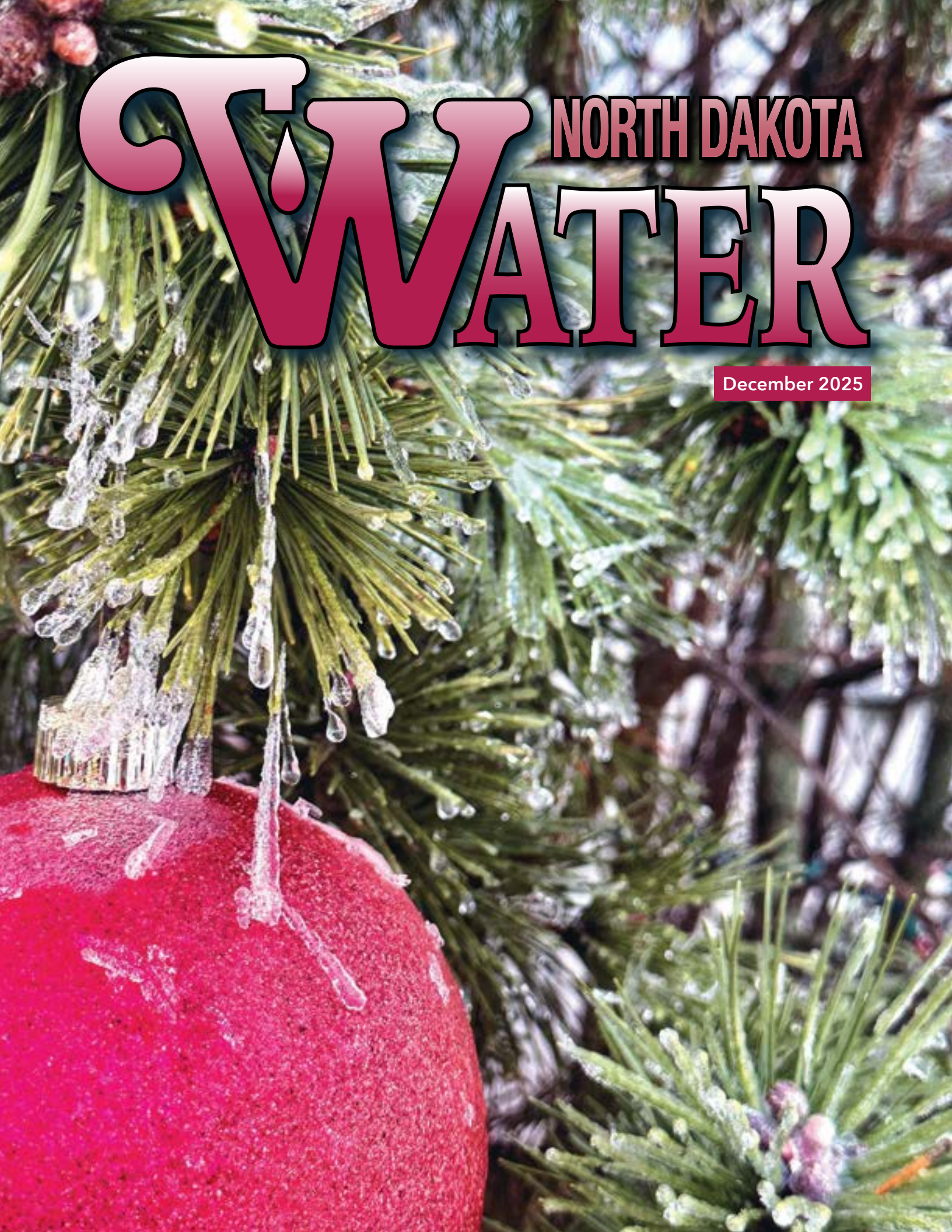

NORTH DAKOTA WATER

December 2025

WATER. NOT AN OPTION.

Dani Quissell
Executive Director
North Dakota Water
Education Foundation

The theme for the 2025 Joint Water Convention was an apt one: Water. Not an Option. For humans, for animals, for life, water isn't an option. That's why the work that we do in the water community is so important. We strive every day to get dependable, quality water to people and livestock. We put water to beneficial use to support irrigation and industry. We work to implement management strategies that prevent water from damaging homes and infrastructure.

It takes everyone to make this work happen. As we close out 2025, I'd encourage us all to take some time to think about what each of us can do in the coming year to be actively engaged in the water community. Does your local water resource district or rural water board need board members? Ask how to get appointed or run! Maybe they just need help with minutes or bookkeeping. Is that a skill you could provide?

Water management policy is largely influenced by state and local elected officials. We need city council members, county commissioners and state legislators who are knowledgeable and passionate about water. Think about it!

Finally, there are many water associations that support the work the water industry does and provide networking, training and other benefits to the water community. If you're not already a member of one or more of these associations, consider joining! If you're already a member, consider joining the board or volunteering to help with training.

Finally, it's important to support the next generation of water leaders. Supporting the Dushinske & Jamison Water Resources Scholarship is a great way to do that. You can make one-time or recurring donations via the North Dakota Community Foundation to support students at North Dakota higher education institutions.

