

# SOUTH DAKOTA RURAL WATER'S

# Quality On Tap!

April 2017 | Volume 12, Issue 4

**SYSTEM SPOTLIGHT:**  
Perkins County RWS

**UNEXPECTED BENEFITS  
& UNLIKELY ALLIES**

**GEOLOGY &  
SOUTH DAKOTA  
RESOURCES**

# A MESSAGE FROM THE PRESIDENT OF THE BOARD

Ron Gillen, President  
South Dakota Association of Rural Water Systems



## Join us at the 2017 West River EXPO!

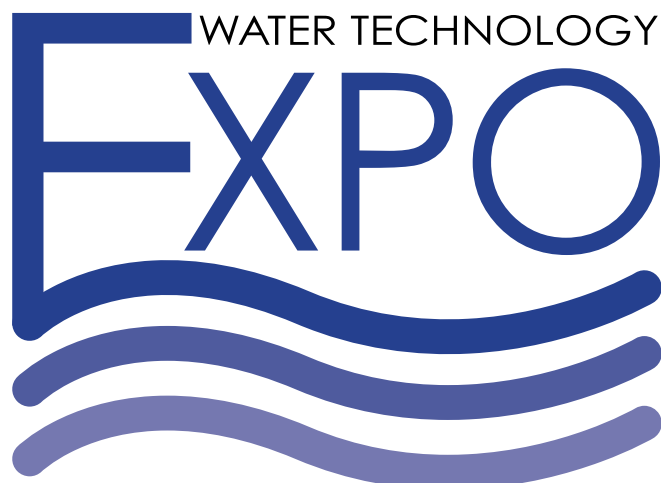
South Dakota Rural Water is pleased to announce the scheduling of the 2017 Water Conservation EXPO. The EXPO will be held in Rapid City at the Best Western Ramkota Hotel and Conference Center (605-343-8550) on April 26-27, 2017.

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. Some of the training sessions being offered include:

- **Internet Access to Your Laboratory's Database**  
*Dean Aurand – Mid Continent Testing Labs, Inc*
- **Using Ice to Pig Water and Wastewater Force Mains**  
*Nichole Grasma, Utility Service Group*
- **The Basics of Submersible Pumps**  
*Bob Reinmund, Grundfos*
- **New Technologies in Leak Detection**  
*Michael Carothers, Leak Locators of Montana*
- **Pipe Lining**  
*Nichole Grasma Utility Service Group*

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. Registration is \$40, and SDARWS is able to bill for this fee after the conference. You can register to attend at [sdarws.com/west-river-expo.html](http://sdarws.com/west-river-expo.html).



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**Class B East River**  
Ronald Neeman

**Class B West River**  
Robert Glenn

**Class C**  
Dan Ostrander



# Training Calendar

## MARCH

### 21-23 – WASTEWATER COLLECTION

**Spearfish Holiday Inn**

**305 N. 27th Street, Spearfish, SD 57783**

This course covers the Association of Boards of Certification "Need to Know" requirements for the Class I through III Wastewater Distribution Collection Exams. This course only covers the material for Wastewater Collection. Operations Specialists who wish to attempt a Water Distribution Exam should attend the Water Distribution Course. 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.

### 29-30 – TRIMBLE GPS TRAINING

**SDARWS Madison Office**

**203 W. Center Street, Madison SD 57042**

CompassTools and South Dakota Rural Water are providing Trimble GPS Unit with TerraSync software. This two day course will cover: GPS Fundamentals, Mission Planning, Data dictionary creation, Configuring GPS equipment, Data Collection techniques, Downloading Data, Differential correction using GPS Pathfinder Office, Data editing in GPS Pathfinder Office, Exporting Data to your GIS and Field Sessions. The class is designed for attendees to utilize their own equipment for the hands on training. The fee for this class is \$550.

## APRIL

### 6 – STABILIZATION POND

**Oacoma Community Center**

**100 E. 3rd Street, Oacoma SD 57365**

This course covers the material on the Association of Boards of Certification Stabilization Pond Exams. It does not cover material on the Class I or higher Wastewater 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 – INTERMEDIATE 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 II & III 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.

