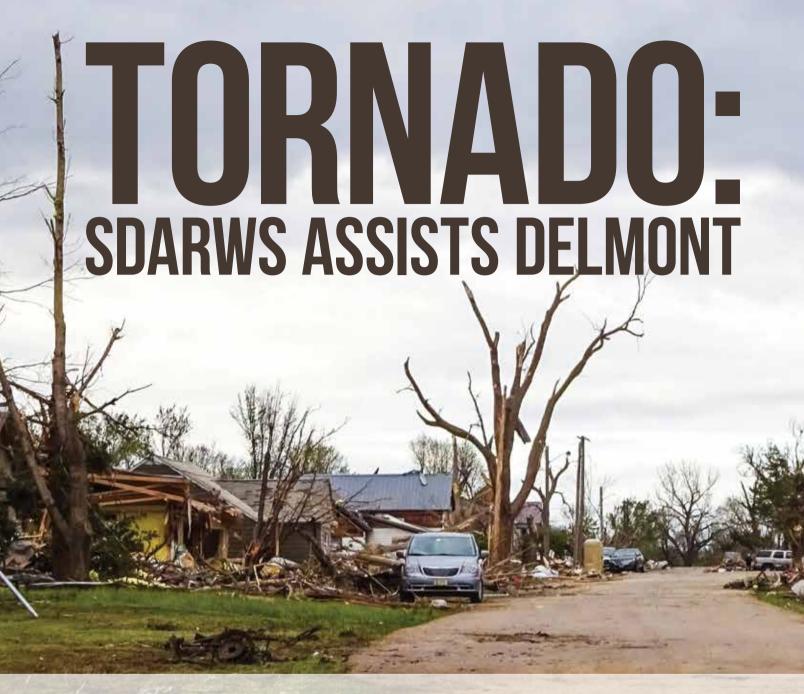
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By Morris Elcock, SDARWS Circuit Rider

n Mother's Day morning – May 10th, 2015, an EF2 tornado developed 3 miles east of Wagner, South Dakota around 10:21 am and traveled north-northeast at a speed of 30 mph. During its travels through Charles Mix County, the tornado remained over open country and only caused damage to some trees. Once the tornado moved into Douglas County, it proceeded to cause damage to four farms south of Delmont before it moved into the city limits. Around 10:45am, it blasted through the town of 235 residents, taking with it a 100+ year old church, the city's brand new fire hall, and several homes. Once it passed through Delmont, it began to weaken, and lifted approximately 3.5 miles north of Delmont around 10:52 am. Miraculously, no human lives were lost during the storm.

On Monday morning May 11th, several calls came into the SDARWS office requesting assistance with recovery efforts and to help restore water and wastewater services to the city. SDARWS Circuit Riders Morris Elcock and Mike Moeller, and SDARWS Wastewater Technician Jerry Hemeyer were dispatched to Delmont and reported to the Emergency Operations Center located in the Community Center. Delmont receives its water from Randall Community Water District, and contains 145 service connections. During the initial meeting at the command center, SDARWS staff met with Mayor Mae Gunnare, the Emergency Management Officer in charge, and Delmont's Water Operator Leo Holzbauer, to get an update on the damage to the system, and plotted out the best course of action to restore water service to the city. Their main concern for us is what the best way to restore water service would be. It was reported that the entire



water system was down, the water tower was empty, and there was no electrical power inside of the city limits - including the Randall Rural Water pit located on the southwest edge of the city. The meter pit of concern contained an electrical control valve that automatically controls the water level in the water tower; since power was needed to operate the controls in this pit, Randall Rural Water changed out the electric control valve and installed a pressure reducing pressure sustaining valve. Once it was set to the correct pressure, this replacement valve would not overly pressurize the distribution system, but would also maintain a water level in the water tower to the set pressure level. Water Operations Specialist Leo Holzbauer, along with the help of Water Operations Specialists from Avon, Dante, Parkston, Tripp and Wagner had already shut off most of the service line valves to the structures that had damage, and these areas would not need water service until necessary repairs were

made to the structures, or the structures removed.