As 2025 draws to a close, let's recommit to the work that sustains our communities, our economy, and our people. Water isn't optional and neither is our involvement. Whether through service, advocacy, education, or support, each of us has a role to play in shaping a resilient and thriving water future for North Dakota.

Dani

Scan here to donate to the scholarship!

NORTH DAKOTA WATER

Volume 33 Issue 8 December 2025

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The purpose of the North Dakota Water Education Foundation is to develop and implement water information and education programs to increase awareness, understanding and knowledge about water resource issues in North Dakota. The Foundation publishes the North Dakota Water *magazine, sponsors summer water tours, and supports the Water Education Today (WET) for teachers and students.* North Dakota Water *is supported by several private, federal, state and local organizations and agencies.*

The opinions and viewpoints expressed by the various authors and sponsoring entities in this magazine do not necessarily reflect the opinions and views of the North Dakota Water Education Foundation board and staff or other sponsoring entities.

North Dakota Water is printed on recycled paper.

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On the Cover

"Christmas is Coming" by Cathy Myrum, Petersburg. This photo was an Honorable Mention in the 2025 North Dakota Waterways Photo Contest, sponsored by the North Dakota Water Education Foundation.

We Couldn't Do It Without You

By Lisa Schatz

The staff at North Dakota Rural Water Systems Association extends our sincere gratitude for the generous sponsorships of the 2025 Rural Water EXPO. Sponsorships play a vital role in hosting such an event and your support of water and wastewater systems do not go unnoticed.

In 2026, the 40th Annual Water EXPO and Conference will be held February 10-12 in Fargo. We have five sponsorship levels available – corporate elite, diamond, gold, silver, and bronze. Each sponsorship utilizes unique benefits to enhance your exposure to our conference attendees.

All sponsors must be associate members. To become an associate member, email our office at ndrw@ndrw.org. Our diverse associate members range from engineers/surveyors, maintenance services, water distribution infrastructure, power equipment, training, education, communication, insurance and metal structures.

Mark your calendars and be a part of the largest water EXPO in North Dakota!

■ CORPORATE ELITE SPONSORS

AE2S

AE2S is a specialized civil engineering consulting firm with proven rural water project expertise. We are known for delivering Extreme Client Service through highly responsive communication, personalized attention, and long-term partnerships. Our integrated services extend beyond water to include structural, electrical, mechanical, instrumentation and controls, communications, funding/financial services, and utility planning. With the capabilities of a national firm and the commitment of a local partner, AE2S combines the experience of large, complex projects with the client-focused service of a small firm. We're proud to be 100% employee-owned.

Bartlett & West

Clean, safe and reliable water is a basic building block of a community. Residents and industry depend on your water system. You need proactive communications regarding system needs and value-minded, comprehensive solutions. Since 1951, Bartlett & West has existed to serve the water, wastewater, survey, geographic information systems (GIS), right-of-way, and various other needs of clients throughout the Midwest. As a national leader with long-time relationships in water-focused services and water resource management, Bartlett & West is your ally for success.

Core & Main

Core & Main was established in 2017, built on the foundation of more than 86 legacy companies. They are a leading distributor of water, sewer, storm drain, and fire protection products in the United States. Operating more than 275 branches nationwide, they combine local expertise with a national supply chain to provide contractors and municipalities with innovative solutions for new construction and aging infrastructure. Core & Main's 3,500 plus associates are committed to the safe distribution of water and fire protection to help communities thrive.

Dakota Supply Group

Since founding in 1898–with roots dating back to 1868–Dakota Supply Group (DSG) has been dedicated to providing all the right connections to their customers in the electrical; plumbing; HVAC; refrigeration; communications; utility; automation; waterworks; on-site sewer, water and well; filtration and metering technology industries. They carry more than 65,000 products from the top brands, but that's only the beginning. Their experienced team of specialists provides customers with solutions that help them to maximize their employees' productivity and increase their company's profitability.

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Ferguson Waterworks is the nation's leading supplier for all your waterworks, geosynthetics and stormwater, and water and wastewater management needs. Their offerings include ductile iron, HDPE, custom fabrication, meter and automation utility solutions and treatment plant and design build solutions. Supply any job with our extensive inventory of pipe, valves, fittings, restraints, service brass, meters, geotextiles, hydrants, municipal castings and much more. Their world-class associates can assist you in finding the right products, engineered solutions and technical advice to complete any water treatment, utility, commercial or residential project—no matter the size.

■ DIAMOND

Dakota Pump & Control, Inc.

Dakota Pump & Control, Inc., (DPC) has been serving the water and wastewater communities for more than 53 years with dependable 24/7 service and support. DPC represents the following manufacturers: Fairbanks Nijhuis, Hydromatic, Xylem (Goulds Water Technologies), LobePro rotary lobe pumps, Hydroflo pumps, Hidrostal Screw Pumps, Tank Connection Liquid Storage Solutions, USEMCO prefabricated stations and controls, Primex Controls, OCV control valves, FOGROD level controller, DeRagger anti-ragging/monitoring equipment, and much more. DPC recently added a custom controls division, DPC Automation Solutions, which designs and builds UL 508/698 custom controls for the water/wastewater industry.