### 25 – BASIC WATER TREATMENT - SIOUX FALLS

**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.

## 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.

**REGISTER FOR CLASSES ONLINE AT: [go.activecalendar.com/sdarws](http://go.activecalendar.com/sdarws)**

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

# OUT AND ABOUT

## APRIL

### 1 – ROOTS & SHOOTS GATHERING - WATERTOWN

An annual spring free day at the Bramble Park Zoo in Watertown. Stations around the zoo highlight service learning, animals and Native American cultures. This is a Jane Goodall Institute's Roots & Shoots event. Free will canned-food donation. [www.brambleparkzoo.com](http://www.brambleparkzoo.com)

### 15 – EGGSTRAVAGANZA – RAPID CITY

Spend time with the family in downtown Rapid City, experience children's activities at Main Street Square and hunt for eggs at Memorial Park on Saturday, April 15. The Easter Bunny will even make an appearance! For full event details, visit [mainstreetsquarerc.com/concerts-and-festivals/eggstravaganza.html](http://mainstreetsquarerc.com/concerts-and-festivals/eggstravaganza.html).

### 26-29 – BLACK HILLS FILM FESTIVAL – HILL CITY

The 8th annual Black Hills Film Festival will be April 26-29. In addition to screening great Independent Films, the Festival also features seminars and workshops with Industry Experts and great parties with Celebrity guests. Some of the weekend's events take place in Hill City and others take place in Rapid City. See the full schedule online at <http://www.blackhillsfilmfestival.org>.

## MAY

### 5-7 – SOUTH DAKOTA BIRDING FESTIVAL – FT. RANDALL

Registration is in Pickstown, SD. Activities include bird banding, bird identification, birding experts and speakers, guided field trips, and children's activities. This is the only time that the Karl Mundt National Wildlife Refuge located by the Fort Randall Dam is open to the public. <http://southeastsouthdakota.com/what-to-do/calendar-of-events/details/south-dakota-birding-festival>

### 19-20 – SOUTH DAKOTA STATE PARKS OPEN HOUSE AND FREE FISHING WEEKEND

The annual Open House Weekend includes free entrance to all South Dakota state parks. (Camping fees do apply.) A number of parks will also host special events to kick off the summer and it is free fishing weekend, so licenses are not required. <http://gfp.sd.gov/state-parks>.

*If you would like your event featured in the July 2017 issue of Quality on Tap!, please email your event description to: [info@sdarws.com](mailto:info@sdarws.com). July's issue will cover events taking place July - September 2017. Event listings are subject to approval by the QOT Editorial Board.*

## MAY

### 20 – HURON TURKEY DAYS/TURKEY RACES

The Huron Turkey Races take place every spring in downtown Huron. The event draws crowds eager to watch teams of two try to encourage their "turkey" team to cross the finish line first for a chance to win \$1,000. Activities include skills games, balloon animals, and more. Turkey Legs and Fowl Balls will also be available to test your palate. It's free fun for the entire family! [www.huronsd.com/visiting-huron/special-events/huron-turkey-races](http://www.huronsd.com/visiting-huron/special-events/huron-turkey-races).

## JUNE

### 8 – SD SHAKESPEARE FESTIVAL - VERMILLION

The Comedy of Errors, an early Shakespeare play, deals us not only one, but two sets of identical twins. As the two heroes travel in search of their long-lost twins, they are mistaken along the way by citizens. Plenty of slap-stick, shtick and verbal banter serve up a true "comedy of errors." Performances are June 8-10 at 7 p.m. and June 11 at 4:30 p.m. There will be live music and vending beginning one hour before each performance. Bring your blanket or lawn-chair to Prentis Park in Vermillion. [www.sdshakespearefestival.org](http://www.sdshakespearefestival.org)

### 17 – ABERDEEN ARTS IN THE PARK

Aberdeen's 42nd annual Arts in the Park will feature exhibitors and vendors filling Melgaard Park for a weekend of fun, food, entertainment and of course fantastic arts and crafts. The juried event attracts exhibitors from more than 12 states and features more than 100 booths. Event hours are 10 a.m.-6 p.m. on Saturday and 10 a.m.-5 p.m. on Sunday (the third full weekend each June). Free admission. [www.aberdeenaareaartscouncil.com](http://www.aberdeenaareaartscouncil.com)

## JULY

### 28-30 – ARLINGTON DAYS

Arlington Days kicks off their 3-day celebration with something for all ages. Arlington Days features a Mud Bog side-by-side competition on a 400' track on Saturday afternoon for an opportunity to see some exciting muddy racing action. Bring your 4x4 and get in on the fun! A street dance; Music in the Park; Outdoor Picnic; Kids Fishing Derby; Free Swimming; and lots more entertainment for the whole family. See full list of events at [www.arlingtonsd.com/economic\\_chamber](http://www.arlingtonsd.com/economic_chamber).





