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how do you reach excellence?

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Members of the conference are indebted to those members and others who have contributed articles and other materials for this publication.

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If you are interested in submitting articles please contact the editor, Jake Schafer at jschafer@nd.gov.
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Beulah, N.D.
Water treatment plant
Evolved.

When you pick up a glass of water, you don't usually think about where it comes from. That's how it should be. Smart management of a precious resource. It's second nature at KLJ.
North Dakota continues to show a strong need for drinking water and wastewater infrastructure improvements. The North Dakota Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) programs continue to respond to that need by protecting North Dakota’s water and investing in the future of communities in our state.

This year, 12 CWSRF loans totaling $22.9 million were approved for new wastewater projects, and three CWSRF loans totaling $2.7 million were approved to refinance existing wastewater projects. Twenty-one (21) DWSRF loans totaling $96.4 million were approved for new drinking water projects, and three DWSRF loans totaling $8.4 million were approved to refinance existing drinking water projects. The map below shows the communities or public water systems that were awarded loans for new infrastructure projects in 2017.

North Dakota has:

- **$733 Million** in drinking water infrastructure needs
- **$428 Million** in wastewater infrastructure needs

1. 2017 DWSRF Intended Use Plan
2. 2017 CWSRF Intended Use Plan
CWSRF Provides Funding for Horace’s Wastewater Connection to Fargo

As the City of Fargo continues to expand, some of that growth has spread to its smaller neighbors. Once an isolated agricultural community, the City of Horace saw its population more than double between 2000 and 2010. The city’s wastewater stabilization ponds were nearing their capacity, which triggered an evaluation of options to accommodate growth. One option was for the city to purchase more land in order to construct additional cells. However, this would be a significant expense, and residential housing was already being developed adjacent to the existing system. Another option was to construct a mechanical treatment plant, but the capital and operations/maintenance costs were prohibitive.

The City of Horace was able to negotiate an agreement with the City of Fargo to treat its wastewater. To convey the wastewater to Fargo’s collection system, a new lift station and force main are being constructed, and some of the city’s existing lift stations are being modified. Horace will benefit by reducing operations and maintenance costs associated with its treatment system and may one day decommission the existing system.

The CWSRF Program approved a 30-year $3.192 million loan at 2 percent interest and is the sole funding source for the project.

DWSRF Provides Funding for Grand Forks Regional Water Treatment Plant

Located in northeast North Dakota, the City of Grand Forks has experienced several significant events since the construction of its existing water treatment plant (WTP) in 1956. These include the 1980s drought, the 1997 Red River flood, and the introduction of Devils Lake water into the Sheyenne River system in 2012.

The DWSRF Approved $96,350,000 in Loans in 2017.
A majority of the funding is being used for drinking water treatment projects.

The CWSRF Approved $22,948,000 in Loans in 2017.
A majority of the funding is being used for sanitary sewer collection projects.
Despite multiple renovations to the original WTP, the City of Grand Forks has had difficulty maintaining its system to meet current drinking water needs and treat a water source of variable quality. The city decided to construct a new 20-million-gallons-per-day WTP to comply with current and future regional population growth. The facility will use conventional and membrane treatment to meet Safe Drinking Water Act requirements, prepare the city for possible contaminants of emerging concern, and reduce taste and odor issues in the water distribution system.

The WTP is currently under construction and is scheduled to be completed in 2020. The DWSRF Program approved a 30-year $66 million loan at 2 percent interest to fund a portion of the $152.2 million project.

### SRF Programs and Return on Investment

The following table shows the impact of the SRF programs on the state’s drinking water and wastewater infrastructure from their inception through 2017. Federal grants only account for a portion of the funding. Other sources of funding that contribute to the total assistance include state match funds, leveraged bond proceeds, and loan repayments.

<table>
<thead>
<tr>
<th></th>
<th>CWSRF</th>
<th>DWSRF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Federal Grants Received</strong></td>
<td>$212,388,688</td>
<td>$196,423,767</td>
</tr>
<tr>
<td><strong>Total Project Assistance Disbursed</strong></td>
<td>$577,419,453</td>
<td>$444,241,777</td>
</tr>
<tr>
<td><strong>Return on Investment</strong></td>
<td>272%</td>
<td>226%</td>
</tr>
<tr>
<td><strong>Number of Projects</strong></td>
<td>275</td>
<td>226</td>
</tr>
</tbody>
</table>

### Addressing Lead Concerns

The replacement of lead service lines from the water main to the residence (including the portion on private land) is now eligible for DWSRF funding. A limited amount of loan forgiveness is also available for these projects. Please contact the DWSRF Program Manager for additional information.

The SRF Programs set their interest rates below market levels. In January of 2017, the SRF Programs lowered their interest rate from 2.5 percent to **2.0 percent**. This interest rate is the lowest in the state’s history of the SRF Programs.

---

**Current Construction Status (January 4, 2018)**

**Representation of the Finished Water Treatment Plant**
Cooperative Funding Options

The North Dakota SRF programs are proud to be able to work cooperatively with other state and federal agencies to provide funding packages for projects. SRF loans are often combined with grants and/or loans from the following agencies or programs:

- Community Development Block Grants
- United States Department of Agriculture Rural Development
- State Water Commission
- Corp of Engineers
- Federal Emergency Management Agency
- Bureau of Reclamation
- Municipal Rural & Industrial Water Supply Program
- ND Public Finance Authority Capital Financing Program
- Rural Community Assistance Partnership
- Energy Infrastructure and Impact Grant Program

The staff of the SRF programs are happy to work with a loan recipient to avoid duplicating efforts among agencies regarding environmental review, Davis-Bacon wage rate compliance, and American Iron and Steel compliance.

Training Conducted on SRF Program Project Manual

In early 2017, the SRF Program Project Manual was released by North Dakota SRF staff as a resource for potential borrowers and their engineers. The manual describes the complete SRF process and provides information about common issues that may delay a project. Training sessions were held in Grand Forks, Fargo, Minot, Bismarck, Williston, and Dickinson to introduce the manual and provide an opportunity for interested parties to ask questions of SRF staff.

No training sessions have been scheduled for 2018, but staff would be happy to provide more sessions. Contact the SRF programs at 701.328.5211 if interested. The manual can be found on the North Dakota Department of Health website at https://deq.nd.gov/Publications/MF/SRFProgramProjectManual.pdf.

Did You Know?

Publicly owned municipal landfill projects may be eligible for a CWSRF loan. Installation of liners, caps, leachate collection and treatment systems, monitoring wells, and stormwater best management practices may qualify if the facility is required to have a National Pollutant Discharge Elimination permit. These projects are classified as water quality projects because the leachate is considered “liquid municipal waste.” Please contact the CWSRF Program Manager if you have a project that meets these criteria and would like more information about the CWSRF Program.

For more information, contact:

David Bruschwein
DWSRF Program Manager
ND Department of Health
918 E Divide Ave, 3rd Floor
Bismarck, ND 58501
701.328.5259
dbruschw@nd.gov

Dave Bergsagel
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918 E Divide Ave, 3rd Floor
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Bismarck, ND 58506-5509
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dament@nd.gov
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We look at projects from a different perspective – yours.
Operator of the Year Awards

Thank you for your hard work!

The North Dakota Department of Health, in an effort to encourage proper operation and maintenance of water and wastewater systems, instituted an annual operator awards program in 1981 at the Annual North Dakota Water and Pollution Control Conference in Jamestown. This year marks the 38th anniversary of the awards program which has honored 200 operators and three military units (the U.S. Army Reserve, the ND Army National Guard, and the ND Air National Guard) for outstanding service.

The awards are based on:
1. Field and inspection reports.
2. Compliance with state and federal regulations.

Recipients of the 2018 Operator of the Year Awards are:

Roger Kristiansen – City of Napoleon
Roger started working for the City of Napoleon in June 2012. He tested for and received a CDL license, Class 01 water treatment and water distribution certificates, Class 01 wastewater treatment and collection certificates. In the summer of 2016 he became the superintendent for the public works department. He oversees water, wastewater, equipment, facilities and grounds. He also sweeps streets, performs maintenance and winter snow removal. Roger also serves on the Napoleon ambulance, Napoleon fire/rescue as a NREMT and special deputy for Napoleon police department.

