



# MID-DAKOTA RURAL WATER SYSTEM

# Quality On Tap!

January 2019 | Volume 14, Issue 3

## HOW MUCH WATER IS IN THE GROUND?

### A CALIFORNIA PERSPECTIVE:

SOUTH DAKOTA  
RURAL WATER SYSTEM  
DEVELOPMENT

# FROM THE MANAGER

Scott Gross, General Manager  
Mid-Dakota Rural Water System, Inc.



Another year is in the books and it's been a busy year indeed! With some changes in administration and staff this has been a year full of learning. Everyone at Mid-Dakota has stepped up and filled in where ever help was needed. A big goal for Mid-Dakota this year was expanding our distribution system to be able to serve Ring Neck Energy, a new Ethanol producing facility by Onida. Our goal of having this on-line by October 31, 2018 was met and hope that the ethanol plant will have success in starting their business. The town board of Ree Heights contacted Mid-Dakota about taking over their water system. There was a sign-up meeting held at the end of September and there were 76 water user agreements signed. Mid-Dakota hopes to complete this task in 2019. We continue to improve our Automatic Meter Reading system and are still striving for 100% reads every day. Mid-Dakota is moving forward with plans to increase its transmission capacity to the eastern reaches of the System. The improvements will include paralleling 20 miles of 24" pipeline, and construction of another 1.5-Million-gallon water storage tank. Mid-Dakota hopes to bid this project early in the spring of 2019 to be completed over two years.

Mid-Dakota held its 26th Annual Meeting of the Membership on October 16, 2018. We again hosted the meeting using the "come and go" (open-house) format. Over 200 members and guests visited our offices. Each year following the meeting, Mid-Dakota staff compiles an "after-action" report. We try to look at what went right, what went wrong, what can we do differently etc... The end goal is that we want to conduct an annual meeting that entices a lot of people to attend, which is fun and valuable to the people who do attend.

We hope the Christmas season finds you all in good spirits and the new year is prosperous and kind to you as well!



## Quality On Tap!

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(1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: [program.intake@usda.gov](mailto:program.intake@usda.gov). This institution is an equal opportunity provider.

# MID DAKOTA CALENDAR

The Mid-Dakota Rural Water System offices will be closed on the following dates:

**December 24 – Christmas Eve**

**December 25 – Christmas Day**

**January 1 – New Year’s Day**

In case of an emergency, please call the office Toll Free at 1-800-439-3079, or call our After Hours answering service direct at 1-888-545-7440.

## SHANE BUSH, NEW HOOKUP SPECIALIST

Some may have already met our new Hookup Specialist, Shane Bush, since he has been working for Mid-Dakota Rural Water System since the 20th of August. Lorin Johnson took the position of Distribution Operations Manager when it was open and Shane was hired to fill the opening for Hookup Specialist.

Shane is from Cherokee, Iowa; this is where he was first introduced into the career of water distribution. He spent his summers off from college working for the City of Cherokee at the Wastewater Plant and briefly working full-time for the City as a Certified Wastewater Operator. He returned to South Dakota State to finish up his degree in Wildlife and Fisheries. After completion he returned to Cherokee to work for Cherokee Rural Water. He was a Water Operator for Cherokee Rural Water for over a year until his hire at Mid-Dakota.

With his degree in Wildlife, Shane is an avid outdoorsman and enjoys hunting and fishing. He is looking forward to working in the area and meeting new people!



### Rate Table Effective January 1, 2019

#### 501 Residential 1-Unit

\$42.00 per month minimum bill  
\$4.75 per 1,000 gallons 1st 33,000  
\$7.00 per 1,000 gallons over 33,000

#### 502 Rural Household 2-Units

\$52.00 per month minimum bill  
\$4.75 per 1,000 gallons 1st 10,000  
\$3.75 per 1,000 gallons next 56,000  
\$7.00 Per 1,000 gallons over 66,000

#### 504 Rural Household 4-Units

\$70.00 per month minimum bill  
\$4.75 per 1,000 gallons 1st 10,000  
\$3.75 per 1,000 gallons next 122,000  
\$7.00 per 1,000 gallons over 132,000

#### 506 Rural Household 6-Units

\$87.00 per month minimum bill  
\$4.75 per 1,000 gallons 1st 10,000  
\$3.75 per 1,000 gallons next 188,000  
\$7.00 per 1,000 gallons over 198,000

#### 511 Livestock

\$30.00 per month minimum bill  
\$3.75 per 1,000 gallons 1st 300,000 (per year)  
\$4.75 per 1,000 gallons 301,000 to 700,000 (per year)  
\$7.00 per 1,000 gallons over 700,000 (per year)

#### 161, 162, 164, 165 Special Class I & II

\$16.40 per GPM per month minimum bill  
\$24.00 per GPM per month demand charge  
\$0.50 per 1,000 gallons

#### 163, 166 Special Class III

\$4.69 per Pers (equiv) per month minimum bill  
\$4.55 per Pers (equiv) per month demand charge  
\$0.50 per 1,000 gallons up to contract amount  
\$7.00 per 1,000 gallons over contract amount

1 Minimum & demand charges do not include any water.  
2 Livestock (511) water allocations are annual use, not monthly.  
3 "equivalent" population "person" = contract GPD ÷ 270

#### After Hours or Emergencies

Call Mid-Dakota

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or call the answering service direct at  
1-888-545-7440



For online bill paying:  
[www.mdrws.com](http://www.mdrws.com)