# CALL BEFORE YOU DIG - IT'S THE LAW!

*By Larry Janes, Executive Director, SD One Call/SD811*

**H**ave you ever thought about what it would be like not to have good tasting, clean water available when you need it? Probably not. I know I rarely do, but there's just nothing better than turning on the tap and getting a refreshing cold glass of water to quench your thirst on a hot day or having that steaming hot water ready for you in the shower. And in those rare cases when there's a water break, we just can't wait until it's repaired.

For many, having clean water available for basic human needs is just not the case. There are all kinds of figures available on the internet ranging anywhere from hundreds of millions of people to several billion people who don't have access to clean or even adequate water supplies, either on a regular basis or ever. Fortunately for those of us living here in South Dakota, we do. And we have our water suppliers, excavators and you to thank for that.

Our water suppliers work hard to learn about new technologies to keep our water clean and safe. But why thank excavators and you, you ask? That's because you contacted the South Dakota 811 Center before digging, more than ever before, in 2016. In fact last year was a record year for contacting the South Dakota 811 system, either by calling 811 or by going on-line to request utilities to locate their underground services and mark them with paint or flags before digging occurred. The 811 Center was contacted, a whopping 148,352 times last year. That's more than any other year since the service began back in 1993. With our population in South Dakota of about 858,000 people, and with this large number of locate requests, it works out to almost one in six people digging something, somewhere in the state all year long.

What's really cool about this is that 54% of all these requests were made on line, with no hold time, even during the busiest times of the year, which are always during the spring thaw and just before freeze-up. We're constantly working to make it easier and more efficient for you to get your work projects out to the utilities in your area as quickly as possible. A call to the 811 Center takes about 7 to 8 minutes, from the time you reach a representative until you hang up, but the new, on-line Homeowner Portal takes only about half that time. Just go to [www.SD811.com](http://www.SD811.com), click on the Homeowner or Landowner tab and click [HERE](#) to process your request using the South Dakota Homeowner Portal. It's a step-by-step process that's really easy to use. (Even I can do it, and that's saying something).

South Dakota 811 is there to accept your calls and on-line requests 24/7, 365 days a year, so water suppliers and other underground facility operators know to mark their lines to prevent outages. This can protect those buried services during excavation projects, such as planting trees, placing fences or drain tile, and any other projects where the earth will be disturbed and where those buried lines could accidentally be damaged. Once you've made contact with the Center all utilities in the area are notified of the work you'll be doing and when you plan to do it, so they can mark those underground lines, including your water, to ensure your safety and making sure that you won't lose your valuable services.

It's not only a good idea to contact 811 before digging, it's actually a law in South Dakota, as it is in every other state. You did a great job last year in keeping yourself and your water safe. Keep up the good work! Thank you from South Dakota 811 for getting those lines marked. And thank you from your local water provider and the South Dakota Association of Rural Water Systems.



*Glacial Lakes Ethanol Plant served by  
WEB Water Development Association, Inc.*

# Unexpected Benefits & Unlikely Allies

## THE ROLE OF CURT HOHN, JOHN SIEH AND THE BUREAU OF RECLAMATION IN SOUTH DAKOTA'S DOMESTIC WATER SYSTEMS

*By Peter Carrels*

Two of today's key benefits from Missouri River development – recreation and domestic water pipelines – were not mentioned when the federal Flood Control Act of 1944 was discussed, championed and enacted. No one envisioned that by building dams on the river, walleye habitat would be created, and a recreation industry with widespread benefits would blossom. Planners also failed to anticipate the development of pipeline systems emanating at the river and providing clean, ample water to thousands of South Dakotans and hundreds of thousands of livestock.

A pivotal reason for passage of the 1944 legislation were plans in the bill calling for construction of several massive irrigation projects on the Northern Plains. Economic development leaders in both Dakotas cheered the prospect of these extensive blueprints. The venerable Bureau of Reclamation (BOR), a formidable federal agency, would plan, promote and build the projects as they had done in many other western areas.

Oahe dam was erected high and mighty to create a deep reservoir that would feed one of those irrigation projects, a sprawling, complex enterprise to be situated in northern South Dakota and officially titled the Oahe Unit. But when

grassroots opposition challenged that irrigation plan in its early years of construction it fell to project opponents to compel a more productive and noncontroversial use for those impounded Missouri River waters.