After reviewing the city water distribution map, SDARWS Circuit Rider Morris Elcock suggested that the Delmont mainline that ran from the rural water meter pit on the southwest part of town be isolated as it was the most direct route to the tower with the least amount of users online. The Mayor then asked that SDARWS staff take the lead on restoring water service to Delmont and issued a boil water notice for Delmont until water service could be restored and Bacti samples tested safe. After meeting with the onsite Operations Specialists, SDARWS Staff went over the system maps and split the work crew into three groups to proceed with and isolating the mainline from the rest of the system. Randall CWD staff then opened the valves in their meter pit.

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DELMONT: continued from page 15...

The line was flushed block by block and the water tower began to fill. Once water pressure in the water tower reached 43 psi, the mainline from the tower west three blocks was opened and flushed so that water service could be provided to the Community Center and the Emergency Operations Center. Once pressure reached 44 psi, SDARWS Staff again met with the Mayor and the Emergency Operations Manager, and it was decided not to restore any more service until the next morning. The reasoning behind this action was to let the tower fill, enabling better fire protection and to allow for flushing of the system. Residents were not allowed in town after 8:00 pm because of safety concerns.

On Tuesday, May 12th, SDARWS Staff arrived back on site in Delmont at 6:30 am. Pressure in the tower was checked and it read 49 psi (normal is 50 psi). Power had been restored to a majority of the town at 11:00pm the night before. With electricity now available, the wastewater lift station, water tower, and the old water pump house by the water tower housing the controls for the water tower were back in action. However, the Randall CWD meter pit servicing Delmont remained without power. Water service was restored to the balance of the system at 6:45 am. We then went to the Community Center / Emergency Operations Center for a 7:00 am briefing. SDARWS Circuit Rider Elcock updated the mayor and others attending the meeting on the status of the water system, and explained that power was needed at









the Randall CWD meter pit, and that the Water Operations Specialists from Delmont, Parkston and Tripp would go door to door to all residences and businesses to deliver the Boil Water notices. If no home or business owner were available at the location, notices were attached to their main door. Notices were also posted at the Community Center and made available to people entering the system at the security check point for the system. While boil orders were being handed out, SDARWS staff checked all 27 mainline valves to make sure they operated and were open, and all 15 fire hydrants in the system were opened and flushed. Northwestern Energy started to install four new power poles and line to the Randall CWD pit around 2:00 pm. Circuit Rider Elcock contacted Chad Anderson at Randall CWD, informed him that power would be to the meter pit late that afternoon.

During our time in Delmont, service was restored to 66 services along 23 blocks of water main. Unfortunately, due to destruction from the tornado, approximately 43 homes were so severely damaged that services were unable to be restored. Services on the balance of 36 users, and the balance of the distribution system was turned on in a controlled and monitored schedule to ensure there were no known water leaks that would create problems. After

...continued on page 18









DELMONT: cont. from page 17...

these determinations, water received from Randall CWD was increased to 40 GPM.

One issue that we ran across was that mail coming to Delmont was being held at the Post Office in Tripp and was not being delivered to Delmont. Since the Bacti sample bottles had been mailed, Circuit Rider Elcock made contact with DENR to get replacement bottles from Parkston, and was onsite first thing Wednesday, May 13th, to take the appropriate number of samples throughout the system to get the best representation of water possible. One routine and five additional Bacti samples were taken and delivered to the Sioux Falls Health Lab. All samples taken had a Chlorine level of 1.6 - 2.0 total residual; Randall CWD delivers water to town with a 2.0 residual. That afternoon, Randall CWD changed out the equipment in the meter pit back to the automatic fill valve, and switched back to normal automatic filling of the water tower.

The results were emailed to the Emergency Command Center Information Officer Sandy Frentz on Thursday morning May 14th just in time for the 7:00 am briefing. All samples taken tested ok and the State of South Dakota approved the lifting of the boil water notice and emailed that notice to the city.

