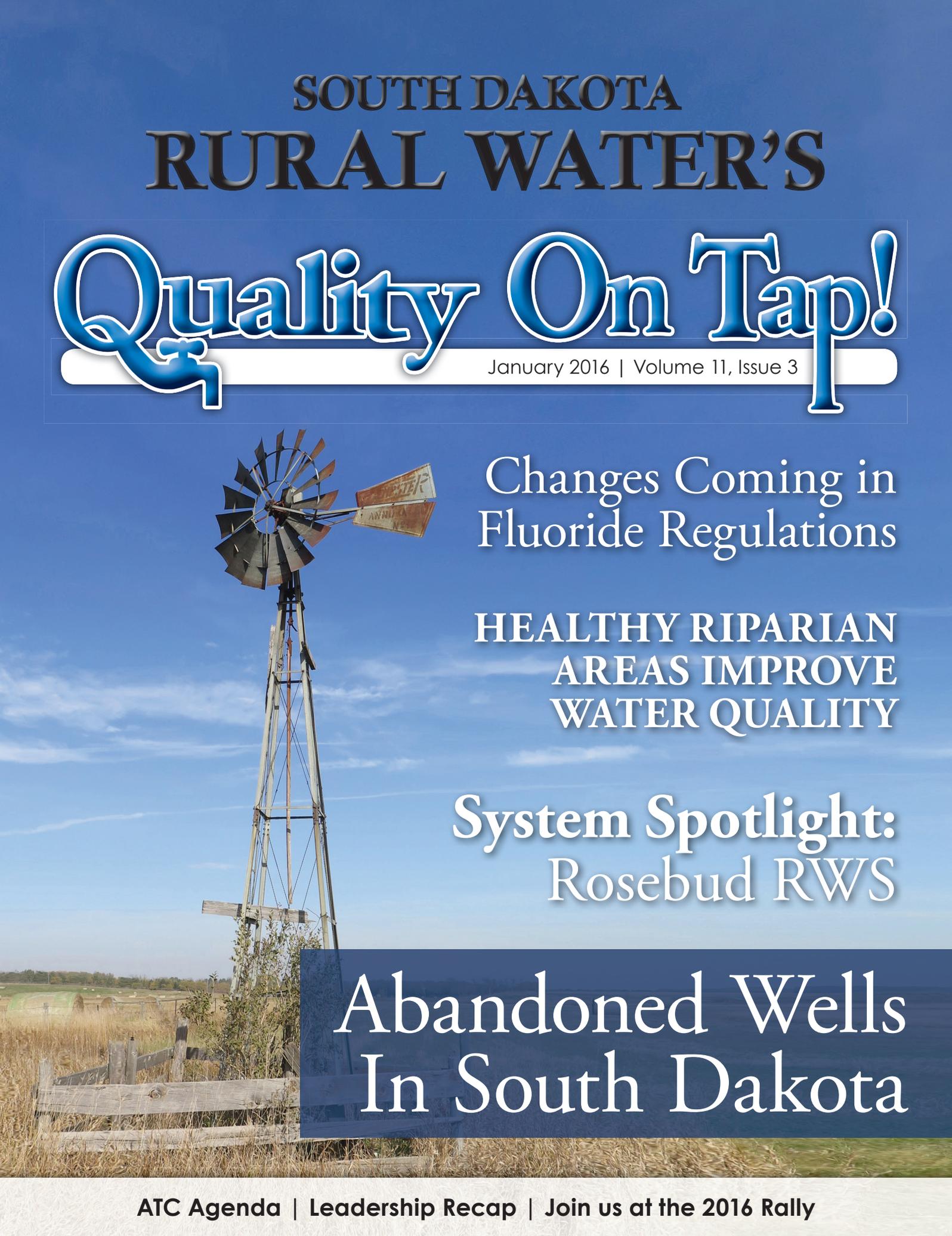


SOUTH DAKOTA RURAL WATER'S

Quality On Tap!

January 2016 | Volume 11, Issue 3



Changes Coming in
Fluoride Regulations

HEALTHY RIPARIAN
AREAS IMPROVE
WATER QUALITY

System Spotlight:
Rosebud RWS

Abandoned Wells
In South Dakota

A MESSAGE FROM THE PRESIDENT OF THE BOARD

Ron Gillen, President
South Dakota Association of Rural Water Systems



Join us at the ATC!

Association staff are currently very busy gearing up for the 2016 Annual Technical Conference in Pierre, South Dakota, January 13-15 at the Ramkota Hotel and Convention Center in Pierre. The conference features an exhibit hall and educational sessions.

VJ Smith is this year's keynote speaker. A 1978 graduate of South Dakota State University, Smith spent the decade of the 1980s working for the Allied Signal Aerospace Company in Kansas City, MO. He returned to his alma mater in

1990 to serve as Assistant Athletic Director for the SDSU athletic program. He was appointed Executive Director of the SDSU Alumni Association in 1996 and resigned from that position in January 2007 due to the overwhelming requests for speaking appearances.

Smith is the author of the books, "The Richest Man in Town," and "Can You Hear What I See – How Words and Actions Matter."

We are also hosting a spouse program this year, so make sure to bring along your significant other. Take a look at the agenda on pages 14-15 in this issue of *Quality on Tap!* and plan out the sessions you would like to attend. Haven't registered yet? You can find everything you need to know about this year's conference on our website at: www.sdarws.com/atc.html, including registration information, updated agendas, and more! Make sure to register soon!