Merry Christmas  
& Happy New Year

FROM THE MID-DAKOTA STAFF  
AND BOARD OF DIRECTORS



# OUT AND ABOUT

## JANUARY

### **1 – WINTER WOODS WALK – NEWTON HILLS STATE PARK, CANTON**

Ring in the new year with a walk through Newton Hills. Enjoy the quiet nature that winter offers, and enjoy the walk. Meet at Shelters 3 & 4 located on SGT Creek road. Walk takes place from 2:00pm - 3:30pm. Park License is required. <https://gfp.sd.gov/events/detail/541/>

### **3-5 – DAKOTA FARM SHOW – DAKOTA DOME, VERMILLION**

For 35 years, the Dakota Farm Show has kicked off the new year by showcasing over 280 exhibitors representing over 1000 agricultural products and services, all inside the temperature-controlled USD DakotaDome. Join over 25,000 agricultural producers from South Dakota, Nebraska, Iowa, and Minnesota to review the latest farm technology focused on improving yields, reducing costs, and managing risk. <https://dakotafarmshow.com>

### **18-19 – MEDIAONE FUNSKI, SIOUX FALLS**

This annual event features skiing, snowboarding, team tubing, Frozen Leg kickball, a snow sculpture contest, Zipfy sled racing, and cross country skiing as well as live music. Most events have beginner, intermediate, and advanced categories. Funkski has become the premier outdoor winter event in eastern South Dakota and has raised nearly \$1 million for Children's Inn. Join in the fun at Great Bear Ski Valley in Sioux Falls starting at 5 p.m. on Friday and 8:15 a.m. on Saturday. Free to attend. Participants can still register and pay for events at Great Bear up to 30 minutes before each event's start time. [www.funkski.org/](http://www.funkski.org/)

### **19 – LAKOTA GAMES ON ICE – PREHISTORIC INDIAN VILLAGE, MITCHELL**

Join Sicangu Rosebud Tribe Member Mike Marshall for an afternoon of great family fun! Mike will teach us all how to play the ancient games his ancestors played during the winter months. This annual event is great for children of all ages. The museum and gift shop will be open during the games. After the games, come into the warm museum for some hot chocolate or coffee and cookies! This event is free, donations are welcome! The Games will begin at 1:00, arrive early! [www.facebook.com/mitchellprehistoricindianvillage](http://www.facebook.com/mitchellprehistoricindianvillage)

### **25 - FEBRUARY 3 – ANNUAL BLACK HILLS STOCK SHOW & RODEO, RAPID CITY**

The Black Hills Stock Show & Rodeo in Rapid City features events, rodeos and vendors. The region's largest trade show, livestock sales and competitions and is one of the top 5 indoor PRCA rodeos in the country. There are 10 different breeds of cattle sales, a two-day horse sale, and seminars for livestock producers, horse enthusiasts and the general public. Events are held at the Central States Fairgrounds and at the Rushmore Plaza Civic Center (444 Mt. Rushmore Road). Admission. [www.blackhillsstockshow.com](http://www.blackhillsstockshow.com)

## FEBRUARY

### **23-24 – 47TH ANNUAL FARM, HOME, & SPORT SHOW, PIERRE RAMKOTA**

Central South Dakota's Largest Display Show will be at the Ramkota in Pierre. For more information visit our website [www.todayskccr.com](http://www.todayskccr.com).

### **21-23 – SIOUX FALLS SNO JAM COMEDY FESTIVAL**

What better way to celebrate winter time in South Dakota than by staying inside to watch comedy? There is no other comedy festival like this. Thirty comedians from around the country will perform in various venues across Sioux Falls. Over the course of three days, they will perform in standup and themed showcases, testing both their comedy wits and their endurance to the cold. Net proceeds benefit the Special Olympics of South Dakota. [www.siouxfallssnojамcomedyfest.com](http://www.siouxfallssnojамcomedyfest.com)

## MARCH

### **1-2 – MARDI GRAS WEEKEND, DEADWOOD**

It is the best party north of the Bayou! Celebrate Mardi Gras in the Wild West, with a weekend full of free parades, costume contests, parties and live music. Make your plans now - you don't want to miss this cabin-fever-busting event in Historic Deadwood. The fun starts at 8 p.m. on Friday and lasts until 10 p.m. on Saturday. [www.deadwood.com/event/mardi-gras/](http://www.deadwood.com/event/mardi-gras/)

### **9-12 – SUMMIT LEAGUE BASKETBALL CHAMPIONSHIP, SIOUX FALLS**

The 2019 Summit League Basketball Championships, men's and women's, return to the Denny Sanford PREMIER Center in Sioux Falls, March 9-12. Enjoy four days of Division I college basketball action by teams from South Dakota, North Dakota, Colorado, Nebraska, Oklahoma, Indiana and Illinois. Admission fees. <http://www.dennysanfordpremiercenter.com/events-tickets/calendar-of-events/2019-summit-league/>

### **29-30 – SCHMECKFEST, FREEMAN**

Schmeckfest is an annual festival in the southeastern South Dakota town of Freeman. The gathering uses food, art and a celebration of community to honor the history of Germans that emigrated from Russia. Held on the campus of the Freeman Academy, it's been a fundraiser for the school every spring since 1959. The ethnic German meal, served family-style, and the community musical take place two weekends in March/April. The 2019 dates of the 61st Annual Schmeckfest are March 29-30 and April 5-6. [www.schmeckfest.com](http://www.schmeckfest.com)

*If you would like your event featured in the April 2019 issue of Quality on Tap!, please email your event description to: [info@sdarws.com](mailto:info@sdarws.com). April's issue will cover events taking place April - June 2019. Event listings are subject to approval by the QOT Editorial Board.*



# A CALIFORNIA PERSPECTIVE: SOUTH DAKOTA RURAL WATER SYSTEM DEVELOPMENT

*by Andy Christensen,  
former Manager of the Clark Rural Water System*

**S**outh Dakota rural water systems have a lot to be proud of in all of their accomplishments. These systems, members of the South Dakota Association of Rural Water Systems, virtually blanket the entire state. Our family owns farmland in Beadle County served by the Mid-Dakota Rural Water System providing an assured high-quality domestic drinking water. I can remember as a farm kid growing up in the 1950's of having to carry water in a pail from a windmill for drinking, washing and bathing purposes. So glad those days are gone and that the Mid-Dakota RWS now serves us.