John Sieh became a notable figure in the Oahe irrigation project conflict. A Brown County farmer and businessman, Sieh helped lead the group of farmers and conservationists – called United Family Farmers – that opposed the irrigation project and fought the BOR and its powerful political and business supporters. In 1974 he first won election to the Oahe Conservancy Sub-District board of directors, the local board overseeing development of the federal irrigation project, and two years later he became that board's chairman, an occurrence that demonstrated the rising power of United Family Farmers. Sieh was simultaneously beloved and berated, speaking boldly and strategizing forcefully against the project. But he was also a public-spirited citizen, understanding that opposing the Oahe Unit was not sufficient duty for an institution like the Oahe Sub-District.

Sieh and his trusted colleague and friend, Curt Hohn, manager of the Oahe Sub-District, recognized that many rural people in the area to be served and impacted by the Oahe irrigation plan suffered from inferior and inadequate





*WEB Water Intake on the Missouri River*

water for household and other uses.

In its formative stages was a small group of dedicated individuals trying to rectify this problem by promoting a pipeline using Missouri River water. Sieh, Hohn and the Oahe Sub-District became their chief allies. The Sub-District hired a staffer to help pipeline advocates, allocated funds to help plan and establish the pipeline, and courted political support for it. This was the beginning of the WEB water system, named after the three counties – Walworth, Edmunds, and Brown – that would have benefited by the pipeline project.

By 1982 a major political compromise traded development of the Oahe Unit for federal support of several South Dakota water projects, including the WEB system. It had been a bitter ten-year fight to halt the enormous irrigation plan, and there were considerable misgivings about the trade by the project's boosters in South Dakota. But Sieh and Hohn pushed hard, and they found political partners who understood that replacing a controversial project with a popular, useful one was reasonable and appropriate.

When Hohn left the Sub-District in late 1982 he was hired by WEB supporters to help guide the WEB system through construction to completion. It was a tricky assignment, because the Oahe-WEB trade ushered in a new and relatively undefined set of responsibilities for the federal Bureau of Reclamation.

Losing the Oahe irrigation project fight was painfully difficult for the BOR as it marked the first and only time grassroots opponents had derailed one of its projects. That historic defeat also signaled a dramatic end to the agency's long domination of the West, and to the conventional mentality that building irrigation (reclamation) projects was synonymous with progress. Among BOR's new responsibilities was aiding rural water systems, including the new WEB project.

That, of course, meant bitter rivals Curt Hohn and the BOR had to work together. Hohn would later say that WEB and BOR steadily developed a positive working relationship, and that he grew to appreciate the professionalism of the agency. Hohn was credited with helping craft the unique funding mechanism through which the BOR could administer monies to build WEB, and that approach was later applied to other Missouri River pipeline systems.

Today's vast WEB water system may have been invented and incubated by an ardent collective of local activists, but the pipeline system was given its lasting life by John Sieh, Curt Hohn and their allies on the Oahe Sub-District board. Curt Hohn's skills and tenacity are critical reasons WEB became an invaluable contributor to quality of life in the region it now serves, and that success paved the way for numerous other rural water systems receiving federal funding via the Bureau of Reclamation.

*Peter Carrels' book [Uphill Against Water](#) described Missouri River development in South Dakota and closely profiled the political fight over the Oahe irrigation project. From 1980 through early 1983 he worked for the Oahe Conservancy Sub-district. He now serves as communications coordinator for the University of South Dakota, and also works as a freelance writer for clients and publications.*

# GEOLOGY & SOUTH DAKOTA WATER RESOURCES

## Part Three

*By: Martin Jarrett, Big Sioux Community Water System, and Jay Gilbertson, East Dakota Water Development District*

South Dakota has a diverse geologic history. Hard, crystalline rocks like granite and quartzite are found in the central core of the Black Hills and in quarries near Milbank, Mitchell and Sioux Falls. These and similar rocks underlie all of the state and form the foundation on which all other materials rest. Layered rocks, which can be seen ringing the Black Hills and extending east to the Missouri River valley (and beyond), record periods when the state was covered by great oceans that swept over the landscape. Lastly, covering most of the state east of the Missouri River are largely unconsolidated deposits left behind when glaciers repeatedly advanced across the area. While each geologic unit is different, they all share a common trait - they each have a direct connection to the drinking water resources that we utilize today. This is the third and final of a series of articles in which these connections will be explained and explored.