2015 Leadership Seminar Recap

Seventy-two rural water board members and managers from 21 different rural water systems gathered at the Ramkota Hotel in Pierre, SD on November 19th and 20th for the 10th Annual South Dakota Rural Water Leadership Seminar. The attendees were able to learn, network and discuss some of the most pressing issues in rural water today. This year's Leadership marked the 3rd year that the Pierre Ramkota has hosted the event. With an agenda filled with topics handpicked by Leadership Seminar attendees, this conference has become a can't miss event. Training topics included: cloud storage, technology in the board room, sustainable water systems, water resource adequacy, infrastructure stability, customer satisfaction and financial viability, product quality and operational optimization, handing rouge directors, SDARWS dues structure, asset management and water rates, financial reporting, AMR, addressing aging infrastructure, and financing options.

Thank you to everyone who participated in this one-of-a-kind board and leadership training opportunity. Block off your calendars now for next year's Leadership Seminar, tentatively slated for November 16-17, 2016.

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West River/Lyman-Jones Rural Water System
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Class B East River
Fred Snoderly

Class B West River
Vacant

Class C
Francis Toscana



RURAL WATER RALLY

Dennis N. Davis, Executive Director
South Dakota Association of Rural Water Systems

South Dakota Rural Water does many things, and one of the most important benefit to our rural water membership relates to our legislative efforts. Every year the National Rural Water Association hosts a Rural Water Rally in Washington D.C. to further the work of providing drinking water and wastewater services to rural communities. Rural Water professionals, leaders and customers from every state attend the rally to thank their Senators and Representatives for their support and encourage them to further support the goals and needs of the Rural Water Industry. SDARWS has participated in the Rally since its inception in 1986, and 2016 will be no exception. The Rally provides your Association the opportunity to meet directly with our congressional delegation one-on-one to discuss concerns of SDARWS members and other systems, as well as with their staffers, and USDA. Guest speakers from legislative staffs and federal organizations, like the EPA and USDA, are invited by NRWA to share their views and insight to the assembled guests from across the nation.

SDARWS generally meets with both of our two Senators and our Representative; we also meet directly with their key staff members to make sure that rural water funding remains a priority. Our time at the Rally usually culminates with a meeting with the loan program specialists at USDA Rural Development. Managers and board members, and even employees of systems make the trek to DC for this important endeavor.

State rural water associations operate contracts that are funded through the National Rural Water Association. This funding originates with EPA and the Rural Utilities Service (RUS), a division of the USDA. For SDARWS, and more importantly, the public we serve, those programs include three circuit riders, a wastewater tech, a source water protection specialist, and a part-time training specialist. While membership dollars help to support your association, we cannot cover the cost of staff and travel to provide assistance to systems without continued funding through the State of South Dakota, USDA, and EPA.

While the Rally began as an information meeting to make us aware of legislative and regulatory issues affecting our industry, it also prepares us to discuss these very issues with our legislators. There are a few mainline items that we always like to discuss during our time in DC. It is important to note that all rural water priorities are authorized in the Farm Bill or the Safe Drinking Water Act. They are not earmarks.

We invite you to join us February 18-10, 2016 at the Hyatt Regency on Capitol Hill. For more information, visit NRWA's Rally page at: nrwa.org/about-us/rural-water-rally/. Room reservations can be made at the Hyatt Regency by calling 202-737-1234. If you have any questions about attending this year's event, please call the SDARWS office at 605-556-7219. We would love to have you join us on the Hill!



Merry
Christmas

FROM ALL OF US AT SOUTH DAKOTA RURAL WATER



OUT AND ABOUT

JANUARY

1 – TRACKING IN THE NEW YEAR ADAMS HOMESTEAD, NORTH SIOUX CITY

Join us for a First Day Hike at Adams Homestead and Nature Preserve and learn to identify tracks of animals that live in the area. Hike begins at 1pm. Please call the visitor center at 605-232-0873 for more information. State park entrance fees required. gfp.sd.gov

1 – FIRST DAY SNOWSHOE HIKE LAKE HERMAN STATE PARK, MADISON

Celebrate the first day of the year by learning how to snowshoe. The two sessions (1pm and 3pm) will cover the basics of snowshoeing followed by a hike. Spaces are limited; please call 605-256-5003 to reserve your spot. Participants must wear snow boots or equivalent for snowshoeing, and dress according to the weather. State park entrance fees required. gfp.sd.gov

1 – FIRST DAY HIKE LAKE LOUISE RECREATION AREA, MILLER

Start your new year off right with a First Day Hike at Lake Louise. Discover the sights and sounds of the park in the winter, something few people experience. State park entrance fees required. gfp.sd.gov

5-7 – DAKOTA FARM SHOW DAKOTA DOME, VERMILLION

The 33rd Annual Dakota Farm Show is Jan. 5, 6, & 7, 2016 at the DakotaDome. Hours are 9 am-5 pm Tues. & Wed. and 9 am-4 pm on Thurs. Over 280 exhibitors representing over 1,000 products and services will be present. Free admission & free parking. For more information, please go to: www.dakotafarmshow.com or call 507-437-7969.

8-16 – 70TH ANNUAL SNOW QUEEN FESTIVAL ABERDEEN CIVIC THEATRE, ABERDEEN

The Jr. Snow Queen Coronation and Talent Contest begins on the evening of January 9th at 7:00 pm, and concludes with the crowning of the 2016 South Dakota Snow Queen on Saturday, January 16th, 2016 at 7:00 pm. Tickets and information on scheduled events can be found at www.sdsnowqueen.com.

If you would like your event featured in the April 2016 issue of Quality on Tap!, please email your event description to: info@sdarws.com. April's issue will cover events taking place April-June 2016. Event listings are subject to approval by the QOT Editorial Board.