My background in South Dakota water started as the Domestic Water Coordinator for the WEB Pipeline Corporation helping to organize six steering committees that morphed into the large system it is today. From 1982 to 1989, I served as the Manager for the Clark Rural Water System in a seemingly unending succession of construction projects. Today, Clark has more than doubled its size and population served under subsequent Managers each contributing to Clark's success. After living in California, I appreciate more how SD rural water employees rise to the occasion in building these systems and providing high-quality service.

I am the manager for the Woodbridge Irrigation District that provides a much different service to 13,000 acres (40,000-acre area) and bulk service to the Cities of Lodi and Stockton totaling 400,000 people. The District's Mokelumne River water supply comes from snowmelt water originating in the Sierra Mountains

100 miles to the east. The water is diverted by a new dam, 414 cubic feet/ second (cfs) diversion and fish screen structure and 100-mile system of pipelines and canals providing irrigation water to farmers but bulk untreated drinking water to our customers including Lodi and Stockton's water treatment plants.

California has been plagued with droughts, fires, and floods, but the biggest disaster has been the excessive regulation, taxation, and fees charged by the State Government in Sacramento (referred to as regulatory droughts). Since our legislature meets year around, the number of regulations and fees on water, licenses, and permits has seemingly unending new regulations and intrusive control of water districts (mostly deleterious) adding to cost of water services. California depends on both surface water and groundwater which is in a state of overdraft. California droughts are caused by lack of rainfall also by almost no new construction of new reservoirs to serve a population that has doubled to 40 million people in the last 30 years. California plans to help meet its future water demands with mandatory conservation, reduction, and rationing.

South Dakota, not California, is ahead of the curve in meeting the water needs of its cities and rural population without unnecessary, burdensome regulation. I am happy the "can do" spirit is alive and well in South Dakota ensuring that every South Dakota citizen has reliable and safe drinking water brought to them by South Dakota's numerous rural water systems. South Dakota is a leader in developing its groundwater and surface water resources for domestic use. California can learn a lot from the successes of South Dakota Rural Water Systems.



# BACKGROUND ON DRINKING WATER STANDARDS IN THE SAFE DRINKING WATER ACT

## SUMMARY OF SDWA RELATED TO CONTAMINANTS:

■ **Congress enacted the Safe Drinking Water Act (SDWA) in 1974 and amended and reauthorized it in 1986 and 1996.**

- *Main federal law that ensures the quality of Americans' drinking water*
- *Authorizes EPA to set national standards for drinking water to protect against health effects from exposure to naturally-occurring and man-made contaminants*

■ **Drinking water standards only apply to public water systems (not individual private wells).**

■ **EPA works with states, localities, and water suppliers who carry out these standards.**

## DRINKING WATER STANDARDS APPLY TO PUBLIC WATER SYSTEMS:

■ **Public water systems are those having at least 15 service connections or serve at least 25 people for at least 60 days a year.**

■ **Over 150,000 public water systems across the U.S. serve more than 300 million people.**

■ **Approximately 646 public water systems exist in South Dakota.**

## THREE TYPES OF PUBLIC WATER SYSTEMS:

■ **Community Water Systems (CWSs)**

- *Provide water to the same population year-round (for example: homes, apartment buildings)*
- *Approximately 52,000 systems serving the majority of the U.S. population*
- *There are 463 Community Water Systems in South Dakota*

■ **Non-Transient Non-Community Water Systems (NTNCWSs)**

- *Provide water to same people at least six months a year, but not all year (for example: schools, factories, churches, office buildings that have their own water system)*
- *Approximately 85,000 systems nationwide, 20 in South Dakota*

## ■ Transient Non-Community Water System (TNCWS)

- Provide water where people do not remain for long periods of time (for example: gas stations, campgrounds)
- *Approximately 18,000 systems nationwide, 163 in South Dakota*

Drinking water standards may apply differently based on type and size of public water systems.

## WHAT ARE DRINKING WATER STANDARDS?

Drinking water standards are regulations that EPA sets to control the level of contaminants in the nation's drinking water. The regulations also require water monitoring schedules and methods to measure contaminants in water.

### THE STANDARDS ARE PART OF SDWA'S "MULTIPLE BARRIER" APPROACH TO DRINKING WATER PROTECTION, WHICH INCLUDES:

- Assessing and protecting drinking water sources
- Protecting wells and collection systems
- Making sure water is treated by qualified operators
- Ensuring the integrity of distribution systems (for example, minimizing leaks, maintaining adequate water pressure)
- Making information available to the public on the quality of their drinking water

### THERE ARE TWO CATEGORIES OF DRINKING WATER STANDARDS:

#### ■ National primary drinking water regulations (NPDWR or primary standard):

- Legally-enforceable standards that apply to public water systems
- Protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and are known or anticipated to occur in water from public water systems
- Take the form of maximum contaminant level or treatment technique rules

#### ■ National secondary drinking water regulations (NSDWR or secondary standard):

- Non-enforceable guidelines for contaminants that may cause:
- cosmetic effects (such as skin or tooth discoloration)
- aesthetic effects (such as taste, odor, or color) in drinking water

The EPA recommends secondary standards to water systems but does not require systems to comply (except for the public notice required for exceedance of the fluoride secondary standard). However, states may choose to adopt them as enforceable standards.