Hawkins

When you need a reliable, domestic source you can trust, turn to Hawkins. Hawkins has been serving customers since 1938. Hawkins carries a wide product line of chemicals, equipment and services. This includes mini-bulk delivery of chemicals, local technical support, equipment installations, and laboratory testing. Hawkins can provide you with custom treatment programs with the proper chemistry tailored to your facility. Local drivers/technicians are professionally trained to help you optimize your current system.

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Founded in 1976, Interstate Engineering provides innovative engineering, surveying, and planning solutions throughout the Great Plains Region. It specializes in sustainable, high-performance civil engineering, surveying and planning services. Whether a rural community, growing urban area, established water resource district, expanding tribal community or private developer, its team strives to be the professionals you need, the people you trust. With 19 offices, Interstate Engineering is strategically placed to better serve its clients. The Interstate Engineering team includes original civil, structural, aviation and environmental engineering thinkers.

Moore Engineering

Moore Engineering has remained committed to its mission of improving lives by building strong communities since founding in 1960. For decades, it has proudly served thousands of public and private clients in communities across the region. Moore's world-class team of engineers, scientists and specialists has successfully completed thousands of projects, supporting the civil, environmental, transportation, and water infrastructure we all rely on.

Northern Pipe Products

Located in Fargo, ND, Northern Pipe Products is proud to supply PVC pipe to municipal water, rural water, wastewater, well casing, plumbing, and irrigation markets throughout the Midwestern United States and Canada. Since 1979, Northern Pipe Products has focused on manufacturing the highest quality PVC pipe while providing a level of service second to none.
All products are manufactured and tested to the applicable standards and specifications defined by the American Water Works Association (AWWA) and/or ASTM.

■ GOLD SPONSORS

Apex Engineering

Apex Engineering Group partners with clients to create practical and efficient solutions for complex water, transportation, municipal and facility projects. They propose focused solutions that solve problems – rather than create new ones. They are not one size fits all. At Apex, they approach each project with a clean slate, taking all our experiences and applying "lessons learned" to each project. Each project completed for your community becomes a comprehensive engineered facility. And while each one is important, all projects tie together to function efficiently and prolong the life of your infrastructure systems.

CC Steel

CC Steel is a leading provider of municipal utility construction and rehabilitation services, specializing in lift stations, underground utilities, street construction, and related projects. They value the subcontractor relationships they've established through many years of experience. They welcome inquiries about available subcontract work. CC Steel focuses on general contracting municipal utilities. They have completed many private party jobs and completed subcontract work for others. Contact CC Steel for your private party and subcontracting needs.

ISCO Industries

ISCO Industries is a global customized HDPE piping solutions supplier based in Louisville, KY. ISCO stocks and sells a wide variety of piping materials and provides piping solutions for various environmental, geothermal, golf, industrial, landfill, mining, municipal, nuclear, waterworks and culvert-lining applications worldwide.

ISCO is a family-owned, total piping solutions supplier with more than 30 facilities in the United States and Canada. ISCO offers custom high-density polyethylene (HDPE) fabrication and inventories large stockpiles of pipe, including a large supply of HDPE pipe, usually within a one-day delivery of most projects.

Team Laboratory Chemical

Since 1977, the Team Laboratory Chemical Corporation has responded to the needs of operators in the wastewater industry with a lineup of products and programs for both problem-solving and preventative maintenance. Its products enable entire wastewater systems to operate at maximum efficiency from collection to treatment.

■ SILVER SPONSORS

Bolton & Menk, Inc.

Since 1949, Bolton & Menk has helped communities thrive by delivering safe, sustainable, and beautiful infrastructure. With more than 1,000 employees, including 400-plus engineers, planners, and surveyors, we build trust through collaboration, face-to-face communication, and practical solutions. We live where we work, and we're committed to improving quality of life through thoughtful design, advocacy, and partnership. Simply put, we're real people offering real solutions.

HDR

For more than a century, HDR has partnered with clients to shape communities and push the boundaries of what's possible. Its expertise spans more than 13,000 employees in more than 220 locations around the world. HDR's engineering, environmental and construction services bring an impressive breadth of knowledge to every project. Its optimistic approach to finding innovative solutions defined its past and drives its future. The water cycle is a beautiful force; one we all depend on and influence. Its professionals work with clients to sustain safe drinking water around the world. Consistently ranked among Engineering News-Record's top 10 water design firms, HDR approaches project work from an integrated perspective.

For more information, please visit www.hdrinc.com.

Hobas Pipe

Hobas is a leading manufacturer of GRP Pipe Systems. It is an international group with 60 years of proven commitment to customer satisfaction and quality excellence. Hobas creates value for customers by delivering innovative products and services which meet client specifications and applicable standards. It is committed to actively protecting the environment in everything it does.