21-24 – SNOWMOBILE RALLY DEADWOOD

Enjoy the Snocross Shootout events and all of the Big Game entertainment on the huge video display on Deadwood's Main Street. Wander freely in Deadwood and enjoy all of the great activities with your cold beer in hand. Vintage snowmobiles will be on display. www.deadwood.com/events/snowmobilerally/

21-24 – BALD EAGLE DAYS LEWIS & CLARK VISITOR CENTER (NEAR GAVINS POINT DAM) YANKTON

View beautiful bald eagles perching in nearby trees, participate in hands-on activities and watch programs with live raptors presented by "SOAR Raptors" of Dedham, Iowa. There will be spotting scopes available for viewing eagles along the river, eagle displays and trivia, and a children's activity table. Live raptor programs will be at 9 a.m., 11 a.m., 1 p.m. and 3 p.m. both days. Free admission. Sponsored by the U.S. Army Corps of Engineers and the National Park Service.

FEBRUARY

5-6 – LIVING HISTORY FAIR WATERTOWN

The annual Living History Fair is a festival to reenact history. Live actors are onsite and on stage to show you how people lived and worked in years past. Come join the fun learning about history. Vendors will be selling their wares. The event takes place at the Watertown Event Center and it is open to the public on Saturday (9 a.m.-5 p.m.).

9-13 – WINTER FARM SHOW WATERTOWN

The Watertown Winter Farm Show is a five-day event filled with entertainment and education for all ages. For 71 years, the show has been an outlet for the agriculture community to share new programs, opportunities and ideas. Featured events include livestock shows and sales, home and family programs, educational presentations, commercial exhibits, zoo demonstrations and a Lego contest. All activities are held at the Codington County Extension Complex. Show hours are 9 a.m.-4 p.m., daily.

19-20 – WOMEN IN BLUE JEANS CONFERENCE HIGHLAND CONFERENCE CENTER, MITCHELL

Women in Blue Jeans is presented each year to provide education, inspiration, and networking opportunities to women of rural America. www.womeninbluejeans.org



CHANGES COMING IN FLUORIDE REGULATIONS

The fluoride level in your rural water system's water supply will soon be changing as a result of studies that have been underway for several years. The studies have led to a revision in the optimum level of fluoride that water suppliers maintain.

The SD Dept. of Environment and Natural Resources (DENR) is currently adopting the changes at the state level to comply with the federal guidelines. According to Mark Mayer, Administrator of the Drinking Water Program at DENR, the new regulations should be effective at the end of December.

Fluoride is a naturally occurring ion that is present in water. Utilities add fluoride to their water supply to bring the level up to the optimum level for dental health. The current recommended dosage for fluoride is 0.9 to 1.7 milligrams per liter (mg/L) with 1.2 mg/L the optimum dose. Current levels were adopted in 1962 as part of the US Public Health Service's (USPHS) Drinking Water Standards related to community fluoridation – the controlled addition of a fluoride compound to a community water supply to achieve a level of concentration which is the most advantageous in preventing tooth decay. The optimal level is the concentration that provides the best balance of protection from tooth decay while limiting the risk of spotting or streaking of the tooth enamel. The original level was adopted based on outdoor air temperature and geographic location.

The changes were proposed in 2011 and take into account new scientific data and recognizes that water is now one of many sources of fluoride. Others include toothpaste, mouth rinses, prescription fluoride supplements and fluoride applied by dental professionals. The new standard will be 0.5 to 0.9 mg/L with 0.7 the optimal dosage. The USPHS sets the recommended levels and is making the change because of new data that addresses changes in the prevalence of dental fluorosis, also called the mottling of tooth enamel. The maximum allowed level of fluoride in a water supply is 4.0 mg/L and is set by the Environmental Protection Agency (EPA). EPA has indicated it will look at the maximum level.

South Dakota passed its first fluoride law in 1969 after a bitter debate that spanned twenty years. SD Codified Law 34-24A – “Fluoridation of Water” applied to all public water systems that served a population of more than 500 people. In the Nov. 1970 election, voters defeated an initiative that would have repealed the law (111,568 to 104,430). Bills passed later by the SD Legislature made fluoride addition mandatory and gave DENR enforcement authority. Today, SD is one of 17 states in the nation that make fluoride addition mandatory. The remaining states make fluoridation a local option.

Fluoridation of public water supplies in the US was introduced in 1945. Grand Rapids, MI was the first municipality in the nation to add fluoride to its city water system. The move towards fluoridation of public water supplies took root in the 1930's when scientists examined the relationship between tooth decay in children and naturally occurring fluoride in drinking water. The study found that children who drank water with natural levels of fluoride had less tooth decay. In 2012, more than 210 million people, or 75% of the US population, were served by community water systems. Several years ago the Center for Disease Control proclaimed fluoridation one of the top ten greatest public health achievements of the past century. Fluoride's effect is topical. It keeps tooth enamel strong by preventing the loss of important minerals.

For additional information on fluoride and the rationale behind the proposed changes, please refer to the following links:

USPH recommendations: www.publichealthreports.org/documents/PHS_2015_Fluoride_Guidelines.pdf

SDDENR Fluoride Info: denr.sd.gov/des/dw/Fluoride.aspx

Center for Disease Control Community Water Fluoridation page: www.cdc.gov/fluoridation/index.htm

Abandoned Wells in South Dakota

Until fairly recently, most rural homes, farms and ranches in South Dakota depended on individual wells for water. What came out of these wells was not always great, but it was at least better than the alternative - no water at all. The growth and expansion of regional water systems (insert your system name here!) has provided plentiful, high quality water for consumption by people and livestock, replacing the sometimes sketchy wells.

In some cases, the old well(s) were completely decommissioned and sealed, hopefully in full compliance with state law. A number of these otherwise functioning wells remain active, with use largely restricted to lawn and garden watering and other non-consumptive uses. However, a majority of these wells were simply disconnected and abandoned.

Abandoned wells exist throughout South Dakota and tap into every principal aquifer in the state. These are the same aquifers that are relied on today for much of the drinking water used. While the actual number of abandoned wells is not known, it is possible to make some reasonable estimates of the number of abandoned wells. In 1910, South Dakota had approximately 78,000 farms which reached a maximum of 84,300 farms in 1932. Since that time, farm numbers have declined steadily to about 31,700 today. Therefore, South Dakota has lost approximately 52,600 farms that likely had at least one well which may now be abandoned.