## SDWA PROCESSES INVOLVING DRINKING WATER CONTAMINANTS:

**Contaminant Candidate List (CCL)** — Requires EPA to develop a list of unregulated contaminants that are known or may occur in drinking water. This list is published every five years

**Regulatory Determination for CCL** — Requires EPA to decide whether to regulate at least five CCL contaminants with a drinking water standard every five years Specifies three criteria (adverse health effects, occurrence in public water systems, meaningful opportunity for health risk reduction)

**Unregulated Contaminant Monitoring** — Requires EPA to establish criteria for a program to monitor at least 30 unregulated contaminants every five years

**Regulation Development** — If EPA decides to regulate a contaminant via the regulatory determination process, the Agency has 24 months from the time of the determination to propose a regulation and 18 months from the proposal to finalize the regulation. The SDWA requires evaluation of a number of factors in the standard setting process.

**Six Year Review** — The EPA is required to review each standard every six years and, if appropriate, revise the standard. Any revision must maintain or improve public health protection. If a regulation is revised, EPA goes through the standard setting process again and evaluates a number of factors.

**National Contaminant Occurrence Database (NCOD)** — Requires the EPA to assemble and maintain a national drinking water contaminant occurrence database using information for both regulated and unregulated contaminants in public water systems.

## HOW DOES EPA DECIDE WHICH CONTAMINANTS TO REGULATE?

The EPA has drinking water regulations for more than 90 contaminants. The Safe Drinking Water Act (SDWA) includes a process that EPA must follow to identify and list unregulated contaminants. This process may lead to development of a national primary drinking water regulation (NPDWR) in the future.

The EPA must periodically publish this list of contaminants (called the Contaminant Candidate List or CCL) and decide whether to regulate at least five or more contaminants on the list (called regulatory determination). A regulatory determination is a formal decision on whether EPA should initiate a rulemaking process to develop an NPDWR for a specific contaminant.

The EPA also uses the CCL to prioritize research and data collection efforts to help the Agency determine whether it should regulate a specific contaminant.

*Information in this article provided by the EPA. For more information, please visit [www.epa.gov/dwstandardsregulations/background-drinking-water-standards-safe-drinking-water-act-sdwa](http://www.epa.gov/dwstandardsregulations/background-drinking-water-standards-safe-drinking-water-act-sdwa)*

# HOW MUCH WATER IS IN THE GROUND?

South Dakota's lakes, rivers and streams are the most visible examples of our important water resources. Promotional efforts at the state and local level often like to focus on people enjoying recreational activities at a lake, boating and fishing along the Missouri river, or the scenic beauty of water falls, be they on the Big Sioux River or Spearfish Creek. However, the day-to-day water needs of most South Dakotans are met with water drawn from below the land surface. These under ground sources, called aquifers, provide needed water to public water supplies and private homes, ranches and farms all across the state.

Given the importance of these resources, keeping track of the amount of water in these aquifers is of critical importance. While it is easy enough to look at a river, lake or reservoir and tell whether it is full or empty, ground water by its very nature is hidden from view. The first indication that such a buried resource is in trouble might be when the well goes dry, at which point alternatives are going to be limited.

To keep track of South Dakota's under ground water resources, the Water Rights Program within the South Dakota Department of Environment and Natural Resources (SD DENR) maintains a network of roughly 1,600 observation wells across the state. They are divided among 105 different individual aquifers, or sub-units of larger systems, like the Big Sioux aquifer. Water level measurements are collected by Water Rights staff on a regular basis, with 12,000-15,000 manual water level readings gathered per year. However, in certain situations, more detailed information is needed, and about 40 wells are equipped with continuous recorders to collect more frequent measurements.

The network was established in 1957 under the direction of the Water Resources Commission. The first wells were drilled under contract with Grimshaw Drilling (James and Lewis Hutmacher were the drillers based in Oacoma and Sioux Falls). However, the oldest observation wells in the current network were constructed in 1953 by US Bureau of Reclamation and added to the observation well network in 1970's. Not surprisingly, a majority of the observation wells (936 wells) were added between 1976-1981, following a period of severe drought. In many instances, wells installed by other state entities, like the South Dakota Geological Survey, are incorporated into the network. Otherwise, private well drillers are hired to install new, or replace old, wells in the network.

The well network is used for a variety of purposes. First and foremost, it helps determine whether or not there is water available for additional users. South Dakota water law grants seniority to the first/oldest users of a particular water resource ('first in time/first in right'). Subsequent (junior) potential users have access only so long as their withdrawals do not adversely impact more senior users. The well network helps the Water Rights Program determine if there is water available for 'new' users.

State law also prohibits, in most cases, the mining of ground

water. This means that water cannot be withdrawn from an aquifer at a rate greater than it is recharged. The well network helps in determining how a given aquifer responds to existing pumping, and whether there is available water for other users.

**In addition to help determine general water availability, the network is also used to:**

- resolve well interference complaints or concerns;
- monitor long-term water level trends;
- determine the configuration of the potentiometric surface (water table) for the aquifer, and in turn determine overall flow directions;
- differentiate management units within larger aquifers; and
- provide input and calibration for models of ground water flow.

Is there a Water Rights network well near you? Information on the location of network wells can be found on the SD DENR website at: <http://apps.sd.gov/nr69obswell/default.aspx>. The link takes you to an interactive map, and you can zoom in on any part of the state to find the location of wells in your area of interest. Clicking on a particular well site will bring up information on the well location, elevation, depth and the aquifer being monitored. You can also pull up a detail drillers log, and a plot of water levels over the period of record.