SDARWS Staff would like to thank the Operations Specialists from the cities of Avon, Dante, Parkston, Tripp, Wagner, and Randall CWD for their assistance and hard work in restoring water to the residents of Delmont.







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IN APPRECIATION

Dear Morris:

I wanted to take a moment to thank you for all you have done to assist Delmont as they recover from the tornado damage. As usual, you brought your expertise and how-how to the area and helped coordinate the steps needed to bring their water system back online. We also appreciated the daily update reports that you sent to Mark Mayer. Mark then used the reports to keep everyone in the loop as to what was going on and ensure that public health was protected.

As a circuit rider, you know how overwhelming a response like this can be for an operator that is trying to get the systems back to normal but also deal with the impacts of the storm on a personal level. Having experts like you there to help think things through and implement a plan of attack is invaluable.

Thanks again for sharing your time and expertise with Delmont as they move beyond emergency response and on to rebuilding.

Sincerely,

Steven M. Pirner Secretary, SD DENR

Dear Mike:

Staff from the South Dakota Association of Rural Water Systems is an invaluable resource when natural disasters strike communities. Thank you for the time and assistance you provided Delmont as part of the response team. Responding to natural disasters requires many different skills and the expertise you brought to the team was helpful in getting Delmont's water system back on line safely and timely.

It is in tines like this that the true character of South Dakotans shines. It is great to know we live in a state where we help each other in times of need. Thank again for all the time and extra effort you provided Delmont.

Sincerely,

Steven M. Pirner Secretary, SD DENR

Dear Jerry:

Thank you for your assistance with the response efforts in Delmont. Whenever a community must deal with the recover efforts from a natural disaster such as this, experts in various areas are a big help. Having the specialized tools on hand and coupled with the years of experience you have in the wastewater field assured that public health and the environment were protected as the extent of the damage was assessed.

All of the staff at South Dakota Association of Rural Water is viewed by communities as "go-to" resources with the equipment and know-how to respond with a wide variety of problems. Thanks again for all that you did to assist Delmont with this natural disaster.

Sincerely,

Steven M. Pirner Secretary, SD DENR

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NRWA Water Operations

Developed By: NRWA (\$2.99)

Works on: iOS 4.0 or later; Android 2.2 and up

The NRWA operations app contains suite of functions designed to aid operations specialists in the water and waste water industry. The app includes calculators for common water functions. It also includes an NRWA news feed and access to the NRWA on-line Resource Center.

Water calculators include: pressure conversion, flow conversion, chemical feed, dose, detention time, chlorine demand, feed pump sizing, weir discharge, filtration rate, backwash flow, pipe, tank and well disinfection.

Pipe Diameter Calculator

Developed by:

pipeflowcalculations.com (Free)

Works on: Android 1.5 and up

This simple and useful calculator app easily helps you figure out pipe diameters based on known flow rates. You can also check on a stream velocity by entering the internal pipe diameter and flow rate.

Plutocalc Water Calculations

Developed By: Daniel Brooke Peig

Works on: Android 2.1 and up

Plutocalc is a free multi-platform application that does conversions and reversible calculations for water treatment processes, wastewater treatment and hydraulics.

Plutocalc models were carefully tuned to minimize the input requirements saving time for the users. Most of the equations are reversible so you can evaluate results for multiple variables. This app features 77 equation models, 2247+ different calculations, an internal databases for chemicals and standards, plant operation and design emphasis – as well as the ability to work offline and free from advertising. Some of the currently supported calculation models include

conversions, geometry, energy and power, contaminants, solutions, adsorption and ion exchange, filters and membranes, reactions, clarifiers, and finance.