North Dakota Water Users

The North Dakota Water Users Association was organized in 1959 to protect, develop and manage North Dakota's water resources. It is comprised of more than 300 local, statewide, and regional organizations with an active interest in water. Water Users serves as an umbrella organization for the North Dakota Irrigation Association, North Dakota Water Coalition, and other water-related groups. Together, it supports vital water supply and flood control projects; promotes irrigation development; educates on the importance of the state's water resources; and advocates for sound water policy at state and national levels.

Vessco, Inc.

Vessco, Inc. provides the highest level of quality water and wastewater equipment (process, chemical feed, pumps, valves and more) and service to municipal and industrial customers through its Total Solution approach. This includes project consultation, design partnering, installation assistance, field service and parts delivery. With a focus on life-cycle costs, long-term reliability and ongoing customer service, Vessco offers customers a partner for life. Vessco, Inc. is part of Vessco Water's family of water treatment companies and is committed to serving customers, principals and industry partners with the highest level of service and professionalism.

■ BRONZE SPONSORS

Ackerman-Estvold

Ackerman-Estvold is a full-service civil engineering and architectural consulting firm serving clients on projects ranging from initial planning to construction and every step in between. The organization was founded in 2003 and currently serves the communities and surrounding areas of Minot, Williston and Fargo, N.D., and Boise, Idaho. Services we provide include water resources, municipal, transportation and traffic engineering, land planning and development, construction engineering, GIS, architecture, drone technology and environmental services. Ackerman-Estvold has a proven history of effective and efficient solutions for water supply treatment and distribution, watershed management, wastewater systems and stormwater management.

Black Mountain Software, Inc.

Black Mountain Software specializes in easy-to-use, integrated utility billing and fund accounting software for North Dakota cities and special districts. Across 24 U.S. states, more than 600 clients rely on its software solutions and professional, "small town" friendly support to ensure time-savings, improved efficiency and regulatory compliance. For more information about Black Mountain Software, call 1-800-353-8829 or visit www.blackmountainsoftware.com.

DN Tanks

DN Tanks helps keep the world's most precious resource safe by designing and constructing prestressed concrete liquid storage tanks. Their mission is to provide their clients around the world with the highest quality liquid storage at the best long-term value with an unrivaled customer experience. To do this, they form strong, collaborative relationships that ensure exceptional outcomes. The results are long-term performance, durability, reliability, minimal maintenance requirements, and lowest cost of ownership. With more than 90 years of experience, and a deep commitment to helping clients meet the emerging needs of today and tomorrow, DN Tanks is Built for the Future.

Marsh McLennan Agency

Marsh McLennan Agency (MMA) is one of the nation's leading insurance brokerages, providing comprehensive business insurance and employee health and benefit solutions to companies and organizations of all sizes. MMA offers the local touch of a personal broker with the world-class resources of an international firm. With a customized team of risk management professionals, your partners at MMA will work tirelessly to understand you, so you can focus on the challenges you face and the things you enjoy.

Minnesota Pump Works

Established in 2012 by Jerry and Terri Turnbull, Minnesota Pump Works is committed to delivering premier pump services and products to communities across Minnesota, North Dakota, and South Dakota. Known for fair pricing, industry expertise, and exceptional customer service, we pride ourselves on conducting business with integrity and professionalism. We are dedicated to exceeding your expectations and look forward to the opportunity to serve you.

Sherwin Williams

"Sherwin-Williams Protective and Marine Division delivers industry-leading coatings solutions designed to protect critical water and wastewater infrastructure. Our NSF-certified systems meet evolving EPA, OSHA, and LEED standards, helping reduce VOC emissions while ensuring long-term asset performance. With a strong local presence in each community and dedicated technical service teams, we support projects from specification through application. Backed by continuous innovation and unmatched service, we help communities safeguard their water systems with confidence."

Visu-Sewer, Inc.

Proudly serving our clients for 50 years, Visu-Sewer LLC was founded in 1975. Specializing in trenchless technologies, Visu-Sewer is one of the largest full-service sewer inspection, maintenance and rehabilitation contractors in the United States. With specialized equipment and skilled personnel, we can efficiently investigate, diagnose and complete your collection system rehabilitation projects with the most cost-effective solutions. Our services include Cured-In-Place Pipe lining, injection grouting (infiltration control), manhole rehabilitation, CCTV inspection and sewer cleaning. Widely respected in the industry, Visu-Sewer boasts four NASSCO presidents and is recognized as a leader in the industry. For sewer project recommendations, please visit www.visusewer.com.

William E. Young Co.

We have 75 years combined sales experience in providing solutions to our customers for their measurement needs. We supply products from the leading industrial manufacturers, such as Brooks Instrument, Rosemount Inc., ChemTec Equipment and Keller Pressure, giving our customers the best in equipment and service. William E. Young Company currently has a sales and support location in St. Paul, Minnesota. The states typically covered are Minnesota, North Dakota, South Dakota, Iowa, Nebraska, and western Wisconsin.