Dan Schaefer – All Seasons Water District
Dan started work for All Seasons Water Users District (ASWUD) in May of 1986 as maintenance man / operator. In June of 1994 he became manager of ASWUD, since that time the water system has grown from 860 connections and 980 miles of water lines, to currently over 1,500 connections, 1,700 miles of water lines and bulk water service to 4 communities. He has 4 adult children and 6 grandchildren. Dan is a certified Grade 2 Water Treatment Operator and a Grade 2 Water Distribution Operator.

We’d like to clarify something.
Donald Vetter – South Central Rural Water District
Donald Vetter was raised on a small dairy farm near Moffit, ND. He graduated from Hazleton High School in 1993 and attended the University of ND in Grand Forks. While there he started his career in water by joining the 133 Quartermaster Detachment in Grafton, ND with the ND Army National Guard. He graduated UND with a BBA in Business Management and worked with several companies to include Office Depot and Gordmans. He also worked as a Federal Technician with the ND Guard until coming back to water as the Superintendent of Public Works for the City of Steele. He began working for South Central Regional Water District as chief operator in the North Burleigh water treatment plant in July of 2014. The water treatment plant utilizes Ozone, Ultrafiltration, and Reverse Osmosis to produce 2.0 MGD of high-quality potable water. Don currently holds his Grade 3 water treatment and Grade 2 water distribution operator certifications with the ND Department of Health. He married his wife Pamela in 2008 and they have 5 beautiful children. Jada, Donavin, Maxwell, Ellie, and Jameson. Don enjoys gardening, farm work, and most of all spending time with his family.

Allan Weiand – City of Wahpeton
Al is a grade 04 Water Treatment and grade 01 Wastewater Treatment senior operator for the Wahpeton Water Treatment Plant and will be retiring after 44 years in the water industry. Al began his career with the City of Wahpeton in 1974. He left the city for a short period from 2001 to 2004, before returning as an operator. He started as an Operator/Meter Reader and helped bring the city’s new water plant online. Al also helped upgrade the WTP and Telemetry systems and bring online a second water tower. He is a member of the NDAWWA, NDWPCC, and NDRWSA. Al is married to May Ann and is the father of three and grandfather of seven.

Past Recipients: Operator of the Year Awards

2017 Kenny Bergstrom, Williston
Mike Hall, Lake Metigoshe
Alice Pekarski, Montpelier
Dane Fuchs, New Salem
Brian Harrington, Carrington
Grace Rixen-Handford, Southwest Water Authority
Jerry Tufte, Glenfield

2016 Kelly Jemtrud, Velva
Barry Schulz, Missouri West Water System
John Silvenail, Lisbon
Dell Widmer, Kulm

2015 Darrell Haman, Towner
Don Hartman, Wildrose
Bradley Moser, Medina
Dale Neubauer, Fargo

2014 Clary Kruger, Riverdale
Wayne Offerdahl, Fargo
Lyle Quenzer, South Central Water District
Adam Thomas, Washburn

2013 Darrell Haman, Towner
Don Hartman, Wildrose
Bradley Moser, Medina
Dale Neubauer, Fargo

2012 Alan Beyries, Garrison
Frank Moser, Maddock
Sam Shutt, Minto
Michael Tank, Medora

2011 Kent Bickler, R&T Water Supply
Mike Houska, Grafton
Rick Larson, Rugby
William “Bill” McQuiston, Williston

2010 Wade Hesch, Valley City
Mark Peterson, Fargo
Donald Wald, Wahpeton
Keith Winson, Maddock

2009 Dennis Larson, Park River
Ken Miskavige, Grafton
Gary Neuberger, Beulah
Jason Sorenson, Minot

2008 Bill Gefroh, Bismarck
Steve Himmelspach, Mandan
Richard Jacobson, Hazen
Roy Hayes, Hazen

2007 Duane Golliet, Fargo
Raymond Peterson, Fargo
Terry Rust, West Fargo
Jerome Olson, Traill Rural Water District
2006  Kelly Berentson, Westhope
       Jerry Imhoff, Elgin
       Jay Haugen, Michigan

2005  Keith Olson, Harvey
       Bob Weninger, Harvey
       Ken Blilie, Kindred
       Del Kindelspire, LaMoure

2004  Ron Hendrickson, Fargo
       Pete Bilstad, Fargo
       Delvin Stemen, Burlington
       Mark Paddock, Burlington

2003  Rick Anderson, Central Plains Water District
       Keith Fulsebakke, Bottineau
       Don Horning, Zap

2002  Arlis Bischoff, Grafton
       Allan Kraft, Cavalier
       Doug Neibauer, South Central Regional Water District
       Gary Zander, Mandan

2001  Verdeen Backstrom, Minnewaukan
       Jerome Broz, Fairmount
       Jack Knudson, Jamestown
       Paul Lacina, Barnes Rural Water

2000  Tim Gjovig, Crosby
       Jim Fixen, Alexander
       Ed Rekkedaal, Arvilla
       Reuben Grosz, Bismarck

1999  Richard Wanner, Bismarck
       Tom Sieg, Anamoose
       Ron Kleven, Grafton
       Bill Emerson, Minot

1998  Bill Link, Walsh Water Users
       Ross Carter, Sherwood
       Bob French, Bismarck
       Terry Leingang, Riverdale

1997  Staff Members of the 348th Quartermaster
       Detachment (Water Purification) United States Army Reserve

1997  Staff Members of the 136th Quartermaster Battalion
       North Dakota Army National Guard

1997  Staff Members of the 119th Civil Engineering Squadron North Dakota Air National Guard

1997  Operators of Grand Forks-Traill Water Users
       Randy Loeslie
       Mike Thompson
       Neil Breidenbach
       Ray Rakoczy

1997  Operators of Agassiz Water Users
       Gus Cronquist
       Clark Cronquist

1997  City of Grand Forks Water Treatment Plant Operators and Employees
       Brian Borden
       Jason Coyle
       Andy Job
       Greg Batzer
       Steven Bolton
       David Brose
       James Evenson
       John Ferguson
       Larry Hadland
       Erik Johnson, Jr.
       Richard Jurgens
       Rodney Kalis
       Ken Mather
       Robert Peterson
       Wayne Tunseth
       Dan Tupa
       Craig Lacher
       Steve Kolar
       Linda Schumacher
       Hazel Sletten

1997  City of Grand Forks Water Distribution Operators
       Ron Borden
       Darrel Danielson
       Robert Deitz
       Perry Hart
       Jackie Heidric
       Michael Klemisch
       David Kratochvil
       Dennis Kulas
       Shirley Litchy
       John Scheffer
       Mark Skow
       Peter Stoute
       Randy Thompson
       Dwight Wurzbacher
       Donald Zhorela

1997  City of Grand Forks Wastewater Operators
       (Storm and Wastewater Departments)
       Thomas Helle
       Kenneth Stevenson
       Peter Aamold
       Dennis Dunn
       Robert Fetsch
       Duane Fontaine
       Gary Goetz
       Dennis Gunderson
       Edward Haskell
       David Kresel
       Thomas Mikelson
       Lawrence Morrison
       Carl Sherlock
       Richard Winkels

1996  Randy Seelig, Lisbon
       Skip Rapp, Dickinson
       Larry Thomas, Washburn
       Gary Hager, Upper Souris

1996  Water Users

1995  Brad Moser, Medina
       Les Sigette, McVille
       Don Olafson, Valley City
       Charles Jaszkowiak, Bismarck

1994  Gregg Christensen, Cass Rural Water Users
       Gordon Johnson, North Valley Water Assoc.
       Kerry Miller, Stanton
       Virgil Sund, Oakes
1993  Jeff Huwe, Columbus
Clay Pettys, Lake Metigoshe Recreation
Service Dept.
Richard Resell, Williston

1992  Dave Auch, Mandan
Joel Heitkamp, Southeast Water Users
Michael Schneider, Jr., Strasburg
Joseph Leo Tupa, Grand Forks