### Ice Age South Dakota

From time to time over the long history of the planet, there have been periods when the climate was substantially cooler than usual. Referred to as ice ages, they mark times when glaciers covered a significant portion of the Earth's surface. During an ice age, which can last tens of millions of years, climatic fluctuations cause glaciers to alternately grow and advance, during glacial periods, and thaw and retreat, during interglacial periods. We currently live in what would be described as a relatively warm interglacial period within the Quaternary ice age, which began around 1.6 million (1,600,000) years ago.

The last major glacial period ended about 10,000 years ago. At its peak (18,000 to 25,000 years ago), glaciers covered about 30% of the planet's land surface, including most of northern Europe, northwestern Asia, Canada, and the northern United States. In places, the ice was up to 2-1/2 miles thick. In our part of the world, glaciers originating in Canada covered most of South Dakota east of the Missouri River. Note: Deposits from this period are mapped in shades of brown on the geologic map.

Evidence of earlier glacial periods can be found in certain parts of South Dakota, including deposits that likely date to the beginning of the current ice age. However, each advancing glacier often eroded and stripped away the deposits left behind by its predecessors, recycling and then

re-depositing the material, collectively called glacial drift. As a result, the present landscape is largely the result of the final advance, and subsequent retreat, of the ice. Deposits from earlier glacial periods are found along and east of the Big Sioux River, an area not covered by ice the last time around.

Glacial drift in South Dakota takes two basic forms. Glacial till is the material deposited directly by the ice when a glacier melts. It contains particles that range from microscopic clay up to boulders several feet across or larger. A single glacier can transport material for hundreds of miles, taking rocks from one area and depositing them somewhere else. Often the rocks left behind are nothing like the local variety. Such rocks are called erratics, and in certain instances can be shown to have traveled over a thousand miles as the result of multiple glacial events. Almost without exception, the rocks and boulders scattered across eastern South Dakota were carried into the state from elsewhere, mostly from Canada.

### Glacial aquifers

The other major type of glacial drift is called outwash. Outwash typically consists of sand and gravel deposited in rivers and stream valleys by meltwater from glaciers. As ice melts, the resulting water flows away from the glacier, often in substantial torrents. As it passes over previously deposited material, it can pick up all but the largest particles. As the water slows, sand- and gravel-sized particles settle out, forming outwash deposits, while finer particles are carried far away. Across eastern South Dakota, deposits of outwash at or near the land surface mark the courses of meltwater channels and pathways formed as the last glacial period came to a close. Similar deposits are found buried beneath recent drift, but were formed in a similar manner during prior glacial periods.

Composed of porous sand and gravel, glacial outwash can hold and transmit significant quantities of water. Water from rainfall and/or snow melt that soaks into the ground can be found in these units. In some cases, modern rivers and streams, like the Big Sioux River and its tributaries, follow the old glacial meltwater channels. Interconnections between the river and aquifer provide another path for water to enter the outwash. As such, these deposits make excellent aquifers on which the citizens of the state have depended for many years.





# GEOLOGICAL MAP OF SOUTH DAKOTA

Public water suppliers across eastern South Dakota, including both municipal and rural water systems, have developed well fields in glacial outwash aquifers. This is particularly true east of the James River, where extensive surface outwash bodies are found along former meltwater pathways in the Vermillion River and Big Sioux River basins. Using current and former channels as a guide to locating these aquifers, communities and individuals need do little more than dig/drill down a few tens of feet to find accessible water.

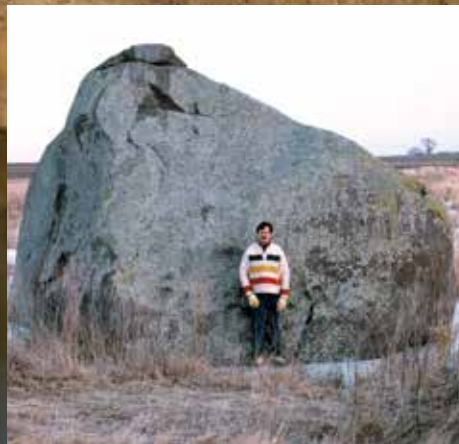
Where near surface outwash deposits/aquifers are absent, locating buried outwash poses more problems. Unlike older and geographically extensive bedrock aquifers (see Dakota aquifer described in the October 2016 Quality On Tap), the presence and location of outwash aquifers is not readily predictable. To better define the aquifers in the glaciated part of the state, the South Dakota Geological Survey (now known as the Geological

Survey Program within the State Department of Environment and Natural Resources) began a program in the late 1950s to define and inventory the geologic and groundwater resources county-by-county.