Water And Waste Management Engineer

Developed By: Multieducator Inc. (\$4.99)

Works on: iPhone or iPad

Water & Waste Management, part of MultiEducator's "Formulator" Line, is the perfect tool for any systems operations specialist or engineer. This application contains over 200 important formulas needed by water and waste management engineers. In addition to the current 200 specialized formulas, geared towards water and wastewater operations specialists, there are nearly 600 conversion formulas in this application. Major areas currently covered in the program include: area formulas, groundwater, river pollution, sewer pipe, sewage treatment, storm runoff and water flow.

All formulas in this app can be saved. You can access recent or favorite formulas. You can also e-mail the results of any formula.

Pipe Diameter Calculator

Developed by:

pipeflowcalculations.com (Free)

Works on: Android 1.5 and up

This simple and useful calculator app easily helps you figure out pipe diameters based on known flow rates. You can also check on a stream velocity by entering the internal pipe diameter and flow rate.

ProTek Water Calc

ProTekMobile (Free - \$2.99)

Works on: Android 2.2 and up

ProTek Water Pro is another calculation app, but also covers a broad range of calculations and is designed for water utility professionals and engineers. The free version of the app give you disinfection estimators for tanks and pipelines, and calculates water loss for three different

types of water line breaks (holes, cracks, and circular breaks). The paid version also includes flow rates for full pipe open discharge and open channel regular weir flow rate, as well as a calculator for pump power, flow rates, head, and efficiency. All of the calculations can be done in either US or SI units. ProTek also includes a number of commonly used water formulas, and conversion factors for many common unit conversions. Also included are disinfection estimators for tanks and pipelines, and calculators for estimating water loss on three different types of water line breaks (holes, cracks, and circular breaks). The paid version also includes flow rates for full pipe open discharge and open channel regular weir flow rate, as well as a calculator for pump power, flow rates, head, and efficiency. All of the calculations can be done in either US or SI units. ProTek also includes a number of commonly used water formulas, and conversion factors for many common unit conversions.

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ITEMS FOR SALE

The following items have been declared surplus property by the City of Pickstown and will be sold by sealed bids on September 9, 2015 at 7:30 pm. Mail sealed bids to the City of Pickstown PO Box 107 Pickstown, SD 57367-0107 (Envelope Marked Equipment Bid) Pickstown reserves the right to accept or reject any or all bids. Please contact Mike Jansen Superintendent for the City of Pickstown at 605-487-7553

- 1. Hach CL17 Chlorine Analyzer & 55164-00 SP 510/CL Installation Kit & Reagents, new never used.
- Hach PS1201 Power Supply 12volt DC Network Connection Module & Hach Low Range 1720D Turbidimeter with Reagents, new never used.
- 3. Hach AquqTrend/SOM Integrated Signal Output Module P/N 51350-60, new never used.
- 4. Eastech Flow Control / Vantage 2210 Flow Level Meter with 8" Flume & Kyocera Model KD135GX-LPU Solar Panel and battery mounted on a 4.5' x 6' trailer. Has been used was new in 2010.

To list your surplus items in ServiceLine, please contact Jennifer at 605-556-7219. Listings are only available to utility members of SDARWS.



Hach CL17 Chlorine Analyzer & 55164-00 SP 510/CL Installation Kit & Reagents



Hach AquqTrend/SOM Integrated Signal Output Module P/N 51350-60

BOARD: continued from page 11...

a nice overview of the roles of the Board and the Executive Director.

Margo Northrup, SDARWS Attorney, provided a fiduciary responsibility presentation. This presentation covered the five duties of a director.

- 1. Duty of Loyalty
- 2. Duty of Care, Due Care, or "Diligence"
- 3. Duty of Obedience
- 4. Duty to Question or Object
- 5. Duty of Attention

The afternoon session began with a discussion about measures boards that make a difference utilize. Attwood provided the group with fundamental information for financial control. This discussion provided an excellent education to participants on fundamental financial reports and best management practices to maintain internal controls. Atwood's presentation also covered reserve amounts and the importance of financial planning.