PLAN TO ATTEND

40th Annual Water EXPO and Conference | February 10-12 | Fargo

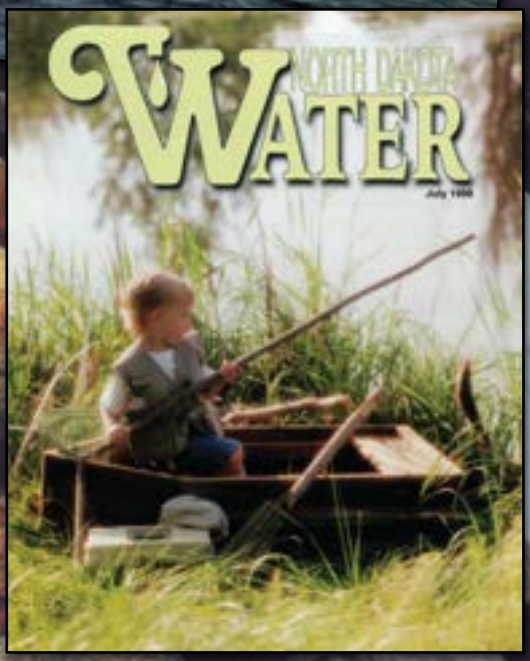
Discover Our Cover ...

The North Dakota Waterways Photo Contest

For more than 30 years, the North Dakota Waterways Photo Contest has upheld a tradition of showcasing the stunning beauty and diverse water resources of North Dakota. This long-standing contest invites both amateur and professional photographers to capture and share their unique perspectives on North Dakota's water. Through this competition, participants help celebrate the essential role water plays in the state's heritage, culture, and everyday life.

The contest began in 1994 with a simple set of rules: submit a photo that illustrates some aspect of North Dakota's water, whether natural or man-made, and reflect how water is used throughout the state. At that time, entries were limited to 35mm slides, full-color or black-and-white photographs, and five winners were selected. The winning photographers received U.S. Savings Bonds and their images ran on the cover of the *North Dakota Water* magazine. Today, eight photos are selected, including a winner, first, second, and third places, along with four honorable mentions, all of which receive cash awards.

Since its inception, the contest has grown steadily, now receiving hundreds of photo submissions each year. The increasing popularity of digital photography in the late 1990s and early 2000s led to a boom in the number of North Dakotans taking up photography as a hobby. As digital cameras became more accessible, an even wider range of participants began sharing their images of the state's breathtaking water, capturing everything from peaceful lakes and active river systems to stunning weather formations.



The first annual contest in 1994 culminated in the selection of Phil Ruege as the first Waterways Photo of the Year winner. Ruege, a part-time professional photographer, submitted a stunning image of a Hobie cat sailboat gliding across Lake Sakakawea, perfectly capturing the essence of water-based recreation in North Dakota.

Over the years, the North Dakota Waterways Photo Contest has continued to evolve, attracting thousands of entries from photographers eager to showcase the state's natural beauty. Today, the contest remains a beloved tradition, serving as a testament to the vibrant connection between North Dakotans and their waterways.

The 2026 North Dakota Waterways Photo Contest will be accepting entries January 1, 2026. Find more information on page 19.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July 2009

2026 Dushinske & Jamison Water Resources Scholarship

APPLY FOR THE 2026 Dushinske & Jamison Water Resources Scholarship STARTING January 1, 2026

The North Dakota Water Education Foundation (NDWEF) will begin accepting applications for the 2026 Dushinske & Jamison Water Resources Scholarship on January 1, 2026!

APPLICATION DEADLINE: April 15, 2026

This scholarship honors the legacy of Russ Dushinske and Warren Jamison, whose unwavering commitment to water development in North Dakota set the standard for leadership and service. Established by the NDWEF within the North Dakota Community Foundation, the Dushinske & Jamison Water Resources Scholarship Endowment supports the next generation of leaders in water resources.

For more details, visit https://ndwater.org/scholarships/

2026

DEADLINE APRIL 15, 2026

DUSHINSKE & JAMISON
WATER RESOURCES SCHOLARSHIP APPLICATION

NORTH DAKOTA WATER

_____
Name of Student *Date of Birth*

_____
Address *City* *State* *Zip*

_____
Student's Telephone *Student's Personal Email (not school-linked)*

_____
Parent(s) Name *Parent(s) Telephone*

_____
Parent(s) Mailing Address *City* *State* *Zip*

_____
Names and relationships of relatives/guardians involved in water management, protection or development and how they are involved in the industry.

EDUCATION

_____
High School *City* *Graduation Year*

_____
Principal's Name *Grade Point Average*

_____
Name of College or University (attending or planning to attend) *Expected Graduation Date*

_____
Mailing Address *City* *State* *Zip*

_____
Intended Major *Intended Minor*

_____
Other Education or Training

ESSAY *(ATTACH)*

In a two-page essay (12-point type, double-spaced), write about YOUR MOST VIVID MEMORY CONCERNING WATER.