1991  Jim Moe, Devils Lake
Lyle Mitzel, Wahpeton
Joe Manning, Fargo
Howard Plum, Maddock

1990  Keith Demke, Bismarck
Rick Gillund, Enderlin
Greg Nordsven, Killdeer
Byron Thronson, Minot

1989  Ed Braunagel, Harvey
Greg Larson, R&T Water Supply
Ingram Opp, New Salem
Dale Townsend, Carrington

1988  David Burckhard, Minot
Ray Feltman, Minto
Dale Hanson, Valley City
Robert Job, Linton

1987  Don Erickson, Watford City
Dave Johnson, Washburn
Marvin Johnson, Jamestown
Harland Peterson, Carrington

1986  Dan Reiter, Minot
Larry Thelen, South Central Regional Water
District
Bill Werle, Velva
Jerry Zander, Mandan

1985  Ray Foss, Hillsboro
Phil Furaus, Harvey
Francis Leintz, Lisbon
LaRay Reis, Lisbon
Dwight Wurzbacher, Grand Forks

1984  Larry Boeppe, Halliday
Lester Carman, Bismarck
Joe Roshau, Killdeer
Beven Shaw, Williston

1983  Gary Armstrong, Rolla
Cliff D’Heilly, Neche
Virgil Houim, Rugby
Bud Lund, Bismarck
Arnonld Stokkeland, Cooperstown

1982  Fred Clark, Grafton
Harry Hanks, Beulah
Don Larson, Gwinner
Bill Mendewald, Hankinson
John Muus, Grand Forks

1981  Marvin Baska, Mohall
Alvin Carlson, Langdon
Al Swanson, Jamestown
Gene Thomas, McVille
Casper Volk, Rugby
The 90th Annual Meeting of the North Dakota Water and Pollution Control Conference (NDWPCC) was held October 16, 17, and 18, 2018, at the Alerus Center, Grand Forks, North Dakota. The annual meeting/convention was held jointly with the North Dakota Chapter of the American Public Works Association (NDCAPWA), the North Dakota Water Environment Association (NDWEA), the North Dakota Section of the American Water Works Association (NDAWWA), and the North Dakota Chapter of the North American Stormwater and Erosion Control Association (NASECA-ND).

There was a pre-conference Workshop on Effective Communication and Decision Making, Monday, October 15, 2018, from 1:00 p.m. to 5:00 p.m. in the Oriole Room of the Alerus Center, 1200 S. 42nd St., Grand Forks, ND. The NDAWWA Education and Research Committee was also scheduled at 7:00 p.m., Monday, in the Oriole Room.

Board meetings were held Tuesday, October 16, 2018, by NDAWWA at 7:30 a.m. in the Bluebird Room, NDCAPWA at 8:00 a.m. in Finch Room, NDWEA at 8:00 a.m. in the Cardinal Room, and Wednesday, October 17, 2018, by NASECA-ND at 8:00 a.m. in the Finch Room. The associations planned their business meetings, gave committee reports, and accepted volunteers for committees. Association business meetings were held Tuesday, October 16th (NDWEA); Wednesday, October 17th (NDAWWA); and Thursday, October 18th (NDCAPWA and NDWPCC).

North Dakota Department of Health (NDDH) Water and Waste Water Certification Exams were written Tuesday, October 16, 2018, from 7:30 to 11:30 a.m. in the Ambassador A Room. Wastewater Operator pH Certification training was held 9:00 to 11:00 a.m. in the Hummingbird Room. Registration opened at 8:00 a.m., Tuesday, October 16, 2017, with Patty Carman, Julie Feist, Stacey Herreid, Barrett Brown, Bob Markhouse, and Shawn Heinle welcoming all attendees. A total of 390 preregistered with final attendance being 428.

The Joint Board of Directors of the NDWPCC, NDCAPWA, NDWEA, NDAWWA, and NASECA-ND met at 9:30 a.m., Tuesday, October 16, 2018, in the Executive Room with NDWPCC President Joe Ferguson presiding. The following board members and guests were present: Mike Berg, Tracy Eslinger, Joe Ferguson, Rick Gillund, Fred Goetz, Eric Gilbertson, Marty Haroldson, Shawn Heinle, Barry Johnson, Jasper Klein, Jim Lennington, Wei Lin, Eric Nelson, Jennifer Malloy, Lance Meyer, Dennis Miranowski, Karla Olson, Michael Quamme, Jake Schafer, Gabe Schell, Luci Snowden, Matt Sperry, Don Wald, Greg Wavra, and Adam Zach.

The meeting was called to order at 9:40 a.m. by NDWPCC President Tracy Eslinger. Copies of the meeting agenda and January 1 through October 12, 2018, financial report was provided to those in attendance.

The first order of business President Eslinger called for a motion to dispense with the reading of the minutes from the May 22, 2018 minutes and approve the copy mailed to all board members. Rick Gillund so moved, Michael Quamme seconded, and the motion carried.

Next, President Eslinger called for the Treasurer’s Report. Shawn Heinle read the 2018 NDWPCC financial report, which showed a net gain of $55,649.36 and total assets of $208,236.15. President Eslinger asked for any discussion. Hearing none, President Eslinger called for a motion to approve the Treasurer’s Report. Wei Lin so moved, Matt Sperry seconded, and the motion carried.
Next, President Eslinger called for any old business. Mr. Heinle mentioned the dates and locations of the upcoming Conferences, Bismarck in 2019 and Minot in 2020. Gabe Schell discussed the recommendation that was made by the committee on the conference checking account. Mr. Schell indicated no change to the checking account will be made, this is based on the ebbs and flows of the checking account. Instead at the end of the year any profit would be transferred to the money market account. Michael Quamme asked if there is a minimal amount needed in the account, Gabe Schell said $75,000. President Eslinger asked for a motion to accept the committee’s recommendation. Dean Sletten so moved, Joe Ferguson seconded, motion carried. President Eslinger then inquired about the old equipment at the ETC. Mr. Heinle said it had been removed. Mr. Heinle spoke about the use of Eventbrite for online registrations. He said the use of the online site had been very successful. The question was brought up about the Eventbrite fee being passed on to the attendees. The decision was made to table the discussion until the January board meeting. Fred Goetz asked about reducing the number of OB copies sent to systems. He indicated that at the Grand Forks plant they received fourteen copies and only need two or three. Jake Schafer and Shawn Heinle said they can review the mailing list for repeats to systems. No further old business.

President Eslinger called for new business. First, Mr. Eslinger asked for volunteers to serve on the nominating committee. Joe Ferguson, Mike Berg, and Dean Sletten volunteered. Also, the auditing committee needed three volunteers. Jasper Klein, Dean Sletten, and Wei Lin volunteered. President Eslinger then asked for nominations of Life Membership, there were none. Mr. Heinle also asked for presenters at the Spring trainings. The dates will be as follows:

- February 25th – 27th, 2019
- March 4th – 6th, 2019
- March 18th – 20th, 2019
- March 25th – 27th, 2019
- April 8th- 10th, 2019
- April 15th-17th, 2019

President Eslinger then called for a motion to adjourn. Motion made by Adam Zach, seconded by Rick Gillund. Meeting adjourned.

The meeting adjourned at 10:45 a.m.

Water samples for the 27th Annual Water Taste Test, sponsored by NDAWWA were accepted throughout the day Tuesday with nine public water systems competing. The Tuesday luncheon and NDAWWA business meeting were held in Ball Room 5 with NDAWWA Chair, Mike Berg, presiding. Grand Forks Mayor, Michael Brown, welcomed all attendees on behalf of Grand Forks. Guest speaker, Aurel Arndt, Treasurer, AWWA, updated the members on AWWA national activities.

The annual golf tournament was cancelled due to poor weather conditions.

Tuesday sessions started at 1:30 pm and were held in the Oriole Room, the Pheasant Room and the Hawk Room. Tuesday’s sessions were moderated Greg Wavra, NDDOH, Luci Snowden, Knife River, and Shawna Nieraeth, NDDOH.