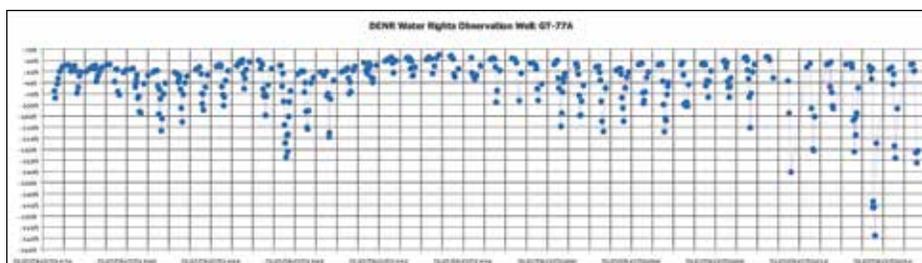
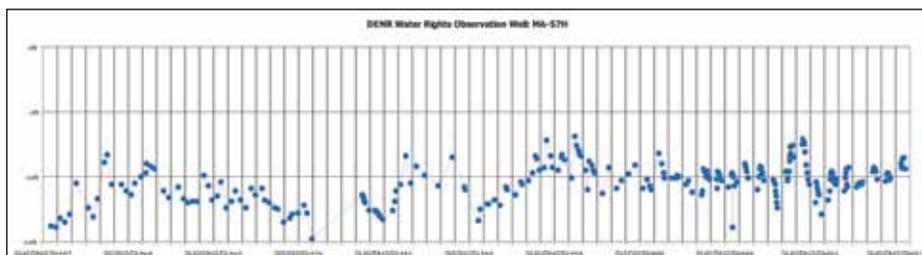
Two examples of the water level plots are shown. MA-57H is a well in the shallow Sioux Falls management unit of the Big Sioux aquifer shallow. Water levels in this well have been fairly stable over the life of the well, ranging from between seven and 15 feet below the casing top. Contrast that with the variability shown in well GT-77A. Located in the Prairie Coteau aquifer about 20 miles north of Watertown, water levels here rise and fall sharply in response to irrigation needs. Fortunately, once the pumps are turned off, water levels rise back up to ‘normal’ pretty quickly.

**Water Rights well trivia:**

Deepest well (JA-96A) - 2,239 feet total depth (TD) finished in the Dakota aquifer in northeastern Jackson County.

Shallowest well (FR-98A) - 12 feet total depth (TD) in alluvium along the Cheyenne River in northeastern Fall River County.

Greatest depth to water (LA-96B) - 900 feet below casing top in a Madison aquifer well near Spearfish in Lawrence County. By contrast, the pressure in a capped flowing well (ED-85B) in the Inyan Kara aquifer near lake Richmond in Edmunds County suggests that the water level would rise to 300 feet above the land surface.



## WEST RIVER/LYMAN-JONES RWS

The concept of a rural community water system began as far back as the 1950s. A volunteer group was formed to take on the project, but the group had a difficult time obtaining funding. These dedicated people used their own money and resources to create an interest in their areas.

In the 1970s a project was being proposed by a group called Energy Transportation System, Inc. or the ETSI pipeline project. This was a pipeline project proposed to deliver large volumes of water through a huge pipe from the Missouri River to the coal fields of Wyoming. The purpose was to pulverize the coal, mix it with water, and send this slurry through a pipe to the power plants in the south and into the Gulf. The coal would then be dried and burned in the power plants.

The people of Lyman and Jones Counties decided to pledge their support along with the West River Water Development District; because they had been assured that if this project became a reality they would be able to draw water from this large pipeline for rural and municipal use. In time, this project was rejected and was unable to proceed. Shortly thereafter, the West River Water Development District decided to join in with Lyman and Jones Counties and work together in promoting a water project that would serve both areas.

Work began immediately signing members up and lobbying for

seed money through the South Dakota Department of Water and Natural Resources so preliminary engineering and lobbying efforts could begin.

In August of 1986, a Senate sub-committee field hearing was held in Kadoka. About 450 people filled the auditorium, and it was at this meeting that three members of the Oglala Sioux Tribe addressed the meeting and indicated that they were interested in joining the project, which would eventually be called the Mni Wiconi Water Supply project, and included construction of the West River/Lyman-Jones Rural Water Systems.

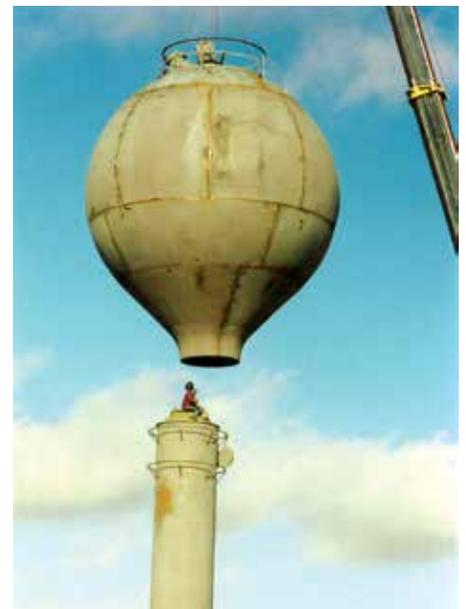
A great deal of time and effort was put in by all entities involved in the process. Much of western South Dakota has been connected to rural water through the Mni Wiconi Project, which was authorized by President Ronald Reagan in October 1988.

Lyman-Jones and West River continued to work together and eventually limited each of their organizations to 5 directors. The first membership meeting was held in January 1991. In May 1994, the West River and the Lyman-Jones water systems merged into one system and was named West River/Lyman-Jones Rural Water Systems.

