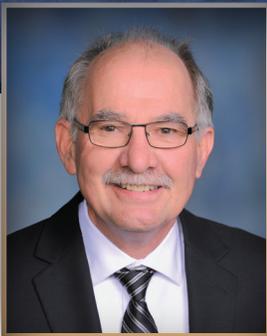




The Current

2019 Issue I



Garland Erbele, P.E.
State Engineer &
Chief Engineer-Secretary

A NEWSLETTER FROM NORTH DAKOTA'S OFFICE OF THE STATE ENGINEER & STATE WATER COMMISSION

On December 5, 2018, Governor Doug Burgum delivered the 2019-2021 budget address to the 66th Legislative Assembly with a plan that focused on structural balance and strategic investments. Governor Burgum began the budgeting process in April by announcing a newly implemented strategy and review process.

A refocused approach was also utilized in the completion of the North Dakota State Water Commission and Office of the State Engineer's 2019-2021 Strategic Plan and the 2019 Water Development Plan. An agency-wide effort initiated a re-evaluation of our goals, strategic initiatives, and planning process. These well-documented plans will help guide our agency throughout the upcoming Legislative session and with budgeting procedures.

In his budget address, Governor Burgum noted the important role that infrastructure plays in preserving rural areas and promoting healthy, vibrant communities. The governor's budget proposes \$464 million be allocated to the State Water Commission for essential water projects and infrastructure. This prospective allotment includes federal and local project sponsor funding.

The 2019 Legislative session commenced on January 3, 2019. The Office of the State Engineer and State Water Commission have filed various bills related to policies and procedures to the Legislative Council in order for the Legislature to consider. Throughout the session, several Water Commission staff members and directors will be providing testimony to support these bills.

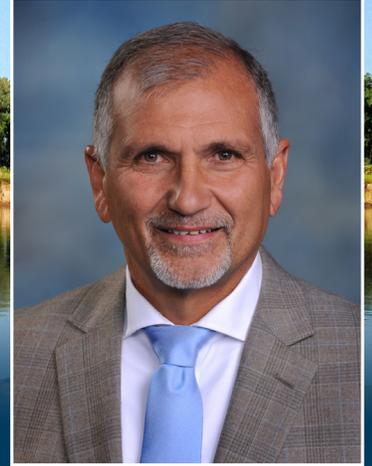
The funds allocated in the previous biennium supported the agency with an exceptional amount of progress for water supply, rural water supply, flood control, and general water management projects across North Dakota. This biennium, we hope to see even more growth, advancements, and development.

Garland Erbele

Can You Find The Water Drop?



This water drop is hidden
somewhere in this issue.



Commissioner Mark Owan
Upper Missouri River Basin

COMMISSIONER'S CORNER

As a third-generation farmer from western North Dakota, the availability of water has played an important role throughout my life. That is just one of the reasons I am honored to be a State Water Commissioner for the Upper Missouri River Basin region. Gov. Doug Burgum appointed me to the State Water Commission in August 2017. I am grateful for this opportunity to help facilitate water projects of all sizes across the state. I'm also thankful for the chance to share my perspective in this edition of the Commissioner's Corner.

In addition to farming small grains, canola, and pulse crops on my family's land near Williston, I serve in two regional water leadership roles. I am the President of the Northwest Rural Water District (NRWD), formerly known as Williams Rural Water. The NRWD serves approximately 2,000 accounts in rural Williams, Burke, and Divide Counties.

I am also the Chairman of the Western Area Water Supply Authority (WAWSA), a regional water provider that serves 60,000 people in northwest North Dakota. WAWSA delivers water treated at the Williston Regional and R&T Water Treatment Plants to cities and rural areas in Burke, Divide, McKenzie, Mountrail, and Williams Counties. The WAWSA Board is comprised of two representatives from each of the following water systems: NRWD, the City of Williston, McKenzie County Water Resource District, BDW Water System Association, and R&T Water Supply Commerce Authority. My service on the WAWSA Board has provided ample opportunities to work with neighboring water systems for the greater good of the northwestern corner of the state. I see my role on the State Water Commission in a similar light, as an opportunity to work with Commissioners from around the state for the greater good of North Dakota's residents.

As a member of the State Water Commission's Finance, Planning, and Budget subcommittee, I relish the chance to look at the business side of water projects by crunching the

numbers alongside my fellow committee members. Our top priority is to make the most of the state's limited funding resources while simultaneously supporting projects that benefit the health, safety, economics, and opportunities of North Dakota's residents and industries.