Tuesday topics included:

- “Getting the Most Out of the Conference” - Bryan Schmitt, NDDOH and Adam Zach, AE2S
- “Controlling Disinfection by Products in Water Systems” - Tyrel Clark, Moore Engineering
- “Pipeline Condition Assessment and Prioritization” - Meredith Quinn, AE2S
- “How to Survive an MS4 Audit” - Meghan Litsey, WSB and Associates
- “Transitions from Lagoons to MBBR-based Treatment-Experiences of Palmer, Alaska” - Murthy Kasi, HDR
- “PFAS in North Dakota” - Stacey Herreid, NDDOH
- “Fargo Broadway Wet Weather Lift Stations” – Ben Julson, AE2S
- “NDDOH Asbestos Memo Panel Discussion” - Jane Kangas, NDDOH, Diana Trussell, NDDOH and Bryan Schmitt, NDDOH
- “What Lies Beneath: Environmental Concerns in Construction” - Josh Kadrmas, Braun Intertec Corporation
- “Utilizing GPS to Move Field Inspections into the Future” - Jim Mertz, Bolton & Menk, Inc.
- “Jobsite Communication: Playing Nice in the Sandbox” - Meghan Litsey, WSB and Associates
- “The Northern Cass Pass – A Rails to Trails Project” - Barry Johnson, Bolton & Menk
The 3:00 p.m. break was held at the Registration Area with all breaks sponsored by the business firms, vendors, and commercial suppliers listed in the program. A Tuesday YP Social was held from 6:30 to 8:00 p.m. in Ball Room 5.

Early set up for the 30th Annual Exhibitor Program was from 4:00 to 9:00 p.m. on Tuesday in Ball Rooms 3 and 4. Late set up was from 6:30 to 7:30 a.m. on Wednesday, October 17, 2018. Display hours were from 7:30 to 11:30 a.m. with 66 firms/suppliers reserving 69 booths. A breakfast buffet sponsored by the exhibitors was held from 8:00 to 10:00 a.m. along with a breakfast buffet poker game. Poker hands were turned in at the NDWEA booth and the registration table, with winners announced at the Wednesday, NDWEA, business luncheon. Poker dealers included; AE2S; Apex Engineering Group; Bolton & Menk; Core & Main; KLJ; EJ Iron; Interstate Engineering; Moore Engineering; Quality Flow Systems; and Vessco. The following business firms, suppliers and associations participated in the exhibitor program: NDAWWA, NDWEA, NDCAPWA, NAESECA-ND, ABM Equipment; Ackerman-Estvold; AE2S; American-USA; Apex Engineering Group; Bartlett & West; Bolton & Menk; Brock White; Core & Main; Dakota Pump & Controls; Dakota Supply Group; EJ Iron Works; Electric Pump; RMB Labs; Ellington; Engineered Sales; ESS brothers; Fergus Power Pump; Ferguson Waterworks; Fischer, Harris & Associates; General Repair Service; Great Northern Environmental; Hancock Concrete; Hawkins; HDR; Innovative Foundation Support works; Interstate Engineering; Jet-Way; Kemper Construction; KLJ; KLM Engineering; Kodru-Money; Larson Data Communications; Moore Engineering; MNX Inc; MVTL; ND Public Finance Authority; NDRWSA; ND Sewage Pump & Lift; NDSU/NDLTAP; Normont Equipment; Northern Pipe Products; Public Works Sales Holding; Quality Flow Systems; Sanitation Products; SUEZ Advanced Solutions; Sweeney Controls; Team Labs; Tech Sales; Sherwin Williams; Thein Well; Tnemec Coating; Treatment Resources; Ulteig; USDA-Rural Development; Vector Construction; Vessco; Victaulic; Widseth Smith Nolting; William E Young; and WSB & Associates.

The NDWEA luncheon and business meeting was held at 11:45 in Ball Room 5 with NDWEA President, Marty Haroldson, presiding. Also, Guest Speaker, Jaime Eichenberger, Treasurer, WEF, updated the members on WEF activities.

Next, Marty Haroldson, President, NDWEA announced the winning poker hands and handed out the cash prizes.

The Wednesday concurrent sessions started at 1:30 p.m. with Shannon Suggs, NDDOH, Michael Quamme, Apex, and Jeff Hruby, Bismarck moderating.

Wednesday’s topics included:

- “Lead & Copper, Current & Future” - Greg Wavra, NDDOH and Joe Lydon, NDDOH
- “Cured in Place Watermain Renovation” - Lonni Fleck, Interstate Engineering, Inc.
- “Fargo Effluent Reuse Facility” - Jeffrey Hoff, City of Fargo
- “Thickening Centrifuge Pilot Study” - Seth Lynne, Apex Engineering
- “Collection System metering, Monitoring, & Modeling” - Mike Berg, Apex Engineering
- “Stormwater Inspection and Field Information Round Table” - Lisa Botnen, City of Grand Forks, Luci Snowden, Knife River
- “Drone Inspection and Obtaining your COA” - Terry Halstengard, City of Bismarck
- “Construction in Water, Best Practices” - Matt Sperry, NDDOT
- “A Different Point of View for Project Documentation and Planning – Incorporate Oblique Drone Videos in GIS” - Lucas Rengstorf and Nick Stattelman, AE2S
- “Pavement Practices Panel” - Lance Meyer, Minot, Gabe Schell, Bismarck, Al Grasser, Grand Forks, Brenda Derrig, Fargo

Attendees met at 3:00 p.m. in the Registration Area for an afternoon break.
A social hour was held from 5:30 to 6:30 p.m. in the Registration Area prior to the awards banquet. The following companies graciously sponsored the social hour, door prizes, coffee breaks, and golf tournament: Ackerman-Estvold, AE2S, Apex Engineering Group, Bartlett & West, Bolton & Menk, Core & Main, Keith and Beth Demke, EJ Iron Works, Electric Pump, Ellingson Companies, Ferguson Waterworks, Great Northern Environmental, Hawkins, Dale and Jennifer Heglund, Houston Engineering, Interstate Engineering, Jet-Way, Dan Jonasson, Kemper Contraction, Killoran Trucking & Brokerage, KLJ, KLM Engineering, Medora Corporation, Moore Engineering, MVTL Labs, ND Sewage Pump & Lift Station Service, Quality Flow Systems, SHE, Sweeney Controls, Hazel and Tom Sletten, Team Labs, Terracon Consultants, Adam Thomas, Ulteig, Greg and Lauri Wavra, Widseth Smith Nolting, William E Young Company, Wold Engineering, WSB & Associates, Van Bergen and Markson and Vessco.

The annual banquet and awards ceremony was held in the Great Hall with 261 members and guests in attendance. Maria Effertz Hanson served as master of ceremonies introducing the officers and dignitaries at the head table and calling on Charles Vein to deliver the invocation.

After dinner, Ms. Hanson called on the visiting dignitaries to present the 2018 awards. Aurel Arndt, Treasurer, AWWA presented the Operator Meritorious Award to Gary Neuberger, Waterworks Superintendent, City of Beulah, who passed away earlier this year.

Then Michael Quamme, NDAWWA, announced Bosen Jin as the 2018 poster winner.
Next, Mr. Zach indicated that nine public water systems participated in the 27th Annual Water Taste Test with the City of Bismarck being the 2018 winner.

Next, Erik Gilbertson, Vice President, NDCAPWA, announced the 2017 APWA Project of the Year Awards with the NDSCS and Bolton & Menk receiving the small system award and the City of Minot and Houston Engineering receiving the large system award.

Next, Shawn Heinle, NDDOH, presented Operator of the Year Awards to Roger Kristiansen, Public Works Manager, City of Napoleon; Dan Schaefer, Manager, All Seasons Water District; Donald Vetter, Chief Operator, South Central Rural Water District; and Allan Weiand, Water and Wastewater Senior Operator, City of Wahpeton.

The Annual Public Works Directors’ and City Engineers’ meeting was held Thursday, October 18, 2018, at 7:30 a.m. in the Morning Dove Room.