Many people have good intentions to maintain an old well as a backup or standby well, but typically these wells never get used again and are forgotten over time. When this occurs, the well becomes a potential pollution source to everyone using the aquifer and a potential liability to the well owner.

Environmental and Safety Hazards

Contamination of Aquifers: Unsealed or abandoned wells directly connect the land surface with ground water. As such, polluted surface water can easily enter the ground water and cause a contamination problem. Examples of pollutants that can enter the ground water are human or animal wastes, petroleum products, fertilizers, pesticides, etc. Once an aquifer has become contaminated it can be very expensive and difficult to undo the damage. Some of the health hazards associated with contaminated ground water are "blue baby syndrome" caused by high nitrate levels and waterborne diseases such as hepatitis, cholera, and diarrhea caused by bacteria entering the ground water.

Cross Contamination of Aquifers: A well which penetrates more than one aquifer may allow water from one aquifer

to contaminate another aquifer if the well is not properly constructed. Water may leak along the outside of the well casing if the well is not properly sealed or the casing may deteriorate and develop holes which allows water movement inside the casing. In either event, the water from one aquifer mixes with one or more other aquifers which may cause problems. Water of poorer quality may enter another aquifer and reduce the water quality as well as pollutants moving from a contaminated aquifer to an aquifer which, unfortunately, is about to become contaminated.

Reducing Artesian Head Pressure: Abandoned wells from which water flows over the land surface or that leak water underground from one aquifer to another aquifer will reduce the head pressure in an aquifer. As a result, water levels in nearby wells will be lowered and wells that once flowed may need to be pumped to get water from the well. It may not even be possible to place a pump in a well that no longer flows due to the size of the well casing. In addition, water flowing from an abandoned well may result in a waste of water which is prohibited by state law in SDCL 46-1-4.

Safety Hazards: Many abandoned wells are not marked or covered. In some instances the well casing or a pit in which the well is located is large enough for a person or animal to fall into and become seriously injured or killed. While such occurrences are rare, they do happen. Fortunately, these types of accidents are entirely preventable with proper plugging of the well.

Property Owner Responsibilities

The owner of property on which an abandoned well is located is deemed to be the owner of the abandoned well. Consequently, the owner is also responsible for plugging the abandoned well or wells as required by South Dakota Codified Law (SDCL) 46-6-18 and 46-6-27. As noted above, there are many reasons for the owner to properly plug an abandoned well, aside from the legal requirement to complete the plugging.

The plugging of an abandoned well needs to meet requirements outlined in the South Dakota Well Construction Standards, found in the Administrative Rules of South Dakota (ARSD) sections 74:02:04:67 and 74:02:04:69. These rules specify how to plug a well depending on the type of well construction, the type of aquifer or aquifers which the well penetrates, and the materials to be used to plug the well. Even though the owner of an abandoned well may plug the well, it is strongly suggested that a SD licensed well driller perform the work due to the varying conditions encountered in plugging an abandoned well.

If a well is not plugged properly, ground water contamination may still occur and it is very difficult and expensive to correct the improper plugging of an abandoned well.

Locating Abandoned Wells

Abandoned wells may be located anywhere but there are some obvious indicators of the presence of abandoned wells such as windmills, hand pumps, abandoned farmsteads, or a simple pipe sticking out of the ground. Wells were often drilled near outbuildings and were housed in small sheds. Sometimes wells were located in the basement of a home. Perhaps not so obvious are the inhabited farmsteads that are now served by rural water or farms that have had newer wells drilled to replace the original well which has since been abandoned. The same can be said of cities and towns in South Dakota that have hooked to rural water or drilled replacement wells. Other indicators of the presence of an abandoned well are depressions supporting aquatic vegetation,

such as cattails, in an otherwise dry area. Often, wells were hand dug and are large diameter wells constructed of concrete, wood, bricks, rock, or other materials around the perimeter of the well. In some instances, the abandoned well is housed within a large diameter pit which may be several feet deep.



Information sources for locating abandoned wells can include:

- Previous landowners or long-time neighborhood residents;
- Well drillers and well completion reports filed with South Dakota Department of Environment and Natural Resources (DENR) Water Rights Program, (605) 773-3352;
- In the case of irrigation wells or other large water use wells, a water right permit may be on file with the Water Rights Program;
- Old photos of the property showing building locations;
- County or city building permits;
- Old fire insurance plan drawings may show the location of wells.

Additional information on dealing with abandoned wells can be found at:

1. DENR Water Rights Program at (605) 773-3352;
2. (<http://denr.sd.gov/des/wr/abandonedwell.aspx>), a report entitled "Abandoned Well Sealing Demonstration Project;" and
3. (http://pubstorage.sdstate.edu/AgBio_Publications/articles/FS891.pdf), a South Dakota State University Cooperative Extension Service publication entitled, "Plugging Abandoned Water Wells."

HEALTHY RIPARIAN AREAS IMPROVE WATER QUALITY



By Barry Berg, SD Association of Conservation Districts

What exactly is a riparian area? A riparian area is simply the transitional zone between land and water environments. A healthy riparian area is extremely important to water quality as it will reduce sediment, nutrients, pesticides, and other materials in surface and shallow subsurface runoff. Examples of riparian areas include floodplains, streambanks, lakeshores, and wetlands.

Livestock overgrazing in riparian areas can have negative impacts and may accelerate erosion and sedimentation, change stream flow, increase nutrient and bacteria loading (such as *Escherichia coli*), and destroy aquatic habitats. While total exclusion is typically the preferred option for streambank protection, it may not always be the best solution in every situation.

SRAM allows producers to change how they manage riparian grassland acres along certain stream segments in order to improve water quality while still keeping those acres in production.