Please provide the following information (please type):

1) Honors and awards
2) Non-academic school activities and special interests
3) High resolution photo
3) Career plans after college graduation
4) Reason(s) for applying for this scholarship

FOR MORE INFORMATION OR TO APPLY

North Dakota Water Education Foundation
PO Box 2254
Bismarck, ND 58502
701-223-8332
Fax: 701-223-4645
editor@ndwater.net
https://ndwater.org/scholarships/

I certify that the above information and data are correct and I consent disclosure of public information. I understand that the essay I wrote for the purpose of this scholarship competition may be used and distributed by the North Dakota Water Education Foundation without further approval from me.

Signature of Applicant _____ Date _____

MI-7 Floodwall around west end of the Roosevelt Park Zoo.

Transforming Minot: Major Progress on MI-6 and MI-7 Flood Protection Phases

In last month's *North Dakota Water* Magazine, the Souris River Joint Board (SRJB) shared an update on Phase MI-6 Downtown connected to the Mouse River Enhanced Flood Protection Project (MREFPP) in the city of Minot. This project will be transformative throughout some of the oldest portions of the city and in the vibrant downtown space that Minot has been developing over the past five years.

Phase MI-6 Downtown and Phase MI-7 Roosevelt Park and Zoo are so interconnected in the area that most residents would not realize that these are two separate projects with different engineers and contractors performing the work within the spaces. Features within each project have impacts on the other. Collaboration has been critical in making sure the borrow pits are accessible for both spaces, shared haul routes work in tandem, and coordination of utility replacement, etc., is in a sequence to not cause delays with each portion of the project. Providing context to the coordination efforts and complexity of these projects gives just a glimpse of the massive nature of the projects and the safety they will provide to the residents through the areas in Milestone 2.

MI-7 has a bigger footprint than the current portion of MI-6, but there are many complexities added to this portion of the project due to working with Roosevelt Park Zoo to support the health of a large variety of animals in the zoo. Special care needs to be considered when working with animals that call the zoo home and the thousands of patrons who visit the zoo annually. Impacts on wildlife species in trees and along the river had to be lessened before the first phase of construction moved forward with the removal of trees. The Minot Park District has been in step with maintaining the 2.0 version of Roosevelt Park and Zoo. The SRJB team worked with forestry on which trees' lifespans were close to their end, the overall health of trees and future exhibit space and how certain trees impact the upcoming phases of construction. Making these decisions was a partnership with input from experts so we could create a lasting environment with beauty in these shared spaces.

This is a multi-phased project as well. Phase MI-7E includes the main portion of flood control through Roosevelt Park and Zoo and includes the construction of an earthen levee, 24 floodwall footings, 80 concrete floodwalls, and municipal utility modifications and improvements to the zoo and park. It also required site clearing, demolition of six buildings and construction of four pre-consolidation piles as part of the initial phases of construction. Over winter 2025, installation of riprap along several hundred feet of riverbank was completed. Riprap installation along the wet side of the levee consisted of approximately 44,000 tons of various-sized riprap, and bedding was placed to protect the riverbank along the flood protection system.

Favorable spring conditions allowed an early start on several key features. The installation of a 27-inch sanitary sewer main began as soon as frost conditions eased to allow excavation. This critical sewer main serves the downtown area and feeds into the Roosevelt Lift Station. The sanitary sewer crosses two sections of levee that featured specialized construction to meet US Army Corps of Engineers requirements. The sanitary sewer also features a section that was directionally drilled with fused PVC pipe beneath the Mouse River.

Installation of the seepage cutoff wall began in April 2025 and was completed in July. The seepage cutoff wall for both the MI-7 and MI-6 phases was completed during the same timeframe. The seepage cutoff wall was installed by subcontractor L4H Trenching using new state-of-the-art equipment. The large trencher blends in situ soil with bentonite, cement, and water to create a semi-impermeable

MI-7 north end of Roosevelt Park with earthern levee pathway.

MI-7 main park and floodwall.

barrier that resists water mitigation beneath the levee and floodwall system.

The first concrete pour started in early June, and all 24 floodwall footings and 80 floodwall panels should be completed by mid-December 2025. The footings requiring approximately 1,400 cubic yards of concrete and 400 feet of floodwall requiring an additional 400 cubic yards of concrete have been constructed through the middle section of Roosevelt Park. The north end of Roosevelt Park near the playground area features approximately 1,300 feet of earthen levee, which was completed in August. The walking path atop the levee will be completed next year.

The redesigned areas at the north end of the park include a new maintenance building for the Magic City Express (MCE), redesigned track spaces, and a new train platform to allow patrons to get on and off their ride on the Magic City Express. The MCE is a small train taking visitors to the park and zoo on a ride around the park. Keeping this park feature was important but complicated due to the mini locomotive's current train track. The project also required keeping all equipment and storage on the dry side of the floodwall.

In addition to the MCE changes, there were slight modifications of the current playground and picnic shelters on the north end of Roosevelt Park. There were also large changes to the size and layout of the parking lot to help accommodate more parking spaces for Roosevelt Park Pool, and another redesign of the smaller ancillary parking lot for pickleball courts. An outdoor restroom was built in a new location with the changes made in this area.