The three Thursday morning concurrent sessions started at 8:00 a.m. with Mike Berg, Apex; Marty Haroldson, NDDOH; Karla Olson, Apex; and Dallas Grossman, NDDOH, moderating.

Thursday’s topics included:

- “Water Science for Cavepeople” - Todd Siebel, Bismarck State College
- “Ammonia in my Drinking Water, What’s the Big Deal?” - Brian Guldan, Bolton & Menk
- “10 Reasons to Practice and Implement Asset Management” - Kellen Grubb, AE2S
- “Groundwater Issues and Solutions” - Wayne Gersewski, AE2S
- “Speed Dating for Wastewater” - NDWEA Members
- Sanitary Sewer Pipe Rehabilitation - Andrew Aakre, Moore Engineering
- “Times They are a Changin’: Trends in the Stormwater Sector” - Seth Brown, NASECA
- “To Green or Not to Green: Modeling Incentive-Based Approaches for On-site Stormwater Investments” - Seth Brown, NASECA
- “Watershed Master Planning – Alternative Approaches to Regional Detention” - Jeff Hruby, AE2S and Michael Greer, City of Bismarck
- “Updates from Leading Stormwater Sector Industry Groups” - Seth Brown, NASECA
- “Overview of Market-Based Approaches and Public-Private Partnerships in the Stormwater Sector” - Seth Brown, NASECA

A break was held at the Registration Area at 10:00 a.m.

The joint business meetings and luncheon of the NDCAPWA and NDWPCC were held at 12:00 noon Thursday, October 18, 2018, with the NDCAPWA President Erik Gilbertson and NDWPCC President Tracy Eslinger presiding. President Gilbertson opened the NDCAPWA meeting at 12:30 p.m. with the NDCAPWA financial report and announcement the slate of officers.
President Eslinger called the NDWPCC meeting to order at 12:45 p.m. As the first order of business President Eslinger called for a motion to dispense with the reading of the minutes from the 2017 annual meeting in Fargo and approve the minutes as published in the Official Bulletin, October-December 2017, Volume 105, Numbers 10-12. Karla Olson so moved. Joe Ferguson seconded, and the motion carried.

Next, Mr. Heinle presented the 2018 NDWPCC financial report, showing a net income of $55,629.36 and total assets of $208,236.15. President Eslinger, called for a motion to approve the financial report. Joe Ferguson so moved. Barry Johnson seconded, and the motion carried.

President Eslinger then asked if there was any discussion on the changes to the conference resolutions displayed by the registration table. Hearing none, President Ferguson then asked for a motion to accept the resolutions. Sarah Feld so moved. Karla Olson seconded. Motion passed.

Next, President Eslinger ask for nominations for life membership. Hearing none, President Ferguson called for a motion to close nominations. Joe Ferguson so moved. Karla Olson seconded, and the motion carried.

Next, Chair of the Nominating Committee, Joe Ferguson, read the slate of officers received from the nominating committee:

Mike Berg, President
Wei Lin, President-Elect
Michael Quamme, Vice-President
Scott Schneider, Director
Jim Lennington, Director
Lance Meyer, Director
Michael Quamme, Director
Brandon Bucholz, Associate Director
Shawn Heinle, Secretary-Treasurer

President Eslinger called for other nominations from the floor. Hearing none, President Eslinger called for a motion to close nominations and the secretary to cast a unanimous ballot. Tom Welle so moved. Gary Zuroff seconded, and the motion carried.

Next, President Berg presented outgoing President Eslinger the NDWPCC President’s Service Award and thanked him for his dedicated service.

President Berg called for a motion to close the meeting. Shawn Heinle so moved. Karla Olson seconded, and the 90th Annual Meeting of the NDWPCC adjourned at 1:00 p.m., Thursday, October 18, 2018.

Respectfully submitted,
Shawn Heinle
Secretary-Treasurer
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The Business Meeting of the North Dakota Section of the American Water Works Association was held at the Alerus Center in Grand Forks, ND on October 16, 2018.

Mr. Mike Berg called the meeting to order at 12:15 p.m. and recognized the head table, Section Officers, and Trustees.

The minutes of the October 17, 2017, Business Meeting were distributed to each table prior to the meeting. Mr. Berg asked for any corrections to the minutes. There were none. Mr. Tim Paustian moved to approve the minutes, and this was seconded by Mr. Jim Lennington. Motion carried.

Mr. Berg presented the Treasurer’s Report. As of October 11, 2018, the section had income of $23,251.33 and expenses of $22,083.57. This leaves a net income for the year to date of $1,167.76. The section has $37,631.92 in the checking and money market accounts. The section also has $84,950.87 in student support endowments and reserve accounts. There are no liabilities. Mr. Michael Quamme moved to accept the Treasurer’s Report and Mr. Fred Goetz seconded the motion. Motion carried.

Mr. Berg presented the Audit Committee results of the Section financial accounts. Mr. Berg reported no discrepancies were found in the financial accounts for 2016 and all appeared to be in order. Mr. Dean Sletten moved to accept the Audit Committee Report and Mr. Adam Zach seconded the motion. Motion carried.

Mr. Berg introduced Mr. Jim Kershaw who was brought forward by the nominating committee for the position on the Board of Trustees. There were no additional nominations from the floor. A unanimous ballot was cast for Mr. Kershaw.

Mr. Adam Zach presented the Operator Certification awards to new operators and operators that increased their certification level within the past year that are members of the North Dakota Section.

There was no other unfinished business.

There was no new business.

Mr. Berg introduced the guest speaker, Mr. Aurel Arndt, AWWA Treasurer. Mr. Arndt thanked the North Dakota Section for the work that it does. Mr. Arndt also discussed current One AWWA initiative by the association.

Under announcements, Mr. Berg discussed opportunities to get involved with AWWA and encouraged people that were interested to contact any of the board members. Also under announcements Mr. Greg Wavra provided an update to the schedule.

Mr. Berg thanked everybody for their support and help during his tenure as chair. He introduced Mr. Fred Goetz, incoming Section Chair. Mr. Goetz thanked Mr. Berg for the work that he accomplished during his time as Section Chair and presented him with a plaque.

Mr. Goetz adjourned the meeting at 12:40 p.m.

Respectfully Submitted

Mike Berg
Past Chair
Minutes of the Board of Trustees Meeting
North Dakota Section of AWWA
7:30 AM, October 16, 2018

The pre-conference meeting of the North Dakota Section of the American Water Works Association was held at the Alerus Center in Grand Forks, ND on October 16, 2018. Present at the meeting were Chair, Mike Berg; Chair-elect, Fred Goetz; Director, Dean Sletten; Trustees, Jeff Bryson, Adam Zach, Jim Lennington; Assistant Secretary/Treasurer, Greg Wavra. Others attending were AWWA Treasurer Aurel Arndt and Grand Forks WTP Operator Eric Nelson.

The meeting was called to order by Mr. Berg at 7:35 a.m.

After introductions Mr. Arndt presented an overview of the recent AWWA governance changed focusing on the board’s role and the nomination/elect process. Questions were raised about the Water Equation and Water For People (WFP); Board members indicated a strong commitment to focus its fundraising efforts on WFP. That led to a discussion about the One AWWA Operator Scholarship, for which the Section has applied. Mr. Arndt suggested some ideas which have been used by other Sections. In the course of discussion, it was noted that Bismarck State College has an operator curriculum and their admissions or financial aid office might be able to identify potential applicants. It was also noted that water/wastewater utilities have been losing operators to the oil and gas industry, particularly younger workers who have gained experience and training.

Mr. Berg asked if AWWA had any guidance on investment management for a Section’s reserve funds. Mr. Arndt explained AWWA’s current efforts regarding investment of Association reserves and said that he would see if there is any helpful document(s) available for the Sections. It was asked if there are any restrictions on investing Section funds, in particular to generate additional revenues above what can be earned from CDs and money market funds. Mr. Arndt indicated he was unaware of any AWWA restrictions other than being prudent.

The Secretary’s Report was presented by Mr. Berg as Mr. Bruschwein was absent. Mr. Wavra moved to approve the minutes of the May 22, 2018 Board Meeting. Mr. Bryson seconded and the motion passed unanimously.