One of the top items the State Water Commission has been working on is revamping the Cost-Share Policy. My fellow Commissioners and I, alongside the State Water Commission staff, have devoted a lot of time and effort into rewriting the policy. We received valuable input from around the state, and I believe we have succeeded in bringing clarity and uniformity to the policy, as well as making it more user friendly. One of the primary goals of the new policy is to reduce carryover. This is important because we want to ensure the funding going into the Resources Trust Fund is not reduced. The State Water Commission will give projects two biennia, or four years, to complete projects or come back to the Commission with an update and to request an extension.

Water Development is another top priority for the State Water Commission. We have spent a lot of time identifying the various needs from around the state, from water supply to flood protection. With the upcoming legislative session beginning in January, we will need to think outside the box on how we're going to fund these needed projects. I will be working with the Finance, Planning, and Budget subcommittee and full State Water Commission throughout the legislative session to find creative funding solutions. We will consider everything from bonding to tapping the Legacy Fund in some manner to meet the state's water needs for the next biennium and beyond.

The time I've spent so far on the State Water Commission, as well as my experience with NRWD and WAWSA, has made me particularly appreciative of the state's commitment to water development. I am excited to play an active, ongoing role in the future of water in North Dakota.

NEW HIRE

ALEXIS STEINER Hydrologist II



In September, Alexis Steiner was hired by the State Water Commission as a Hydrologist II in the Water Appropriations Division. Her job duties include managing permits, maintaining correspondence with the public, as well as with permit holders and applicants, conducting water rights administration, and managing water resources in assigned areas.

She was born and raised in Wooster, Ohio and is a graduate of Wooster High School. After graduation, she attended Marietta College and received a Bachelor of Science degree in Geology. Alexis later earned her Master's degree at Bowling Green State University.

Alexis is enthusiastic about her first career opportunity with the State Water Commission and is looking forward to many new experiences and endeavors.

STATE ENGINEER'S PROFESSIONALISM AWARD

TERRY OLSON



Terry Olson was honored with the 2018 North Dakota State Engineer's Professionalism Award. Terry is a staff member of the Water Appropriations Division and is the only Rotary Drill Operator in the entire state of North Dakota.

Terry is exceptionally hard-working and steadily demonstrates his craft by getting observation wells completed in a timely fashion while overseeing that the SWC drilling program stays on schedule. Terry's remarkable leadership and guidance has influenced many successful projects. Even with his demanding schedule, Terry continuously displays a respectful and considerate nature. He takes great pride in his work and always generates high-quality results that support the agency's mission and goals.

Commission Cost-Share Approvals

December 7, 2018

USGS Cooperative Hydrologic Monitoring Program	\$422,870
East Central Regional Water District	\$513,750
Bottineau County Baumann Drain	\$391,742
Richland County Drain 7	\$274,541
Garrison Diversion MM 0 and 04 Irrigation Projects	\$1,673,793
Odland Dam	\$110,055