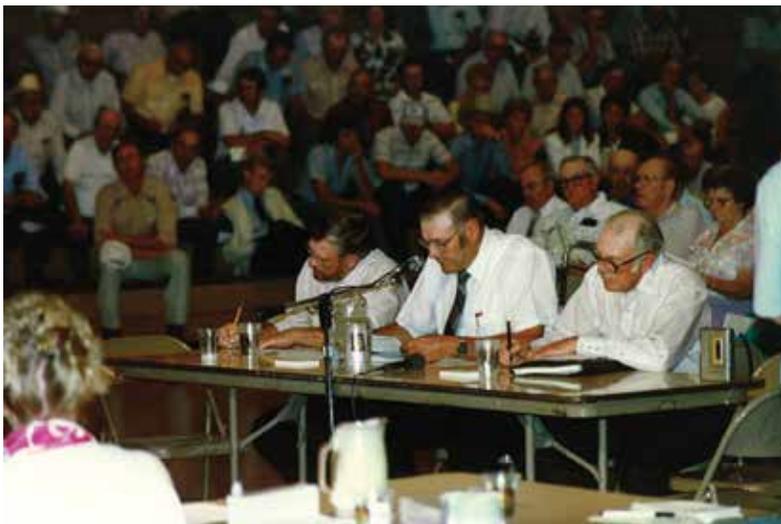
The Mni Wiconi systems are still in the process of completing construction. West River/Lyman-Jones Rural Water is approximately 95% complete to date.



*WRLJ Headquarters in Murdo, SD*



*Construction of Vivian water tower*



**Director Joe Hieb, center, testifies on behalf of the project during the Senate field hearing in Kadoka in August 1986**



**WRLJ First Service - H&K Ranch**

## DIRECTORS:

**Dave Fuoss**, Draper – President  
**Richard L. Doud**, Midland – Vice President  
**Dodie Garrity**, Hayes – Sec./Treas.  
**Paul Goldhammer**, Wall  
**Kirk Cordes**, Creighton  
**Veryl Prokop**, Kadoka  
**Casey Krogman**, White River  
**Brad Smith**, Vivian  
**Dean Nelson**, Murdo  
**Quint Garnos**, Presho  
**Marion Matt**, Philip – Liaison for West River Water Development District

## STAFF:

**Jake Fitzgerald**, Manager  
**Amy Kittelson**, Office Manager  
**Kati Venard**, Billing Secretary  
**Brandon Kinsley**, O & M Foreman - Murdo  
**Ed Venard**, O & M - Murdo  
**Steve Baker**, O & M - Murdo  
**Brian Flynn**, O & M - Murdo  
**Mike Vetter**, O & M Foreman - Philip  
**Eddie Dartt**, O & M - Philip  
**John Kramer**, O & M - Philip  
**Nick Konst**, O & M - Philip

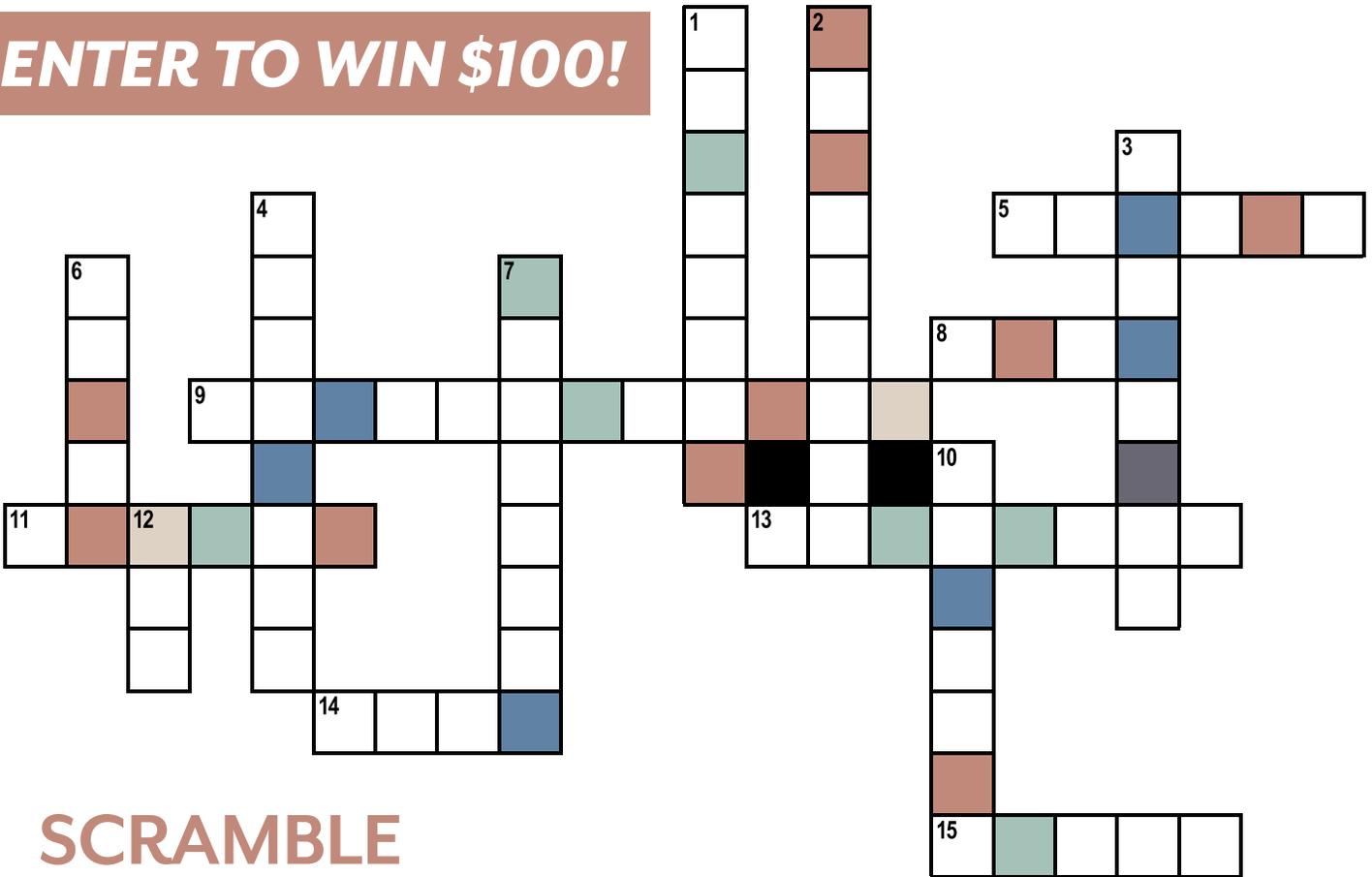
## STATISTICS:

**Hookups:** 3,315  
**Miles of Pipeline:** 3,450  
**Water Source:** Missouri River via Mni Wiconi Water Treatment Plant, three West River/Lyman-Jones wells  
**Counties Served:** Haakon, Jones, Lyman, Mellette, Stanley, and portions of Jackson and Pennington  
**Towns Served Individual:** Draper, Reliance, Interior, Quinn, Vivian, Belvidere  
**Towns Served Bulk:** Philip, Murdo, White River, Presho, Kennebec, Wall, Midland, Kadoka, Fort Pierre

# RURAL WATER CROSSWORD & WORD SCRAMBLE CONTEST

## WINTER WEATHER

**ENTER TO WIN \$100!**



### SCRAMBLE ANSWER



#### DOWN

1. White storm
2. Freezing factor
3. Accumulation of snowfall over time
4. Light, brief shower of snow
6. Another word for arctic
7. Blizzard hazard
10. Frozen stalactite
12. Frozen, slippery condition

#### ACROSS

5. Bright halo caused by ice crystals
8. Frozen flakes
9. Precipitation that becomes ice upon impact (2 words)
11. Bone chilling
13. Transparent driving hazard (2 words)
14. Strong wind
15. Raining ice pellets

**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 January 8th, 2019 to be entered into the \$100 drawing.

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 Diane Byer who had the correct phrase of "Water, use it wisely" for October 2018.

# RURAL WATER

## ACROSS SOUTH DAKOTA

### MID-DAKOTA RURAL WATER SYSTEM CONSTRUCTION

**M**id-Dakota has several construction projects underway. At the current time, construction is being completed to add a new large customer, Ringneck Energy's ethanol plant, near Onida, SD. The plant will produce 80 million gallons of ethanol per year as well as about 240,000 tons of the byproduct of dry distiller's grain. Ringneck Energy will be Mid-Dakota's second largest customer and bringing the water to Ringneck has been a major undertaking. Nitteberg Construction Company (Nitteberg) was awarded Schedule 1 of Contract 2018-1 and Engineering Fluids Inc. (EFI) out of Centralia, Illinois was awarded Schedule 2.

Nitteberg started off with tapping Mid-Dakota's existing 15" water line and crossing Hwy. 83. This project also consists of burying approximately 5,300 feet of 10" PVC pipe and 1,900 feet of 8" PVC pipe with a railroad crossing just before entering Ringneck Energy property. The railroad crossing casing is 140 feet long to carry the 8" PVC pipe into Ringneck Energy property to attach to the master meter vault which is designed to deliver up to 675 gallons per minute (gpm) of water to the plant. EFI has delivered the master meter vault and Nitteberg is installing it.

EFI has also started the planned upgrades at our Onida Booster station; upgrades at this station include switching out two 150-horse pumps to 200-horse pumps and adding a third 200-horse pump to the station. This also includes switching the VFD's to accommodate the larger pumps. Our electric provider has to upsize the power transformers to furnish electricity for the larger pumps. EFI will also be installing a HVAC system to help cool this station with all the motor heat it will be generating. Total package of both schedules when complete will cost \$1.2 million.

Other projects that are at the beginning stages, is working with Ree Heights to upgrade their water delivery system and the Mainline Extension project. After lengthy discussions with town representatives all parties decided that the best course of action for Ree Heights was to replace the town's aging water distribution system and when complete to hand the water system over to Mid-Dakota to operate and maintain. Ree Heights received a loan from the Drinking Water State Revolving Fund for \$430,000 that is 100% principle forgiven. Total cost of project is \$509,000 so Mid-Dakota will pay for the amount over Ree Heights' loan (\$79,000). This project is just getting started, Ree Heights with the help of Mid-Dakota held a sign-up meeting September 25, 2018 and signed up 76 water users. Bartlett & West Engineers will take this information and design the best route to serve all signups and hope to bid this project in the spring 2019 to be installed over the summer.

The Mainline Extension will include a new 1.5-million-gallon water storage tank next to the one west of Highmore (Twin Towers) along Hwy 14 and 20 miles of parallel 24" PVC mainline pipeline. Estimated cost of the Mainline Extension is \$18 million. Bartlett & West has been gathering information to find best placement for parallel pipe, they have identified three separate sections to parallel and help Mid-Dakota out the most in areas of low pressure during peak flows. Mid-Dakota staff has been identifying landowners and working on getting landowners to sign an additional 40-foot easement to run beside existing 60-foot easement to have enough room to work to install new parallel pipeline. During the first part of October, Bartlett & West had a crew on site to fly a drone to survey the route and collect data needed to design project layout. If all goes well on easement gathering and gathering of information by the drone, this project could be designed this winter to be bid in January or February 2019 to start construction spring 2019 to be completed fall 2020. Mid-Dakota also has been in the habit of also installing close to 100 new services each year.