Mr. Wavra presented the Treasurer’s Report. As of October 11, 2018, the section had income of $23,251.33 and expenses of $22,083.57. This leaves a net income for the year to date of $1,167.76. The section has $37,631.92 in the checking and money market accounts. The section also has $84,950.87 in student support endowments and reserve accounts. There are no liabilities. Mr. Sletten moved to accept the Treasurer’s report. Mr. Lennington seconded and the motion carried.

Committee Reports

Young Professionals
No report was provided. Mr. Goetz offered that more volunteers are being sought for the YP group. Mr. Goetz also mentioned that Dr. Feng Xiao (Frank) had accepted an advisor role for a possible UND Student Chapter. Mr. Goetz said there is not really enough interest at this time at UND to support a student chapter there.

Public Relations
Mr. Berg covered the PR committee report. This is not really an active committee, instead it is supported by all trustees. Mr. Berg mentioned trying to get some TV coverage of the conference.

Membership
Mr. Goetz reported the Section membership is doing well. There is a discrepancy between the online listed membership at 257 while the most recent list sent by AWWA listed 239. Mr. Berg suggested an effort to make a pitch for members and Section involvement at the business meeting today. Mr. Goetz and Mr. Zach reported that Bismarck WTP Operator Jim Kershaw had been recruited to serve as incoming Trustee for the Section. Mr. Goetz also reported that he had contacted all new Section members back in January with an email and did not get a response from anyone.

Director’s Report
Mr. Sletten provided a written report which was distributed. A copy of the written report is included with the minutes.
Old Business

EPA Small Systems Training Grant. Mr. Wavra reported that this 18 month grant is intended to fund a single 8-hour session but the Department of Health has split it into 2 4-hour sessions to make attendance more attractive. The Department’s target audience for the training sessions are smaller problem systems, mostly associated with oil activity in the western part of the state. They have had some well drillers attend the 2018 sessions. The training sessions are conducted by Midwest Assistance Program (MAP) staff and Health Department staff.

AWWA One Operator Scholarships. Mr. Wavra reported that the paperwork has been filed and the Section is ready to move ahead and get applicants for these training. The grant money can be split into two $500 scholarships for spring and fall. Operators may be more interested in using the scholarship in the spring to support their training. The next step will be to put together application criteria and then email it out to Section membership plus reach out to Bismarck State College. Mr. Goetz and Mr. Bryson offered to do that. Mr. Berg commented he could meet with BSC staff as one will be attending the conference.

Cyber Security Training. Mr. Wavra said that someone outside the Department of Health would need to lead it if it was to take place. It is an AWWA webinar. Mr. Berg said he would bring materials to the next Section meeting.

AWWA Summer Training. Mr. Zach reported on attending. He was impressed by the number of people that attended from all over the country.

There was no other old business.

New Business

Mr. Wavra reported on compensation to trustees for expenses. There has been concern expressed over compensation for expenses associated with spouses. The discussion is over whether to consider a per diem rate for expenses or using actual receipts. Mr. Wavra mentioned that 5 members from the Section attended ACE. Expenses for alcohol are not eligible for reimbursement unless they are associated with a meal.

There was no other new business.

Mr. Goetz moved and Mr. Bryson seconded to adjourn the meeting.

The meeting adjourned at approximately 9:50 a.m.

Respectfully submitted,

Jim Lennington
Trustee
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If environmental concerns are verified, environmental consultants can provide guidance and recommend options to address these concerns during project design and satisfy environmental compliance. Planning assistance can include coordination with regulatory agencies to get buy-in on the proposed reuse plans; identifying and getting approval for disposal or recycling facilities to receive impacted soil or debris, and assembling bid documents to ensure contractors have the necessary information to accurately bid the work. During construction, onsite technical support can assist in economically segregating materials for either onsite reuse or proper offsite disposal, ensuring construction activities are conducted in a manner that protects the owner, the workers and the adjacent public; and preparing summaries of the
construction activities for submittal to regulatory authorities and ensure compliance with environmental regulations.

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Project Engineer
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Pierce Freeman City of West Fargo 800 4th Avenue East West Fargo, ND 58078
<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Address</th>
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<tbody>
<tr>
<td>Greg Kilgore</td>
<td>Public Works Sales Holdings, LLC</td>
<td>9350 County Rd. 19 Loretto, MN 55357</td>
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<tr>
<td>Brian King</td>
<td>HDR</td>
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<tr>
<td>Paul King</td>
<td>American Crystal Sugar</td>
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<tr>
<td>Pamela Klabo</td>
<td>Normont Equipment</td>
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<tr>
<td>Scott Kolbinger</td>
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<td>PO Box 4130 Bismarck, ND 58502</td>
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<td>Kyle Koterba</td>
<td>Apex Engineering Group</td>
<td>4733 Amber Valley Parkway Fargo, ND 58104</td>
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<td>Isebella Kristiansen</td>
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<td>Jody Kristiansen</td>
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<td>Jason Kroll</td>
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<td>200 3rd St North Fargo, ND 58102</td>
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<td>Dustin Larson</td>
<td>City of Larimore</td>
<td>321 Franklin Ave Larimore, ND 58251</td>
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<td>Richard Larson</td>
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<tr>
<td>Aaron Lauinger</td>
<td>Ulteig</td>
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<tr>
<td>Rhonda Lease</td>
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<td>Jim Lennington</td>
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<td>Justin Liebig</td>
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<td>102 3rd Ave SE Jamestown, ND 58401</td>
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<td>Wei Lin</td>
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<td>ND Department of Health</td>
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<td>Shannon Marmon</td>
<td>City of Minot</td>
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<td>Kevin Martin</td>
<td>Houston Engineering, Inc.</td>
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<td>Cody Mathiason</td>
<td>Braun Intertec</td>
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<td>Jeffery McElwain</td>
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<td>Veronica Meyer</td>
<td>Interstate Engineering</td>
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<td>HDR</td>
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<td>Erik Newman</td>
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<td>Ken Nysether</td>
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<tr>
<td>Wayne Offerdahl</td>
<td>City of Fargo</td>
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<tr>
<td>Dave Oian</td>
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<td>Kevin O'keefe</td>
<td>Minot City of</td>
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<td>Mitch Okerstrom</td>
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<td>120 West 8th Street, Harvey, ND 58341</td>
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<tr>
<th>Name</th>
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<td>Matthew Routledge</td>
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<tr>
<td>Dan Schaefer</td>
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<td>Jacob Schafer</td>
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<td>Chris Ruskamp</td>
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<tr>
<td>Kimberly Schaper</td>
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<tr>
<td>Brian Scheffler</td>
<td>Sanitation Products, Inc.</td>
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<tr>
<td>Grant Schelkoph</td>
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<tr>
<td>Joe Schmidt</td>
<td>Hawkins, Inc.</td>
<td>2381 Rosegate, Roseville, MN 55113</td>
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<tr>
<td>Bryan Schmitt</td>
<td>ND Department of Health</td>
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<tr>
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<tr>
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## 2018 Summer and Conference Testing/Operators Pass Certification Exams

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Communities throughout North Dakota work diligently to provide safe drinking water and reliable wastewater treatment for their residents. Aging infrastructure and limited financial resources have placed a strain on these systems. The North Dakota Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) programs continue to provide support to communities by offering low interest rate loans.

An increasing number of communities are financing their improvement projects through the SRF programs. In 2018, 18 CWSRF loans were issued for new wastewater projects totaling $188.3 million. A total of $96.4 million was issued for 25 new drinking water DWSRF loans, and an additional $11.5 million was issued for four DWSRF loans to refinance existing drinking water projects.

The SRF programs were able to maintain a 2 percent effective interest rate during 2018. This low interest rate has benefited loan recipients throughout North Dakota as overall market interest rates have increased. Additionally, the SRF programs will continue to allow communities to extend their loan terms to a maximum of 30 years based on the useful life of the projects.
Fargo’s Wastewater Treatment Facility is approaching its design capacity, and the city has recently agreed to accept wastewater from the cities of West Fargo and Horace. Furthermore, portions of the existing facility have been found to be deficient due to the physical condition or age of the components. Failure to perform the recommended rehabilitation and expansion may result in a discharge of wastewater that exceeds the city’s discharge permit requirements. These improvements will ensure that the city of Fargo is able to reliably treat wastewater for communities in the region and satisfy regulatory requirements.