A critical part of the Survey's county study program involved the systematic drilling of exploratory test holes into and often through the cover of glacial drift. As a result, geologists were able to identify and map numerous buried glacial outwash aquifers. Observation wells installed in these aquifers have helped further define and quantify water available for use by public water suppliers, farms and individual homes. To date, the Survey has drilled over 23,000 test holes and wells for the sole purpose of better understanding and managing our natural resources. This effort has resulted in an unparalleled resource for the benefit of all South Dakotans.



*Glacial outwash from near Big Stone City.*



*Lone Rock glacial erratic in eastern Moody County.*



*Glacial till from near Milbank.*



# SYSTEM SPOTLIGHT

## PERKINS COUNTY RURAL WATER SYSTEM

The idea of Perkins County Rural Water (PCRWS) first came to light in 1982 when a group of farmers, ranchers, and representatives of Lemmon and Bison were approached by the Southwest Water Pipeline Project with the idea to sell water to Perkins County.

In 1992, the project was re-introduced to Perkins County by Southwest Water Authority. At this time, a committee of approximately 25-30 people from all over the county got together to form Perkins County Rural Water System, Inc. A nine member, volunteer Board of Directors was selected from three districts within the county. In addition municipal members selected one representative to serve on the board.

Perkins County Rural Water became a reality when it was organized as a non-profit organization in March 1993. The State of South Dakota furnished the startup money in the form of two \$50,000 grants under the State Water Plan. With this money, PCRWS was able to finance a feasibility study done by KBM, Inc. of Grand Forks, ND, and The Alliance of Rapid City, SD. The study was finished in late 1993 and showed it would be feasible to build a distribution system and purchase water from Southwest Water Authority.

The Governor's office and the State legislature were approached at this time to authorize Perkins County Rural Water System, Inc. With the authorization came appropriations of one million dollars to be used to finance our portion of the Southwest Pipeline construction in North Dakota and to allow the system to lobby US Congress for a Federal Authorization.

The next several years were spent working with US Congress,

towns of Lemmon and Bison, United States Fish & Wildlife Service, and the Grand River Grazing Association. In 1998, both of the towns signed a contract with Perkins County Rural Water to furnish them with 100% of their water needs. In the spring of 1999, the US Senate approved our authorization on the federal level. The House of Representatives passed the authorization in October of 1999, and the President signed our authorization into Public Law 106-136.

The authorization stated that the federal government would cost share 75% grant money of 28 million dollars to build the distribution pipeline in Perkins County. The appropriation was spread over at least six years of construction time.

Perkins County Rural Water was able to purchase 400 gallons per minute plus any excess water in the line to South Dakota from Southwest Water Authority and distribute that to the members of Perkins County Rural Water. To take care of demands that exceeded the purchase, storage was to be built to stockpile water.

Initial construction on the system began in 2003 with ground breaking occurring May 1, 2004. Initial construction of Phases I to VIII was completed in 2012 with the final amendment for initial construction signed after the installation of the HWY 75 Booster Station. PCRWS began their state repayment of \$5.144 million over 40 years on July 1, 2015.

The system is currently finishing up a DOT mandated realignment project from White Butte to Lemmon on HWY 12, and Summerville to Lemmon on HWY 73. They are currently in the process of installing an automatic meter reading system which began in 2014, and plan to finish this project in 2017.



*Perkins Co. Office in Bison, SD*



*Booster Station on Highway 20*





*Main pump station near Lodgepole.*

# PERKINS COUNTY RURAL WATER SYSTEM

## DIRECTORS:

.....  
**Don Melling**, President  
**Brian Morris**, Vice-President  
**Lynn Frey**, Secretary/SA Director  
**Colin LaMont**, Treasurer  
**Holly Waddell**, Director  
**Rodney LeFebre**, Director  
**Stanley Brixey**, Director  
**Art Pederson**, Director  
**Luke Clements**, Director

## STAFF:

.....  
**Shiloh Baysinger**, O&M Manager  
**Eric Newman**, O&M Operator  
**Brandi Baysinger**, Office Manager

## STATISTICS:

.....  
**Hookups:** 878  
**Miles of Pipeline:** 850  
**Water Source:** Southwest Water Authority, ND  
**Counties Served:** Perkins  
**Towns Served Bulk:** Lemmon, Bison