A relatively new program called Seasonal Riparian Area Management (SRAM) allows producers to change how they manage riparian grassland acres along certain stream segments in order to improve water quality while still keeping those acres in production. The SRAM program is essentially a 6 month deferred grazing program for those portions of a pasture that lie within a 100-year floodplain of a stream. The program is currently only available to producers within the Big Sioux Watershed Project but may soon be opened to other watershed projects within the state.

Main Program Guidelines

- Pasture acres within the 100-year floodplain of a stream eligible for SRAM enrollment (20 foot minimum for enrollment);
- Choice of 10 or 15 year contract;
- Rental rates for enrolled acres determined through the Big Sioux Watershed Project, with payment to be made in-full during the 1st year of participation (currently \$60 per acre year) (e.g. 25 acres enrolled for 10 years = \$15,000);

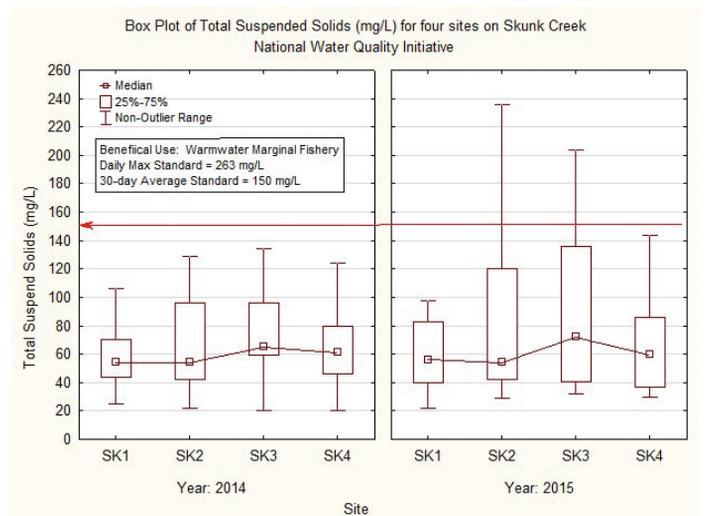
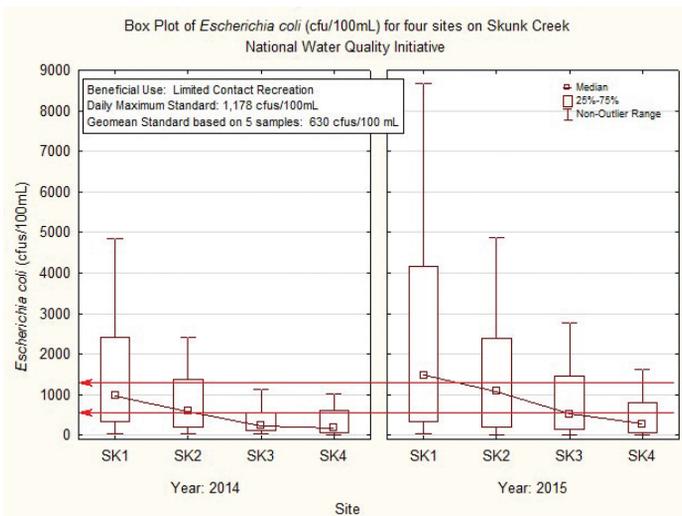


- No grazing allowed on enrolled acres from April 1st – September 30th, however, those acres can be hayed after June 1st while maintaining a minimum vegetative cover of 4 inches;
- Acres under contract can be fall grazed after September 30th if a minimum vegetative cover of 4 to 6 inches is maintained. However, an alternative water source is required to reduce impacts on the riparian area;
- Technical and financial assistance for conservation planning, fencing, alternative water development, cattle crossings, etc. available through the Big Sioux River Watershed Project.

The SRAM program is different from other buffer initiatives such as the Conservation Reserve Program (CRP). Landowners

are still able to utilize the grass near streams for hay after June 1st and throughout the growing season. The allowance for fall grazing after September 30th is also a major difference between the two programs. Producers can manage the SRAM acres by fall grazing but are required to have an alternative water source available to reduce impacts on the riparian area.

As of August 2015, the SRAM program had enrolled roughly 790 acres within the Big Sioux watershed with the majority of those acres along Skunk Creek that is a tributary to the Big Sioux River. The goal is to enroll an additional 1,700 acres in an attempt to improve water quality on the Big Sioux and its tributaries north of Sioux Falls by 2020. For more information on the SRAM program, contact Barry Berg, Watershed Coordinator at 605.759.2650.



Rosebud Rural Water System

Water is the key to increasing the quality of life, and for those on the Rosebud Indian Reservation, an adequate supply was desperately needed. Problems with water quality and inadequate supply were once common throughout the Reservation. Because of this, there was a detrimental effect on the health and quality of life for those on the reservation, as well as deterring economic growth. In the past, the residents of Rosebud had to rely on poorly-constructed or low-capacity individual wells. These water sources were often contaminated with bacteria or undesirable minerals, caused water-borne illnesses, and were costly to maintain and operate. Rosebud does have some artesian aquifers that are deeply buried underneath the reservation lands, but due to their high mineral and salinity content, was not a viable option to build on.