# UNAPPROVED MINUTES MID-DAKOTA RURAL WATER SYSTEM, INC. 26TH ANNUAL MEETING

**M**id-Dakota Rural Water System, Inc. held its 26th Annual Meeting using a “Come and Go” Format on the 16th day of October in 2018. Members were invited to visit any one of the following offices between the hours of 10:00 a.m. and 3:30 p.m. to attend the meeting: Miller Operations and Maintenance Center, Oahe Water Treatment Plant, Gettysburg Field Office, Huron Field Office and Wessington Springs Field Office. There was an attendance of approximately 226 members and guests.

Members were given a form which registered them to vote; confirmed they were given the annual report and the current year’s budget; approved the minutes from last year; and approved the reports of the chairperson and manager.

A total of 156 members filled out forms to vote at the annual meeting. This does not include persons accompanying the Members to the meeting. Mid-Dakota’s by-laws no longer require a quorum to conduct an annual meeting; however, quorum requirement prior to 1999 was that a minimum of 25 members had to be present.

Those attending the meeting were given a registration gift of a small notebook with sticky notes, a Mid-Dakota calendar, a copy of the annual report and 2017 budget summary. Members were also given their choice of a beef or pork gift certificate. Members attending were given an opportunity to register for a DeWalt Cordless Driver/Drill with a value of \$150.00 at the location where they attended the meeting. A Grand Prize which was an 18V LXT® Lithium-Ion Brushless Cordless 4-Pc. Combo Kit (\$500.00 value) was purchased and all who attended the meeting were given a chance to win. Winners of the cordless driver/drills

were: Judy Schaefer, Miller (Miller office); John Wilson, Huron (Huron office); Crystal Christensen, Wessington Springs (Wessington Springs office); Donna Hanson, Gettysburg (Gettysburg office); and Hazel Melvin, Pierre (Water Treatment Plant, Pierre). The winner of the 18V LXT® Lithium-Ion Brushless Cordless 4-Pc. Combo Kit was Bruce Helbig of Pierre.

There wasn’t a contest for the expired director position in Rural Director District 3, so Scott Oligmueller retained his seat; nor were there any additional nominating resolutions from Municipal Customers for Municipal at Large Director, so Dwight Gutzmer retained his seat. The City of Huron re-appointed Jeffrey McGirr for the expired Huron Director position.

The directors for the Mid-Dakota Rural Water System, Inc. board are as follows: Rural Director District #1 – Mr. Steve Robbenolt; Rural Director District #2 – Ms. Leslie Brown; Rural Director District #3 – Mr. Scott Oligmueller; Rural Director District #4 – Mr. Lennis Fagerhaug; Rural Director District #5 – Mr. Rick Benson; Municipal Directors at Large – Mr. Dwight Gutzmer and Mr. Jim McGillvrey; Huron Directors – Mr. Jeff McGirr and Mr. Darrell Raschke.



*Huron Annual Meeting attendees sign in*



*Bruce Helbig, 2018 Grand Prize winner*



*Hazel Melvin, 2018 Pierre winner*



*John Wilson, 2018 Huron winner*



*Donna Hanson, 2018 Gettysburg winner*



*Judy Schaefers, 2018 Miller winner*



*Crystal Christensen, 2018 Wessington Springs winner*

## THE NUMBER OF MEMBERS AT THE FOLLOWING OFFICES WERE:

OFFICES	MEMBERS
Miller Operations & Maintenance Center .....	36
Oahe Water Treatment Plant.....	39
Gettysburg Field Office .....	11
Huron Field Office .....	61
Wessington Springs Field Office .....	9
Total Members Filling out a Voting Form .....	156

# WATER MATTERS

## Nitrates in Well Water (Part 3)



Nitrate is a common contaminant found in many wells in South Dakota. Too much nitrate in drinking water can cause serious health problems for young infants. This is the last of a series of reports on nitrates in well water, intended to provide a basic explanation of nitrate in wells and gives steps that you as a well owner can take to protect your family and visitors from illness.

### HOW IS NITRATE GETTING INTO MY WATER SUPPLY?

Nitrate contamination can enter your water supply several ways. One possibility is through physical or structural problems with the well itself. Ideally, the well is fully sealed off from any surface contamination, and the annular space (any open space in the drilled hole not filled with pipe) is fully sealed as well. If this is not the case, then surface contaminants have a pathway to enter your water supply.

Nitrate can also find its way into shallow aquifers by water moving through the soil. Nitrates are highly water soluble, that is, they dissolve readily in water. If there is residual nitrate in the soil, perhaps from fertilizer that was applied but not fully taken up by plants, water moving through the soil can pick up the contaminant and carry it down to the aquifer. Many of the shallow aquifers in eastern South Dakota have elevated nitrate concentrations, especially at or near the water table.

### WHAT CAN I DO IF I SUSPECT A PROBLEM?

If you have concerns, it's a good idea to have your well inspected by a licensed well contractor if the well is old, or you do not know if it is structurally sound. Repairing the well or constructing a new, deeper well often results in a significant reduction in the nitrate level. To find licensed well drillers in your area, look in the Yellow Pages under "Well Drilling and Service."

Another good idea is to identify and remove sources of contamination near the well. Fertilizers, animal wastes, chemical storage areas, and septic systems should be located and managed so that they do not contaminate the well. If a source is too close to the well and cannot be moved, then you may need to consider having the well permanently sealed and replaced by a licensed well contractor.

### WHAT ABOUT A WATER TREATMENT UNIT?

Home water treatment units are not recommended for treating high nitrate water which will be given to infants. There is no foolproof way of knowing when the treatment system may fail, and methemoglobinemia (blue baby syndrome) has been known to occur after just one day of exposure to high nitrate water.



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