# RURAL WATER & Crossword Word Scramble Contest

## Birds of Spring

\$100 Grand Prize

### DOWN

1. Sunny colored songbird
2. Four and twenty of these baked in a pie
5. Violet fork-tailed swallow (two words)
6. Big-headed diver
9. Tree hole driller
10. Azure symbol of happiness
13. Bright red bird
19. Happy as a \_\_\_\_\_

### ACROSS

3. Black and orange songbird; Baltimore baseball mascot
4. Pesky dark-brown bird
7. Small hoverer with a long tapered beak
8. Rural nester (two words)
11. Common and loud "seed cracker"
12. Tiny black and gray songbird
14. Pirates of the Caribbean Captain Jack
15. Rockin' red-bellied bird of spring
16. Avian mimic
17. "Crazy," but not a duck
18. American plover; "murdering buck"
20. Tiny little brown backyard bird

**SCRAMBLE ANSWER**

## 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](http://www.sdarws.com/crossword.html) with the correct phrase by April 10th, 2017 to be entered into the \$100 drawing.

**Online Entries - go to: [www.sdarws.com/crossword.html](http://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 Robin Buchholz who had the correct phrase of "Victory requires payment in advance" for January 2017.



# Rural Water Across South Dakota

## Kingbrook & WEB Receive USDA Rural Development Funding for Improvements



*Kingbrook receiving their Rural Development funding.*



*WEB receiving their Rural Development funding.*

US Department of Agriculture Rural Development Acting State Director Bruce Jones announced that the Kingbrook Rural Water System, Inc., and the WEB Water Development Association, Inc., will receive Water and Environmental Program (WEP) funds for various improvement projects. USDA Rural Development Community Programs Director Tim Potts was in Pierre at the South Dakota Rural Water Conference held on January 10 – 12, 2017 to make the announcement on Jones' behalf.

"Supporting water systems that supply rural residents with safe and dependable water is part of USDA's mission," said Jones. "USDA is pleased to assist Kingbrook and WEB with improvements to their systems."

Kingbrook Rural Water System, Inc. based in Arlington was awarded a WEP loan of \$10.8 million and a grant of \$1.387 million to provide approximately 230 new service locations and improve the reliability of the existing water system.

"The recent loan and grant funding received from USDA Rural Development will enable Kingbrook to complete a significant expansion project to provide service to rural residents in need of quality water within our eleven county service area," said Randy Jencks, General Manager for Kingbrook Rural Water System,

Inc. "USDA Rural Development is a major funding source for our organization and their staff does a great job providing financial assistance where needed. Without their committed and professional help, we would not have been able to complete this project."

WEB Water Development Association, Inc. based in Aberdeen was awarded a WEP loan of \$7.12 million to upgrade water lines and construct a new booster station.

"WEB Water is happy to move forward with this improvement project to help with meeting the capacity needs of our current membership," said Angie Hammrich, General Manager for WEB Water Development Association, Inc.

Water and Waste Disposal Loan & Grants assist in the development of water and waste disposal systems in rural areas and towns with a population not in excess of 10,000. The funds are available to public bodies, non-profit corporations and Indian tribes.

For more information, contact the Rural Development office nearest you. You can locate an office by visiting [www.usda.gov/contact-us/state-offices/sd](http://www.usda.gov/contact-us/state-offices/sd). Visit [www.rd.usda.gov/programs-services](http://www.rd.usda.gov/programs-services) for information on all Rural Development's programs.



# 2017 RURAL WATER RALLY

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

This year 23 people representing eight rural water systems and the State Association traveled to Washington, D.C. to participate in the NRWA sessions and private meetings with Senators John Thune and Mike Rounds, Congresswoman Kristi Noem, and USDA Rural Development staff.

The goal was to focus our efforts on informing our elected leaders of the needs and concerns of water and wastewater utilities in South Dakota, and hopefully our leaders were receptive to help keep funding for rural water utilities in South Dakota alive.

Despite on-going change and deep uncertainty surrounding the nation’s capital, the National Rural Water Association opened its 2017 Rural Water Rally on Feb. 7th with optimism about the success of their programs and eagerness to build new relationships moving forward. During the 2017 opening session, priorities were established to maintain funding levels for specific programs that provide assistance to small systems across the country. The speakers at the Rally opening included NRWA President Steve Fletcher of Illinois, the NRWA Legislative Chair Kent Watson from Texas, Deputy Staff Director for the US Senate Committee on Appropriations Fitzhugh Elder IV, and Former Chief of Staff for Senator Thad Cochran Keith Heard. The NRWA President Fletcher emphasized that change was underway, and that whether individuals agreed with that change or not, those changes were happening. “With the changes in D.C., we have our best opportunity in many years to affect the future of our water and wastewater systems,” Fletcher said. “These efforts have

the chance to benefit our members for years and years to come.”