Fargo’s Waste Water Treatment Facility improvements began in 2018, and construction is expected to be completed in 2022. The CWSRF Program is the sole funding source for the project with a total of $146,729,000 loaned at a 2 percent interest rate with 30-year terms.

The city of Rugby owns two raw water mains that connect several municipal wells to its water treatment plant. One of the mains was constructed of asbestos cement and was in poor condition. This pipe had broken several times beneath a slough and required significant maintenance over the years. The city of Rugby came to the DWSRF Program for a $285,000 loan at a 2 percent interest rate with 30-year terms to replace 2,100 feet of this pipe.

Following North Dakota Department of Health requirements, the city decided to abandon the asbestos cement pipe beneath the slough and connect the new 2,100 feet of fusible PVC with the existing pipe. Construction was completed in October, and the city now has a more reliable drinking water system.

Stormwater system projects are eligible for CWSRF funding. These include projects that prevent flooding in streets and protect the sanitary sewer system, as well as lift stations and drainage channels to prevent urban flooding. Green infrastructure projects to reduce stormwater flows or provide treatment are also eligible. Stormwater projects must have a water quality benefit. Please contact the CWSRF Program Manager if you would like more information about funding stormwater system projects.
An advantage of using the North Dakota SRF programs is the option to use SRF money as a portion of overall project funding. This flexibility allows loan recipients to assemble a comprehensive funding package to satisfy the needs of the community. The table below highlights three projects that utilized the SRF programs to fund a portion of overall improvement costs.

**CITY OF ARTHUR**

STORM SEWER IMPROVEMENT DISTRICT NO. 2018-1

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<tr>
<th>CWSRF</th>
<th>CDBG</th>
<th>Governor's Fund</th>
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<td>$215,000</td>
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**CITY OF MINOT**

MOUSE RIVER ENHANCED FLOOD PROTECTION PROJECT PHASE MI-1, 4TH AVENUE NE

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<tr>
<th>CWSRF</th>
<th>DWSRF</th>
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<td>$12,282,000</td>
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**CITY OF WAHPETON**

EASTSIDE SANITARY SEWER, STREET AND UTILITIES

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<tr>
<th>CWSRF</th>
<th>DWSRF</th>
<th>Bank Of ND</th>
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<td>$1,046,000</td>
<td>$452,000</td>
<td>$286,000</td>
<td>$456,000</td>
<td><strong>$2,240,000</strong></td>
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**REFINANCING THROUGH THE SRF PROGRAMS**

Recently, a borrower came to the DWSRF Program with a USDA-Rural Development (RD) loan with an interest rate of 3.25 percent and a term of 40 years. The DWSRF Program was able to refinance the loan, reducing the term to 30 years and with a slightly lower annual payment. If your organization has a USDA-RD loan that met the SRF requirements at the time the original project was constructed, it may be eligible for refinancing. Projects originally financed by RD after July 1, 1993 and up to October 30, 2009 typically met the SRF requirements.

To apply, the refinancing must be included in the Intended Use Plan. If you are interested in learning whether your existing loan is eligible for refinancing, please contact the applicable SRF Program. If you are interested in an estimate of the savings that may be realized from a refinancing, please contact DeAnn Ament at dament@nd.gov or (701) 426-5723.
MORE INFORMATION

BOND ISSUANCE

In May of 2018, the SRF programs issued $128,625,000 of leveraged and state match bonds to provide funds for CWSRF and DWSRF loans. The Moody's AAA and Standard & Poor's AAA rated bonds were sold for an all-in true interest cost of 3.3 percent. These market rate bond proceeds are blended with the capitalization grants the SRF programs receive from the U.S. Environmental Protection Agency, along with SRF loan repayments, so below-market rate loans of 2 percent can be offered.

NEW PROJECTS FUNDED BY THE SRF PROGRAM IN 2018

![Map of North Dakota showing new projects funded by the SRF program in 2018]

1 Garrison Diversion Conservancy District
2 North Prairie Rural Water District

SRF PROGRAM TRAINING

Do you have new staff not familiar with the SRF programs? Are there seasoned people at your firm now more involved with SRF projects? If you have staff interested in learning more about the SRF programs, we can bring a tailored training program to you! These trainings can include sessions on completing the loan application, diving into technical issues, or even an SRF 101 class designed to explore a project from start to finish. Our staff would be happy to accommodate a request for a training session. For more information, contact:

NORTH Dakota
Be Legendary.

ND DEPARTMENT OF HEALTH
918 E Divide Ave, 3rd Floor
Bismarck, ND 58501
701.328.5211
NDSRF@nd.gov

ND PUBLIC FINANCE AUTHORITY
PO Box 5509
Bismarck, ND 58506-5509
701.426.5723
dament@nd.gov
INTRODUCTION

The water distribution system is often the source of many problems encountered by the water operator. Complaints by consumers of water heater scale, red water, and taste and odors are indicators of pipeline problems.

Of particular importance is the control of taste and odors caused by the growth of various microorganisms commonly known as nuisance organisms. These bacteria produce a protective coating around themselves or may secrete a slimy waste product. These waste products accumulate and may cause localized corrosion of iron pipe.

Some microorganisms are known to concentrate iron and manganese in water supplies by depositing hydroxides of these elements in sheaves and stocks or in the slime area adjacent to the microorganism cell. These organisms, commonly referred to as iron bacteria, are found in waters that provide a continuous supply of ferrous iron and are most troublesome in water supplies in which the iron content is 1.0 mg/liter or greater. Iron bacteria are unique in that they obtain their energy by the oxidation of ferrous iron to ferric iron. This reaction yields very little energy to the organism, therefore, it must precipitate large quantities of ferric hydroxide to gain enough energy to survive. Severe localized corrosion may occur from the action of iron bacteria and the water may become turbid, reddish in tint and have an objectionable odor characteristic of hydrogen sulfide.

CONTROL OF IRON BACTERIA

Iron bacteria can best be controlled by removing the iron from the water prior to pumping into the distribution system. Once slime-producing organisms are present, it will be necessary to disinfect the entire distribution system as well as all household connections in order to destroy the growth. This may be accomplished by filling the distribution system with water having a chlorine residual of 50 mg/liter. Leave the chlorinated water in the system for up to 24 hours before flushing with fresh water. Upon completion of the treatment, continuous chlorination should be provided so that a residual of not less than 0.5 mg/liter of free chlorine is maintained at all times.

PROCEDURE FOR DISINFECTION OF THE WATER DISTRIBUTION SYSTEM

1. Notify the community by handbill or other means that chlorination of the system will take place, how long it will take and the reason for the treatment.

2. Recommend that a sufficient amount of water be collected and stored for drinking purposes during the chlorination period.
3. Warn the community that high chlorine residual will be harmful to goldfish.

4. Recommend to the community that water be used in a normal manner for routine household purposes during the disinfecting period. It is important that the chlorinated water be used to fill and flush the home plumbing system to destroy any iron bacteria that may be present and prevent recontamination of the municipal system.

5. Mix a sufficient amount of chlorine compound in the form of calcium hypochlorite or sodium hypochlorite with the water in the water tower or storage reservoir to obtain at least a 50 mg/liter chlorine residual.

6. Open and flush the hydrants one by one until the 50 mg/liter chlorine solution is encountered. Chlorine test paper is available for this determination.

7. Allow the chlorine solution to remain within the system a minimum of 10 to 12 hours. Twenty-four hours is recommended if the system can be kept out of operation for this length of time.

8. Drain and flush each hydrant using fresh water pumped through the elevated storage or pneumatic pressure system.

9. Upon completion of the treatment, continuous chlorination should be provided so that a residual of not less than 0.5 mg/liter of free chlorine is maintained at all times.

Systems highly infested with iron and other nuisance organisms may require more than one treatment to completely remove the accumulated scale and slime growths.