The zoo's current North American exhibit space could not be left in its current location as it is across the river on a footbridge and would be on the wet side of the zoo and park should another flood event occur. The project plan included moving the Discovery Barn from its former location to a space within the zoo, closer to the bears' den, and a new concession stand was built to accommodate some of the utility changes needed with the floodwall encircling the back side of the zoo. Moving the Discovery Barn and the subsequent demolition of the North American zoo exhibits left a lot of questions. What happens to those animals and exhibits? We have a beautiful zoo; it's not getting smaller, is it? Where are the smaller farm animals heading?

MI-7 Teddy Roosevelt statue new home.

Have no fear, as all of this was considered in initial discussions on plans for the zoo. It needed to be protected on the dry side of the floodwall. The far south end of Roosevelt Park was cleared of the necessary trees, utility work was updated, and other preparatory items have happened to accommodate the North American exhibit in the new space. This will create a more accessible zoo for all patrons, a better layout for the staff to care for the animals, and a safe and protected zoo from future flood waters. Work on zoo exhibits will start in spring 2026, with completion in 2027.

The bronze statue of the park's namesake, Teddy Roosevelt, was moved from the park courtyard in 2024 to a very prominent space greeting all of the visitors to Roosevelt Zoo and the city of Minot on Burdick Expressway East. The final touches to his monument base were completed in 2025. Those wanting to learn more about how Teddy arrived in Minot can read the story at www.mouseriverplan.com/single-post/the-story-behind-the-namesake-of-roosevelt-park.

An extraordinary amount of work has been accomplished within MI-7 Roosevelt Park and Zoo in the past 15 months, and it is exciting to see things take shape, turning from the demolition, construction material, piles of dirt, and lots of equipment everywhere to looking like significant headway has been made toward the final vision. There is still much to accomplish, but things will only get better and better from here until we reach the end product. The project's final completion date is scheduled for June 2028.

Part 2 of 2

The Next Garrison Diversion Unit Challenge

CLAY CARUFEL
North Dakota Department of Water Resources

We learned in Part One (November 2025) how North Dakota gave up hundreds of thousands of acres of prime river bottom and grazing lands for the benefit of the nation. The Garrison and Oahe reservoirs flooded the land as part of the Flood Control Act of 1944, leading Congress to pass legislation for a project to offset the loss. That project was called the Garrison Diversion Unit (GDU). Past challenges with the GDU like sporadic funding and political opposition were discussed in Part One. Now, a new challenge faces the GDU project and threatens to compromise the benefits received by North Dakota.

Most components of the GDU, including the McClusky Canal and Snake Creek Pumping Plant, are owned by the Bureau of Reclamation and operated by the Garrison Diversion Conservancy District (Garrison Diversion). A crucial component of the GDU, the Snake Creek Embankment (Embankment), is owned and operated by the U.S. Army Corps of Engineers (USACE). The Embankment separates Lake Sakakawea and Lake Audubon and allows Lake Audubon's level to be controlled using pumps at the Snake Creek Pumping Plant. The federal government designed it this way so that Lake Audubon could be filled every year to deliver water to the McClusky Canal. The Embankment was designed to withstand a large water level differential between the lakes, up to 67 feet.

When there's a large water level difference, the water on the higher side of an embankment wants to move to the lower side because of the pressure difference. This movement of water is called seepage and, when uncontrolled, can create problems such as erosion and failure of embankments like dams and levees. To address seepage through the Embankment, USACE built relief wells into the structure to collect the seeping water and release it in a controlled way to relieve pressure and reduce the risk of potential Embankment failure.

The current challenge is that the Embankment was built in 1952, and the original relief wells have received little to no maintenance. This led to them filling with sediment, reducing their effectiveness over time. This likely happened because the Embankment became a lower priority for USACE and because the Embankment's design resulted in the relief wells being underwater. Typically, embankments have a dry and wet side, making maintenance of relief wells possible from the dry side. The Snake Creek Embankment has water on both sides, making relief well maintenance challenging.

The lack of relief well maintenance became apparent in the mid-2000s when prolonged drought set in over the Northern Great Plains. Lake Sakakawea reached a record low elevation, and the water level difference between Lake Sakakawea and Lake Audubon was 41.1 feet. USACE found that the relief wells weren't functioning properly and there was higher than expected pressure on the Embankment. In response, USACE installed several new relief wells and decided that, temporarily, the difference between the water levels of both lakes couldn't be more than 36.5 feet. After more analysis, USACE increased the allowable water level difference to 43 feet and sought to make this a permanent restriction in 2018.

The State of North Dakota and Garrison Diversion are opposed to the new water differential restrictions. In a severe drought, a restriction could lead to Lake Audubon being drawn down, preventing water from reaching the McClusky Canal and hindering the GDU from meeting its purposes of water supply, irrigation, and recreation. This is unacceptable to the State and Garrison Diversion for several reasons. The first is that Congress authorized the GDU in recognition of North Dakota's large land contribution for the Garrison and Oahe Dams to be built. North Dakota had kept their end of the bargain by contributing land for the Flood Control Act, but the federal government is not keeping theirs by allowing the Embankment's performance to slip, potentially compromising the GDU.