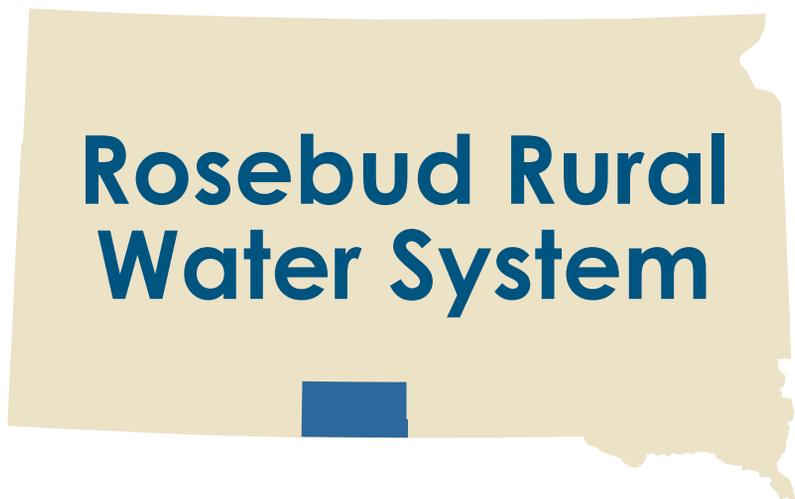
In 1988, Congress authorized the construction of the Mni Wiconi Rural Water Supply Project to provide water for residents of three tribal water systems and one non-tribal system where previous water supplies were insufficient or of poor quality. Fittingly, the Lakota translation of Mni Wiconi means, "Water is life." The original project included the Oglala Sioux Rural Water Supply System, the West River Rural Water System, and the Lyman-Jones Rural Water System. In 1994, the West River and the Lyman-Jones Rural Water System merged. Amendments to the project were also adopted in 1994 that added the Rosebud Sioux and the Lower Brule Sioux Rural Water Systems and raised the authorized appropriation ceiling for the project from \$87.5 million to \$263.2 million. The Project was reauthorized in 2002 and amended again by the Consolidated Appropriations Act, 2008, to





extend the sunset date to 2013. Similar to other large Federal rural water projects, appropriations have failed to keep pace with projected time lines, and additional costs have cut into construction funding. All the water used in the project is pulled from the Missouri River through a pump station in Ft. Pierre, and piped through a 24" core pipeline to approximately 51,000 people in 40 communities in 10 counties and through about 4,400 miles of pipeline throughout central, southern, and western South Dakota. It is considered to be the world's largest rural water pipeline. The Mni Wiconi project also, through the Bureau of Indian Affairs, uses existing programs and annual appropriations to construct, repair and upgrade plumbing fixtures, skirting, and other necessary features, such as septic tanks and drain fields, to ensure that houses within the service areas are able to meet the standards to be connected to the water system.

The Rosebud Sioux Rural Water System consists of about 450 miles of pipeline, 18 booster pump stations, and 18 water storage reservoirs, all of which serve approximately 17,000 people on the Rosebud Indian Reservation. Construction, operation, and maintenance of the Rosebud System are managed by the Tribe's Office of Water Resources. The cost of the Rosebud System was originally estimated at \$47.2 million, though by the final engineering report in October 1999, the cost was indexed in the Master Plan to \$61.8 million. From start to finish, it took eight years for the Rosebud Sioux RWS to be fully hooked up to the Mni Wiconi pipeline.



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Denise Dunham, Mni Wiconi Office Manager

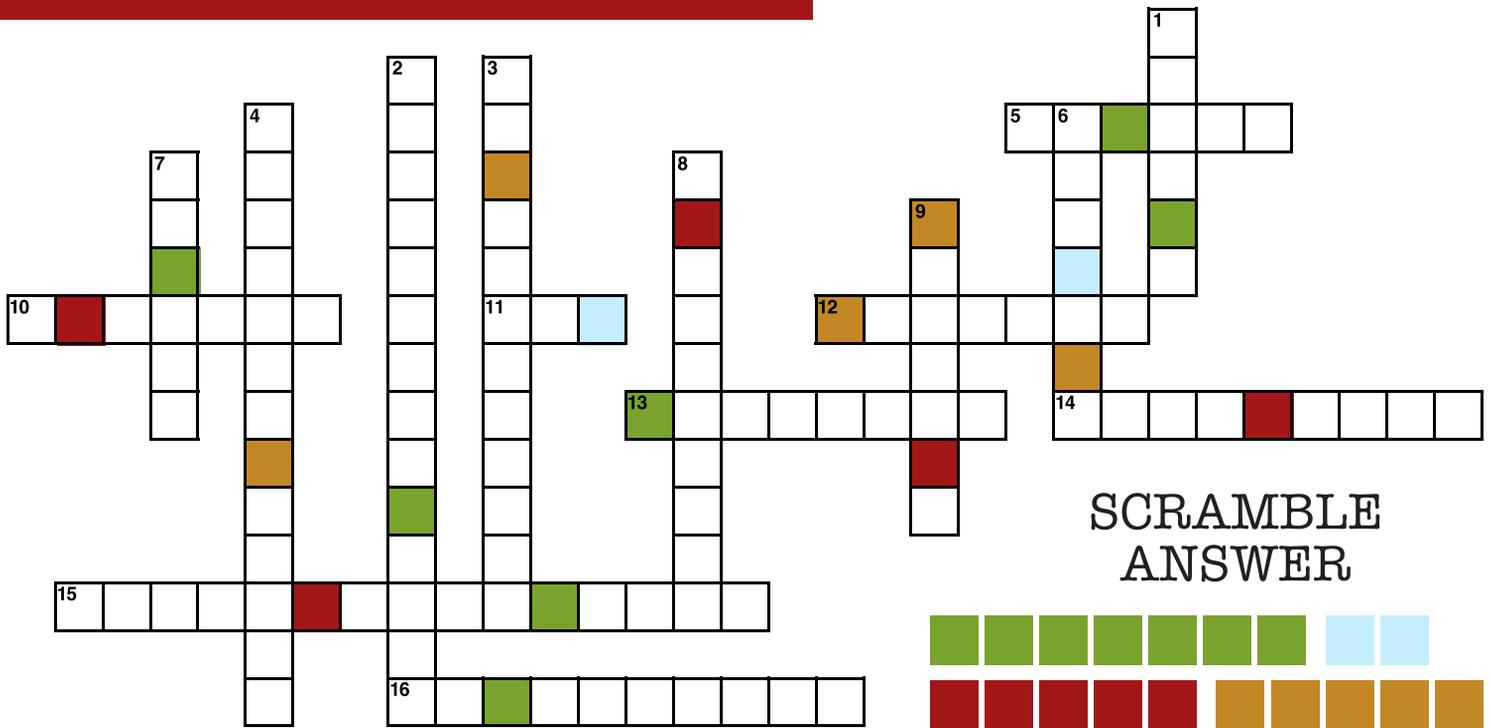
STATISTICS:

Hookups: 3,500
Miles of Pipeline: 450
Water Source: Oglala Aquifer (wells), and surface water from the Oglala Sioux Tribe Mni Wiconi Water Treatment Plant
Counties Served: Todd & Mellette
Towns Served Individual: Antelope, Grass Mountain, Mission, Parmelee, Soldier Creek, Ring Thunder, Upper Cut Meat, Horse Creek, Swift Bear, Okreek, Black Pipe, Corn Creek
Towns Served Bulk: Mission & St. Francis

RURAL WATER & Crossword Word Scramble Contest

Christmas Movies

\$100 Grand Prize



ACROSS

5. Real cool dude with a corncob pipe, button nose, and two eyes made out of coal.
10. Third reindeer in line
11. North Pole assistant
12. _____ on 34th Street
13. "Fixed the newel post." Christmas _____.
14. Left behind at Christmas time (2 words)
15. "You'll shoot your eye out" – The one with the Red Ryder BB gun (3 words)
16. _____ is coming to town (2 words)

DOWN

1. Island of _____ Toys.
2. "I'm dreaming of a _____." (2 words)
3. Magical Christmas Train (2 words)
4. It's a _____. (2 words)
6. Ousted from the reindeer games because of his beaming honker; Good reindeer to have on a foggy night
7. Green Seussian spoilsport
8. Sugarplum fairies and toy soldiers; an unexpected hit to the groin
9. A Christmas Carol miser

RULES

Use the colored squares in the puzzle to solve the word scramble above. Call your Rural Water System (See Page 2 for contact information) or enter online at www.sdarws.com/crossword.html with the correct phrase by January 10th, 2016 to be entered into the \$100 drawing.

Online Entries - go to: www.sdarws.com/crossword.html

Only one entry allowed per address/household. You must be a member of a participating rural water system to be eligible for the prize. Your information will only be used to notify the winner, and will not be shared or sold.

Congratulations to Curt Chambliss who had the correct phrase of "HOME IS THE NICEST PLACE THERE IS" for October 2015.

Rural Water Across South Dakota

Tripp County WUD Internal Upgrade Project



On March 28, 2014, the Board of Water and Natural Resources approved an \$11,750,000 Drinking Water State Revolving Fund loan to Tripp County Water User District for internal improvements and an expansion project. The internal upgrade and expansion project began construction in the spring of 2015, and consisted of installing approximately 183 miles of 1½” through 12” pipeline, replacement of five existing booster vaults, installation of one new booster vault, the replacement or rehabilitation on nine existing PRV’s to improve and expand the District’s distribution system, and provide water to approximately 88 new users who had signed up for the project within the existing service areas of the District.

Upon completion, the project will see the installation of approximately 91 meter pits within Tripp County WUD’s East Gregory service area. This includes customers who currently have meters located inside of their homes or have meter pits that are in need of replacement. Nitterberg Construction out of Estelline, South Dakota was awarded the contract to complete the meter pit upgrades and pipe installation.

The internal upgrade project consists of the installation of two new water towers to improve the system. An elevated multi-legged 400,000 gallon potable water storage tank was constructed one mile west of the Town of Burke. A second elevated multi-legged 125,000 gallon potable water tank was constructed to replace the current tank in the Town of Fairfax which was built in 1919, and was in need of major repairs. The new tank in Fairfax is located near the original tank on the northern edge of town. Phoenix Fabricators and Erectors out of Avon, Indiana was awarded the tank projects.

The Tripp County Water User District Project is moving right along with 161 miles of pipe and approximately 80 new customers installed; they are currently working on several booster pump upgrades at this time. With the finishing touches completed on the Fairfax tank, it will be put into service by the end of 2015. The new Burke tank has also been erected, but is awaiting favorable weather for painting. In 2016, meter pit upgrades will be completed in the East Gregory area, as well as the painting on the Burke tank. The final completion date for the entire upgrade project is scheduled for December of 2016.

JANUARY 12-14

ATC 2016

SOUTH DAKOTA RURAL WATER'S ANNUAL TECHNICAL CONFERENCE

PREMIER ATC SPONSOR



EDUCATIONAL SESSIONS SPONSOR



SCHEDULE OF EVENTS

TUESDAY

JANUARY 12, 2016

| TIME | AMPHITHEATER I | AMPHITHEATER II | ROOM D-E | ROOM F-G |
|----------|--|--|---|---|
| 8AM-4PM | CONFERENCE REGISTRATION – Registration Desk | | | |
| 8AM-4PM | WATER PAC RAFFLE – Lobby Area | | | |
| 8:00 AM | REFRESHMENT TABLE – Lobby Area | | | |
| 10:00 AM | 41st Annual Membership Meeting (This is the Official Business Meeting of the SDARWS) | | Tank Maintenance New Tank Coating Technologies | Sanitary Sewer Service Lateral Lining with CIPP |
| 11:00 AM | | | Winter Tank Operations | Chlorine Safety and Security |
| NOON | LUNCH – On your own | | | |
| 1:00 PM | | OPENING SESSION Keynote Address – V.J. Smith | | |
| 2:00 PM | | | | |
| 2:30 PM | BREAK TABLE – SPONSORED BY DGR – Lobby Area | | | |
| 3:00 PM | Quality on Tap! Editorial Board Meeting (This meeting is open to Rural Water managers, board members and office staff) | KEYNOTE BREAKOUT – VJ Smith | Control Valves | Nitrates in Big Sioux River |
| 4:00 PM | | | Do's and Don'ts of Tracer Wire (3:45pm) | Total Coliform Rule Modifications THM Reduction in Water Tanks |
| 5:00 PM | | | | |