Training was wrapped up with an overview of NRWA's Legislative Effort and the State Association's role in that effort. NRWA's mission is to strengthen State Associations. The biggest part of that is their efforts in Washington D.C. These efforts are primarily regulatory oversight and identify funding that is beneficial to State Associations and Rural Water Systems. The power of Rural Water comes from the fact that every congressional delegation is touched by Rural Water.

NRWA facilitates the communication between Rural Water and key congressional contacts. Board members were reminded that all politics are local, and politics are all about relationships. Remember to thank your congressional delegation for what they have done and the key to NRWA's success is a broad base of grassroots support.

Margo Northrup provided a fiduciary responsibility presentation, after which Claudette Attwood followed up with a financial responsibility presentation. The training then concluded with an overview of NRWA's legislative and regulatory efforts in Washington D.C.

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Test your knowledge

with these certification practice questions

When chlorine gas is added to pure water what two compounds are formed?

- a. H2S & HOCl
- b. HCl & HOCl
- c. HCl & NaOH
- d. HOCl & NaOH

Which is the more powerful disinfectant?

- a. H2S
- b. HOCl
- c. OCL-
- d. HCl

3 What factors effect chlorination?

- a. pH & temperature
- b. Contact time
- c. Concentration
- d. All of the above

Disinfection with chlorine is least effective at which of the following pH levels?

- a. 9.5
- b. 8.0
- c. 7.5
- d. 7.0

5 Lower pH favors the formation of _____ when chlorine is added to water?

- a. NaOH
- b. OCl- and H+
- c. HOCl
- d. Ca(OH)2

Which is more powerful acid?

- a. HCl
- b. NaOH
- c. Ca(OH)2
- d. HOCl

Which is the weaker acid?

- a. HCl
- b. NaOH
- c. Ca(OH)2
- d. HOCl

A Disinfection with chlorine is most effective at?

- a. Lower water temperatures
- b. Higher water temperatures
- c. Temperature does not make a difference

The abbreviation "CT" stands for

- a. Chlorine, Time
- b. Chlorine, Temperature
- c. Concentration, Time
- d. Concentration, Temperature

What is the percentage of available chlorine in a new, un-opened Calcium Hypochlorite tablets.

- a. 65%
- b. 15%
- c. 100%
- d. 5%

Answer Key

) W \(\text{\lambda} \) D \(8 \) B \(\frac{1}{3} \) D \(\frac{1}{3} \) D \(\frac{1}{3} \) O \(\frac{



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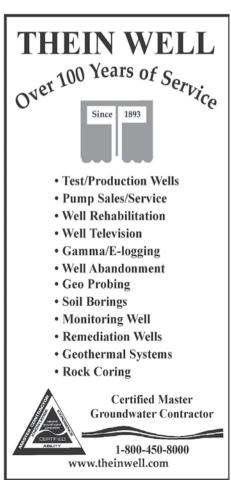
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Water Industry Facing Workforce Turnover Crisis



By Nick Jackson, SDARWS Circuit Rider

The workforce crisis that's been looming over the water **1** and wastewater sector for several years is finally upon us. Due to job turnovers in the water and wastewater industry, water and wastewater operations specialists with many years of experience and knowledge are retiring, or will be retiring in large numbers - and must be replaced with dependable, competent, and knowledgeable workers.

The water and wastewater industry is crucial to maintaining good health within systems throughout our state. Within the water sector, System Operations Specialists have an obligation to continually provide an adequate and safe supply of drinking water to its customers. Their first priority is to ensure that fresh, clean, and safe drinking water comes out of the faucet every single time a consumer turns the handle.

Within the wastewater sector, operators must follow established procedures to re-introduce water back to the environment while also following critical EPA standards. Whether tasked with collecting and treating wastewater whether from a lagoon or a treatment facility, the Wastewater Specialist ensures that the water going back into our streams and rivers are free of as many contaminates as possible while meeting established DENR and EPA regulation standards.