PREPARING CHLORINE SOLUTIONS

Sodium Hypochlorite

Prepared sodium hypochlorite solutions containing 5 1/2 percent available chlorine by weight are available locally as household laundry bleach (Hilex, Purex, etc.). These prepared solutions may be added to the storage tank full strength.

Calcium Hypochlorite

Calcium hypochlorite is available as a powder containing 70 percent chlorine by weight. Calcium hypochlorite should be mixed with water to form a slurry before adding to the reservoir.

To promote mixing of the chlorine solutions with the water in the reservoir, it is recommended that the reservoir be partially filled with water before adding the chlorine compounds. Additional water should then be pumped into the reservoir to fill to the desired level. This should provide sufficient agitation to thoroughly mix the chlorine with the water in the reservoir.
AMOUNT OF CHLORINE REQUIRED

<table>
<thead>
<tr>
<th>Volume of Reservoir or Pipeline (Gallons)</th>
<th>Liquid Laundry Bleach (5.25% Chlorine)</th>
<th>Calcium Hypochlorite (70% Chlorine)</th>
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<tr>
<td>1,000</td>
<td>1 gallon</td>
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</tr>
<tr>
<td>500,000</td>
<td>500 gallons</td>
<td>300.0 pounds</td>
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PROCEDURE FOR DISINFECTION OF A PORTION OF THE WATER SYSTEM

Disinfection of only part of the distribution system may be desired. This may be accomplished in two ways.

1. Valve off the section of the distribution system to be sterilized. Prepare a quantity of 50 mg/liter chlorine solution sufficient to fill the section. Pump the chlorine solution through a fire hydrant at one extremity of the pipe section and bleed at the opposite extremity until the chlorine solution is detected. Allow the chlorine solution to remain in the section for the desired length of time and then flush thoroughly with fresh water.

2. An alternate method is to inject a strong chlorine solution of approximately one percent available chlorine (10,000 mg/liter) into the distribution system by means of a hypochlorinator. The chlorine solution is prepared in a barrel and pumped into the distribution system through an injector discharging through a corporation cock or a water hydrant. All openings in the main should be valved off, except for the section to be disinfected. A small relief opening at the far end of the line will prevent back pressure and allow the chlorine solution to pass through the system. Again, drain water from each fire hydrant on the line to be disinfected until a strong chlorine solution is detectable (50 mg/liter). Allow the solution to remain in the system the recommended length of time and flush thoroughly with fresh water.

PREPARING A 1% CHLORINE SOLUTION

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<tr>
<th>Product</th>
<th>Amount of Chlorine</th>
<th>Quantity of Water</th>
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<td>Liquid laundry bleach (5.25% chlorine)</td>
<td>1 gallon</td>
<td>4.25 gallons</td>
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# Volume in Gallons Per Foot of Water Main

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<td>0.163</td>
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<tr>
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<td>24</td>
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2018 Conference Photos
Jake Schafer
2018 Conference Photos
Jake Schafer
**Drinking Water Program Directory**

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<thead>
<tr>
<th>Program Administrator</th>
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<tr>
<td><strong>Acrylamide and Epichlorohydrin Rule</strong></td>
<td></td>
<td>Jacob Stokes</td>
<td>701-328-6622</td>
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<tr>
<td><strong>Arsenic Rule</strong></td>
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<td>Alexis Steinman</td>
<td>701-328-5258</td>
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<tr>
<td><strong>Consumer Confidence Reports</strong></td>
<td></td>
<td>LeeAnn Tillotson</td>
<td>701-328-5293</td>
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<tr>
<td><strong>Disinfectant/Disinfection Byproducts Rule (TTHM, HAA5) Stage 1 and Stage 2 Rule</strong></td>
<td></td>
<td>Tammy Lamphear</td>
<td>701-328-5295</td>
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<tr>
<td><strong>Electronic Reporting Information System (ERIS)</strong></td>
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<td>Barrett Brown</td>
<td>701-328-5209</td>
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<td><strong>Filter and Backwash Recycle Rule</strong></td>
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<tr>
<td><strong>Fluoride Addition</strong></td>
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<td>Staci Herreid</td>
<td>701-328-5287</td>
</tr>
<tr>
<td><strong>Groundwater Rule</strong></td>
<td></td>
<td>Jeni Walsh</td>
<td>701-328-5231</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jacob Stokes</td>
<td>701-328-6622</td>
</tr>
<tr>
<td><strong>Inspections: Northeast</strong></td>
<td></td>
<td>Gregg Stewart</td>
<td>701-328-6621</td>
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<td><strong>Inspections: Northwest</strong></td>
<td></td>
<td>Rondal Joe Lydon</td>
<td>701-328-5221</td>
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<td>Mike Trythall</td>
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<td><strong>Inspections: East</strong></td>
<td></td>
<td>Jacob Schafer</td>
<td>701-328-6375</td>
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<tr>
<td><strong>Inspections: South Central</strong></td>
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<td>Bob Markhouse</td>
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<td><strong>Surface Water Treatment Rule: Interim Enhanced, Long Term 1 Enhanced, Long Term 2 Enhanced</strong></td>
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<td>Shawn Heinle</td>
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<td><strong>Primary and Secondary Inorganics</strong></td>
<td></td>
<td>Jacob Stokes</td>
<td>701-328-6621</td>
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<tr>
<td><strong>Public Water System Updates (changes to source, treatment, contact, etc.)</strong></td>
<td></td>
<td>Tammy Lamphear</td>
<td>701-328-5295</td>
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<tr>
<td><strong>Radionuclide Rule: Gross Alpha, Total Radium, Uranium</strong></td>
<td></td>
<td>Stacey Herreid</td>
<td>701-328-5287</td>
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<tr>
<td><strong>Revised Total Coliform Rule Level 1 and 2 Assessments</strong></td>
<td></td>
<td>Jeni Walsh</td>
<td>701-328-5231</td>
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<tr>
<td></td>
<td></td>
<td>Josh Seerup</td>
<td>701-328-5257</td>
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<tr>
<td><strong>Unregulated Contaminant Monitoring</strong></td>
<td></td>
<td>LeeAnn Tillotson</td>
<td>701-328-5293</td>
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<tr>
<td><strong>Volatile Organic Chemicals (VOCs)</strong></td>
<td></td>
<td>Mike Trythall</td>
<td>701-328-5269</td>
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**North Dakota Pollutant Discharge Elimination System Program Directory**

<table>
<thead>
<tr>
<th>Program Administrator</th>
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<th>Administrator</th>
<th>Phone</th>
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<tbody>
<tr>
<td><strong>Animal Feeding Operations</strong></td>
<td></td>
<td>Brady Espe</td>
<td>701-328-5228</td>
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<td></td>
<td></td>
<td>Rachel Strommen</td>
<td>701-328-5244</td>
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<td>Jeremy Lang</td>
<td>701-328-5219</td>
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<td><strong>Biosolids</strong></td>
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<td>701-328-5242</td>
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<td>Duane Sandvick</td>
<td>701-328-5260</td>
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<td>Samantha Swanberg</td>
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<td><strong>Dewatering and Hydrostatic Testing</strong></td>
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<td><strong>Discharge Monitoring Reports (DMRs)</strong></td>
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<td><strong>DMR Quality Assurance (QA) Study</strong></td>
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<td>Marty Haroldson</td>
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<td><strong>Industrial Pretreatment</strong></td>
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<td>Jeff Roerick</td>
<td>701-328-5240</td>
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<td><strong>Public Notices/NDPDES Permits</strong></td>
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<td><strong>Septic Pumper</strong></td>
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<td><strong>Wastewater Discharge Reviews</strong></td>
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<td>All Staff</td>
<td>701-328-5210</td>
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</table>
Our Senior Water Resource Engineer, Tom, loves a challenge. That’s why when designing a solution for stormwater retention/detention, Tom got creative. By creating an eco-friendly solution over a traditional pump station, this portion of flood control provided an innovative approach and saved the Souris River Joint Board millions of dollars in the process.

Turning passion into progress, that’s what Tom is most proud of. And we are, too.