October 11, 2018

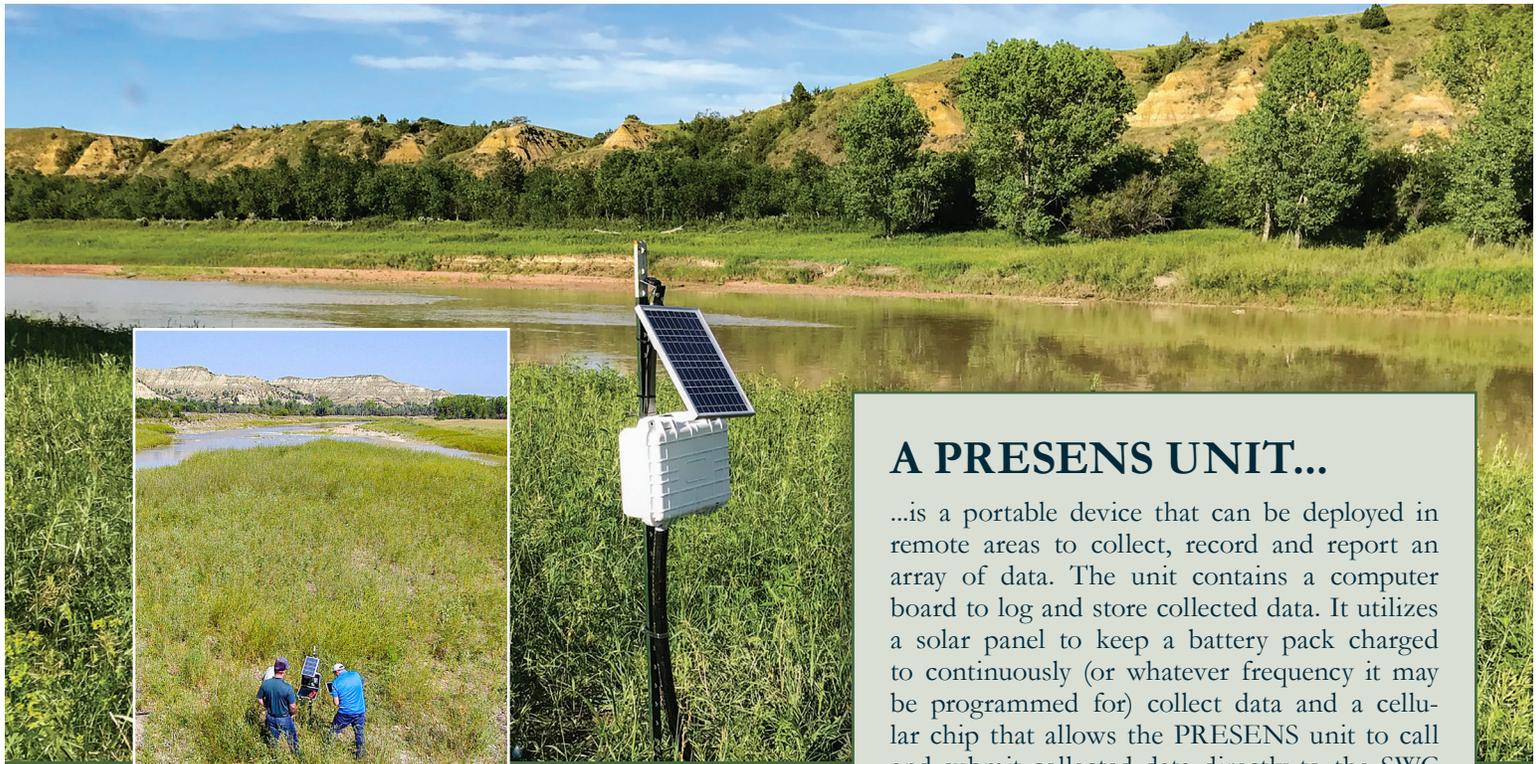
Cass Rural Water Users District	\$1,755,000
Northeast Area Regional Water Master Plan	\$107,000
Northwest Area Water Supply, MR&I Funding	\$1,900,000
NAWS State Water Supply Funding	\$4,600,000
New Town Elevated Tank	\$900,000
Minot System-wide Improvement Framework	\$387,433
Sheldon Subdivision Levee	\$370,200
Valley City Permanent Flood Protection Phase III	\$1,786,179
Walsh County Water Resource District, County Drain	\$328,042
Matejcek Dam	\$279,750
Brummond-Lubke Dam	\$317,111
Southwest Pipeline Project	\$7,200,000

OUR DEEPEST SYMPATHIES



The State Water Commission would like to send its sincere condolences to the family of Larry Hanson. Larry honorably served as a Commission member for 18 years. He provided influential direction, guidance, and astounding dedication throughout his esteemed term. Before retiring, he owned and managed two businesses in Williston for over 30 years, served as Williston's Mayor for four years, and spent seven years on the Williams County Commission. Having reached the rank of Captain in the United States Army, Hanson served as a helicopter pilot in the Medical Service Corps and received the Distinguished Flying Cross. Larry will be missed.





A PRESENS UNIT...

...is a portable device that can be deployed in remote areas to collect, record and report an array of data. The unit contains a computer board to log and store collected data. It utilizes a solar panel to keep a battery pack charged to continuously (or whatever frequency it may be programmed for) collect data and a cellular chip that allows the PRESENS unit to call and submit collected data directly to the SWC database. PRESENS units can be programmed remotely from the SWC Office.

Some data types that will ultimately be collected include but are not limited to:

- Stream flow
- Ground water depth
- Soil moisture
- Water use from irrigation
- Any number of weather variables

SWC INTRODUCES INNOVATIVE TECHNOLOGY

During the 2018 field season, the Appropriations Division of the State Water Commission (SWC) conducted a field study of a real-time continuous monitoring device, designed and built by SWC staff, called PRESENS (Pushing RE mote SENSors). The study took place along a 109-mile reach of the Little Missouri River from Medora to the Long-X Bridge (south of Watford City). The purpose of the study was to gain a better understanding of the hydrology through that stretch of the river.