Rural Water FY18 appropriations priorities were established as follows:

USDA Circuit Rider	\$17.404 million for FY18
USDA Source Water	\$6.5 million for FY18
EPA Technical Assistance	\$15 million for FY18

The Circuit Rider request has raised slightly to \$17.404 million and would maintain the current number of circuit riders in the field (117 nationwide). The USDA Source Water program stayed at a request of \$6.5 million – which would help bring a source water protection specialist to each state in order to better meet current demand. The EPA Technical Assistance request of \$15 million would continue a competitive grant program to provide rural communities with the training and technical assistance necessary to improve water quality and provide safe drinking water.

Besides the NRWA funding requests, appropriations for USDA Grant/Loans (\$600 million), EPA Drinking Water SRF (\$1,020.5 billion), and EPA Clean Water SRF (\$1,393.9 billion) were being supported by Rally attendees.

Your support makes a difference in our fight to preserve rural water loan and grant assistance. Thanks to everybody who attended the Rally – we couldn’t do it without you!







# Cedar Shores Marina OACOMA, SD

## APRIL 29TH, 2017

### Registration

ENTRANCE FEE IS \$100.00 PER TEAM/BOAT  
REGISTRATION DEADLINE IS APRIL 15TH.  
VISIT [SDARWS.COM](http://SDARWS.COM) TO REGISTER  
TOURNAMENT IS LIMITED TO 50 TEAMS

### Launch Time

7:00 AM - 3:00 PM

### Rules

TEAMS TO CONSIST OF 2-3 PEOPLE WITH AT LEAST ONE PERSON WHO IS A CURRENT WATER/WASTEWATER, ASSOCIATE OR CORPORATE MEMBER OF SOUTH DAKOTA RURAL WATER  
8 FISH MAXIMUM PER BOAT WITH THE LARGEST 7 FISH WEIGHED  
ALL JUDGES RULES ARE FINAL  
IN CASE OF A TIE, THE TEAM WITH THE BIGGEST FISH WINS  
MANDATORY RULES MEETING 8:00PM FRIDAY NIGHT  
SOUTH DAKOTA FISHING REGULATIONS MUST BE FOLLOWED

### Prizes

PAYOUT DEPENDENT ON NUMBER OF TEAMS  
TOURNAMENT WINNERS ANNOUNCED SHORTLY AFTER  
WEIGH-IN RESULTS ARE COMPLIED





**SOUTH DAKOTA RURAL WATER**  
 P.O. Box 287  
 Madison, SD 57042  
[www.sdarws.com](http://www.sdarws.com) | 605-556-7219

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# WATER MATTERS

## How Waterfalls are Formed

According to the dictionary, a waterfall is “a cascade of water falling from a height, formed when a river or stream flows over a precipice or steep incline.” Such a dry, academic description might well provide a workable technical definition, but it does little to convey the beauty of such features that have drawn the attention of people for ages. Waterfalls, both large and small, are the focal points of many national, state and local parks and scenic areas, ranging from the massive Niagara Falls along the St. Lawrence River to the modest Minnewissa Falls at the Pipestone National Monument 50 miles northeast of Sioux Falls.



In many cases, waterfalls form when fast-moving water passes over hard, resistant rock that transitions into softer, more easily eroded material. The harder capping rock is preserved (or eroded much more slowly), while the softer rock is quickly worn away. As a result, a step (geologists call it a nick point) develops in the river or stream, over which the water “falls.” Over time, the harder rock will also be eroded, and the waterfall moves slowly upstream. Chunks of the more resistant cap rock are often visible at the base of the waterfall. Roughlock Falls and Spearfish Falls along Little Spearfish Creek in the Black Hills are two good South Dakota examples of this type.



In other cases, the ledge over which the water “falls” is the result of a break in otherwise fairly uniform rock. Over millions of years, forces within the earth have created faults and fractures in the Sioux Quartzite, which is found across parts of southeastern South Dakota. These breaks have left behind a fairly irregular surface on the quartzite. When modern day rivers and streams flow across this surface, waterfalls and cascades develop where there are sharp transitions. The Falls of the Big Sioux River are an example, and led to the development of our states largest community. Rock Rapids, Iowa, got its name in a similar manner.

Next time you come across a waterfall, see if you can figure out just why it is there, but only after admiring what is taking place.



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