So it is no question that Operations Specialists are important public stewards whose jobs are necessary for public health, and critical to the economic viability of our communities. There is no doubt that we need trained and committed individuals to provide these services. Turnover in the workforce can lead to the loss of key technical skills and expertise. Operator turnover has been - and continues to be a significant obstacle in the effort to increase operational capacity of rural and municipal utilities. The most vital component of protecting our water quality is the experienced, trained and certified workforce that operates and maintains the infrastructure of our water and wastewater systems.

So what are some of the obstacles resulting in the significant turnovers? A large portion of Specialists are approaching the average age of retirement. Many of these Operation Specialists entered the water and wastewater field during the 1970's and 80's, and are now retired or soon will be retiring. Perhaps what is most alarming is the prevalence of workers in positions critical to facility operation are nearing retirement. Most facility managers are over 50 years of age.

Other issues I have seen in turnover are due to wages. Trying to convince elected officials that the miracle cure for budget deficits and aging infrastructures isn't finding cheap help or underpaying your employees. Like all businesses, utilities must find a balance between competitive and justifiable salaries. Low salaries will increase employee turnover. Without decent wages, benefits and working conditions, work quality can suffer due to high turnover, inadequate training and experience, and low morale.

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

South Dakota's Operation Specialists have kept water safe and affordable for most communities and systems, but despite their successes, the numbers of these qualified and experienced workers are going away – whether it is retirement, wages, health or even death. The most vital component of protecting our water and wastewater quality is through trained, experienced, and certified workforce.



NRWA UPDATE

Dennis N. Davis **Executive Director**

Congress Produces Appropriations Bills

Last week, the House and Senate Appropriations Committees approved versions of the EPA appropriations bill and the House Agriculture Appropriations Subcommittee approved its version of the USDA appropriations bill. The numbers can be seen in the chart below:

Agency (\$Millions)	Initiative	House FY2016	Senate FY2016	FY2015
USDA	Circuit Rider	15.9	TBD	15.9
	Source Water	5.5	TBD	5.5
	Technical Assistance	19	TBD	19
	Grants & Loans	473.9	TBD	464.86
	Revolving Fund		TBD	1
EPA	Technical Assistance	12.7	15	12.7
	CWSRF	1,047	1,018	1448.9
	DWSRF	757	775.9	906.9
	WIFIA Administration	4.4	5	2.2

EPA Negotiating Panel Releases New Draft of Lead and Copper Rule Revisions:

NRWA's representative on the EPA committee negotiating revisions to the LCR, John Sasur from Massachusetts Rural Water Association, will attend a two day negotiating session on the issue this coming week (proposal). The NRWA Regulatory Committee met over the weekend to review the proposal and identified eight concerns with the draft: new requirements for record keeping, new water quality parameter testing, confusing health effects conclusions, new public notice requirements, possible expanded copper compliance, requirement to remove all lead service lines, new expanded testing, and need for additional technical assistance.

SDARWS Staff Attend NRWA In-Service **Training**

In June the Association staff traveled to Reno, NV for the National Rural Water In-Service Training. At In-Service rural water professionals from around the nation gather together to train and discuss their work with others in their peer group. The goal of In-Service is to learn about new techniques unique to each position, share expertise, and learn about new funding sources.

We gain a lot of knowledge from both the classes and our Rural Water peers at In-Service training, and this year was no exception. Some of the comments from staff include:

"The Advanced Pumping Efficiency Presentation was very interesting. It was great to see the efforts and innovations from other parts of the country that can be used in our area. In addition it was great getting new ideas for improving the sustainable management workshops in that presentation." -Steve Attema

"The Water Circuit Rider Breakout Session was so well conducted that the stories shared from past experiences dealing with unique leak detection incidents caused the session to run over on the allotted amount of time. Great discussions were shared between the veterans and advice was given for the newer generation." – Nick Jackson ▲



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CASE STUD

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

Installed: 1987

Client: Rochester Public Utilities

Location: Rochester, MN

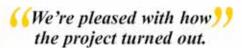
Tank Type: Aquastore® Glass-Fused-to-Steel Storage Capacity: 1 Million Gallons Contractor: Engineering America



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.



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





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