WWW.SDARWS.COM/ATC.HTML

WEDNESDAY

JANUARY 13, 2016

| TIME | AMPHITHEATER I | AMPHITHEATER II | L. FRANCIS CASE A-B | LAKE SHARPE B |
|----------|--|--|---|--|
| 8AM-4PM | CONFERENCE REGISTRATION – Registration Desk | | | |
| 8AM-4PM | WATER PAC RAFFLE – Lobby Area | | | |
| 8:00 AM | <i>Rural Water Center Annual Meeting</i> | <i>The Importance of Proper Torquing</i> | <i>Reinforced Concrete Pipe & Precast Manholes</i> | SIGN UP TO USE THIS ROOM FOR CLIENT MEETINGS 605-556-7219 |
| 8:45 AM | | <i>AMI from Selection to Installation</i> | <i>SDWARN Informational Meeting</i> | |
| 9:30 AM | BREAK TABLE – SPONSORED BY HR Green – Lobby Area | | | |
| 10:00 AM | <i>CoBank: Headwinds in Rural Water</i> | <i>Biotta™ Efficient Nitrate Destruction</i> | <i>Neptune Meter & Automation</i> | SPOUSE PROGRAM: Boho Bead Bracelets with Lynne Elcock |
| 10:30 AM | | <i>Online RD Loan & Grant Application</i> | <i>Mni Wiconi CPE - Lowers Cost & Optimizes Operation (10:45)</i> | |
| 11:00 AM | | | | |
| 11:30 PM | LUNCH – On your own | | | |
| 1:00 PM | <i>Legislative Panel</i> | <i>Mapping</i> | <i>Water System Master Planning</i> | SIGN UP TO USE THIS ROOM FOR CLIENT MEETINGS 605-556-7219 |
| 1:30 PM | | <i>Madison: Recovery from Clear Well Collapse</i> | <i>Difficulties & Strategies of Leak Detection</i> | |
| 2:00 PM | | | | |
| 2:30 PM | BREAK TABLE – SPONSORED BY CoBank – Lobby Area | | | |
| 3:00 PM | <i>Legislative Preview</i> | <i>System Mapping and What is New from Trimble</i> | <i>Control Power Generation</i> | SIGN UP TO USE THIS ROOM FOR CLIENT MEETINGS 605-556-7219 |
| 3:30 PM | | | <i>What's New in Leak Detection</i> | |
| 4:00 PM | LEGISLATIVE RECEPTION AND TECHNOLOGY EXHIBITS – Grand Galleria | | | |

AWARDS BRUNCH SPONSOR

CompassTools

THURSDAY JANUARY 14, 2016

| | |
|---------|---|
| 8:00 AM | REFRESHMENT TABLE – Rooms D&E |
| 8:00 AM | LEGISLATIVE OPEN FORUM – Rooms D&E |
| 9:30 AM | AWARDS BRUNCH SPONSORED BY COMPASSTOOLS – Rooms A-B-C |

Bring a glass quart jar of your water to the 41st Annual Technical Conference in Pierre

All entries must be submitted to the registration desk by 2:00 pm on January 12th in order to be entered into the contest. Entries must be submitted in a glass jar and should be kept cold.

The winner's name will be announced at the ATC Awards Banquet on Thursday, January 14, 2016. The winner will go on to represent South Dakota at the NRWA Great American Water Taste Test in Washington, DC on February 10th, 2016

SPOUSE PROGRAM

TUESDAY JANUARY 12, 2016

3:00 PM Tour of Verendrye Museum Ft. Pierre (Meet in Lobby at 2:45pm)

WEDNESDAY JANUARY 13, 2016

9:00 AM Continental Breakfast (Ramkota Courtyard)

10:00 AM Boho Bead Bracelets (Lake Sharpe B)

11:30 AM Spouse Luncheon (Ramkota Courtyard)

1:30 PM Rural Water Taste Test Finals (Outside of Amphitheater I)

This is a tentative Agenda. Session topics and times are subject to change.



SOUTH DAKOTA RURAL WATER
 P.O. Box 287
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WATER MATTERS

Water Festivals

FOSTERING AWARENESS AND BRINGING COMMUNITIES TOGETHER

For more than two decades, South Dakota Water Festivals have been bringing hands-on water resource programs to 4th grade students across the state. Such events foster awareness of our water resources through interactive activities. Students participate in learning how water impacts each of our lives and the importance of keeping our water clean. The event is a great way to learn about water issues and what each of us can do in helping to protect our environment and its water resources. Each festival depends on its local community for support. Community businesses and residents contribute by volunteering their time, through generous in-kind support, or with monetary donations.



HOW YOU CAN HELP – CONSIDER VOLUNTEERING!

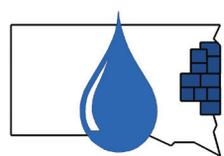
- South Dakota Water Festivals need volunteers:**
- Present activities about our water resources
 - Use a ready-to-go kit or bring your own
 - Guide small groups to designated activities
 - Help with setting up and taking down displays
 - Assist presenters or supervise exhibits
 - Become a committee member and plan a festival



SOUTH DAKOTA WATER FESTIVALS CONTACT A FESTIVAL NEAR YOU!

Volunteers are always needed! Contact a festival near you for more information on how you can help.

FOR A COMPLETE LIST OF WATER FESTIVALS HELD IN SOUTH DAKOTA, GO TO:
www.sd-discovery.org
 and search "water festivals"



Back page content provided by:
 East Dakota Water Development District
 132B Airport Drive • Brookings, SD, 57006
 (605) 688-6741 • <http://eastdakota.org>