The SWC set up PRESENS units at four locations on the Little Missouri River, and one on Beaver Creek, to monitor flow rates. The study area also included permanent USGS gage stations at Medora and the Long-X Bridge. Throughout the season, SWC staff were able to monitor data reported through the PRESENS units and ground truth them with data from the USGS gauging stations and other field measurements taken throughout the summer. The data received from the PRESENS units was judged to be very accurate. By verifying the accuracy of the PRESENS, the SWC can now make more sound, data-driven decisions on water appropriations.

Moving forward, SWC staff is collaborating with Amber Waves, an agriculture and tech company located in Richardton, ND, to finalize product design. Working with an



outside company to design and potentially build the PRESENS unit is beneficial to the state because they have greater expertise and ability to dedicate to this product.

The goal is to have a working prototype from Amber Waves by the beginning of 2019. From there, the SWC will set up multiple units for testing throughout the winter. If they work properly, the SWC would like to have approximately 100 of these units to deploy by summer 2019. The intention is to deploy up to 30 units for streamflow measurements, as well as installing many more at groundwater monitoring locations around the state. By having these real-time data collection PRESENS units deployed in the field, SWC staff can save time and money by not having to make measurements the traditional way, on site – in the field.

RETIREMENTS



41 YEARS

ROSEMARY PEDERSEN - PARALEGAL

PROJECT HIGHLIGHT - Over the years there were so many interesting issues, but one of my favorites was working on a case that involved a WPA dam that required extensive historical research at both the state and national archives. Also, after years of preparation, a month-long trial in Devils Lake on the lake flooding.

CAREER HIGHLIGHT - A career highlight for me was passing the National Association of Legal Assistants' certification exam. And then, our agency, working with the Attorney General's office, was successful in creating the state's paralegal classification. I am very proud that I was one of the state's first paralegals.

WHAT YOU'LL MISS THE MOST - Most definitely the day to day interaction with co-workers. I've also always enjoyed the legal work.

FUTURE PLANS - My husband, Chris, and I have been blessed with six grandkids with another due soon, so I hope to spend more time with family. I am looking forward to enjoying my hobbies of videography, quilting, reading, doing volunteer work, and of course completing all of the unfinished projects that have been piling up for years. After taking a work break, I believe I will seek that perfect part-time job, whatever that might be.



5 1/2 YEARS

TOM BANSE - ENGINEER TECH II

PROJECT HIGHLIGHT - Locating National Geodetic Survey benchmarks with Dan McDonald. We located more benchmarks in the summer of 2018 than the agency had done 30 years prior. Also, capturing bathymetric data was a blast. We used different types of boats, including remote control, and even waders when we had to. No matter if it was 100 degrees, we still got the data needed. It was always an adventure.

MEMORABLE MOMENT - A couple: When Todd Sando got choked up at his retirement party while thanking me for a personalized benchmark that I gave to him. And similarly, when an outgoing supervisor expressed thanks for a personalized trophy I hand-made for him.

WHAT YOU'LL MISS THE MOST - I will miss the people of the SWC. I consider them my "SWC Family." Many of the young people around the building remind me of my own children, and that has made me feel very comfortable and welcome.

FUTURE PLANS - I plan to visit my children, and return home to my cabin on Lake Upsilon.



4 YEARS

PETER GESELLCHEN - WATER RESOURCE PROJECT MANAGER

PROJECT HIGHLIGHT - Most of my time at the SWC was spent doing inspections of industrial water depots in the Bakken. The most I completed in one year was around 350, being in the field from the end of April until October.

MEMORABLE MOMENT - The thing that sticks in my mind the most, is all of the work required to satisfy the auditors a couple of years ago. It was a huge undertaking.

WHAT YOU'LL MISS THE MOST - Looking back on my full career, I will miss my days working as an engineer on the East Coast. My favorite project was developing the site plan for a defense aerospace company called TRW in Fairfax, Virginia.

FUTURE PLANS - Nothing too definite yet. I have several personal projects that have been on hold for years. I'd like to travel around the country and do some research on family history, to include using the Library of Congress and the National Archives. I would also like to visit several car museums around the US, and possibly overseas. I'm also thinking about working on my 1917 Ford Roadster. Finally, I'd like to attend at least one Major League Baseball game in each team's home stadium - I'm about half way done.



NORTH DAKOTA STATE WATER COMMISSION

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BISMARCK, ND 58505-0850

Ice formation at Eaton Dam located in McHenry County.



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OF THE STATE ENGINEER & STATE WATER COMMISSION

The Current

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