Garrison Diversion and the Lake Agassiz Water Authority are also constructing the Red River Valley Water Supply Project using the GDU so that Missouri River water can be delivered to central and eastern North Dakota during droughts. But uncertainty surrounding the Embankment could prevent the project from using the GDU, which could result in significant additional expenses for the State.

Despite the opposition from the State and Garrison Diversion, USACE made the 43-foot water difference restriction formal in 2019. USACE neglected the Embankment, and North Dakota is being left to deal with the consequences.

After this decision was formalized, North Dakota Senator Kevin Cramer directed USACE to reconsider the water differential restriction through America's Water Infrastructure Act and Water Resources Development Act of 2020, resulting in USACE performing a Dam Safety Modification Study to review the benefits of the Embankment compared to the cost of alternatives necessary to address the seepage problem. After their review, USACE concluded that it remains necessary to limit the water level difference between the two lakes, but they pivoted from a defined limit (i.e., 43 feet) to a risk-based approach that would manage Lake Audubon levels based on real-time monitoring of the Embankment during periods of increased water level differences.

The State of North Dakota, through its Department of Water Resources, and the Garrison Diversion have been adamant that more needs to be done for the Embankment than just removing the restriction. The agencies have been pushing for a structural fix that would restore the Embankment to its design standards, prevent Lake Audubon drawdowns in the future, and provide North Dakota with long-term water supply certainty. USACE had previously resisted this idea but now agrees that a structural fix is the best option for the Embankment. This is a victory for North Dakota, but work remains.

The Dam Safety Modification Study still needs to be finalized, and funding from Congress would be needed for a structural fix of the Embankment. Pursuing a structural fix is important so that the GDU, the project North Dakota gave up so much for, can benefit future generations of North Dakotans.

The Oxbow

FROM THE DEPARTMENT OF WATER RESOURCES

MAPPING NORTH DAKOTA'S FUTURE IRRIGATION POTENTIAL

When you look at North Dakota from above, it's easy to see its agricultural vastness; millions of acres of cropland stretching from valley to badlands. But only a small fraction of that landscape is irrigated. In fact, less than 1 percent of North Dakota's cropland was irrigated in 2022 — the lowest rate among all 10 states that make up the Missouri River Basin.

That statistic sparked a statewide effort to better understand where irrigation could expand responsibly in the years ahead. In 2025, researchers from North Dakota State University, working in partnership with the Department of Water Resources (DWR), the North Dakota Irrigation Association, and the Garrison Diversion Conservancy District, completed a Statewide Irrigation Reconnaissance Study. The report provides the first comprehensive look at where soils, water, and power align to make future irrigation feasible.

THREE-PHASE APPROACH

The study unfolded in three phases

UPDATING THE SOIL IRRIGABILITY MAP

Using the latest USDA Soil Survey Geographic Database (SSURGO), researchers classified every soil series in the state as irrigable, conditionally irrigable, or non-irrigable. Two scenarios, "permissive" and "restrictive," were developed to reflect the range of local conditions. The end result: North Dakota has roughly five million acres of irrigable soils and another 25 million acres of conditional soils, depending on assumptions.

FILTERING OUT UNAVAILABLE AND UNSUITABLE LANDS

The team removed lands where irrigation development is off-limits or impractical, such as public lands, wetlands, cities, and areas already occupied by roads, railroads, rivers, powerlines, or large structures. After those filters, about 17 million acres statewide remained both available and suitable for irrigation.

EVALUATING WATER AND POWER AVAILABILITY

The final phase examined proximity to reliable water sources and access to three-phase power, which is essential for running irrigation systems. Surface-water potential focused on the Missouri River system of Lake Sakakawea, Lake Oahe, Lake Audubon, and the McClusky Canal, while groundwater analysis drew on DWR's recent managed-aquifer-recharge map.

THE NUMBERS BEHIND THE OPPORTUNITY

When soil suitability and water availability were combined, the study found 1.26 to 1.52 million acres of cropland across North Dakota with potential for future irrigation development.

- Roughly 500,000 acres lie within 12 Missouri River corridor counties, where irrigation could draw from the river system.

- The remaining 800,000 to 1.1 million acres could rely on good-quality groundwater from shallow glaciofluvial aquifers particularly in areas where surface-water access is limited.

McLean County led the state in potential acreage, while counties in the southwest and far northeast showed little opportunity due to soil and aquifer limitations. Under favorable groundwater conditions, 38 counties have more than 10,000 acres of potential; under limited conditions, 28 counties meet that mark.

POWERING POSSIBILITY

Reliable electricity can be as limiting as water. Because only three of North Dakota's 17 rural electric cooperatives provided usable three-phase power data, the study offers a partial, but still revealing, picture. Within those service areas, 46,000 to 73,000 acres of cropland suitable for irrigation lie within one mile of existing three-phase lines. That's about 10-13 percent of the total potential acreage analyzed.

BEYOND THE MAP

The authors stress that the reconnaissance study is a starting point, not a blueprint for immediate development. It highlights opportunity zones, but detailed feasibility studies would still be needed to consider design, cost, permitting, environmental constraints, and landowner interest.

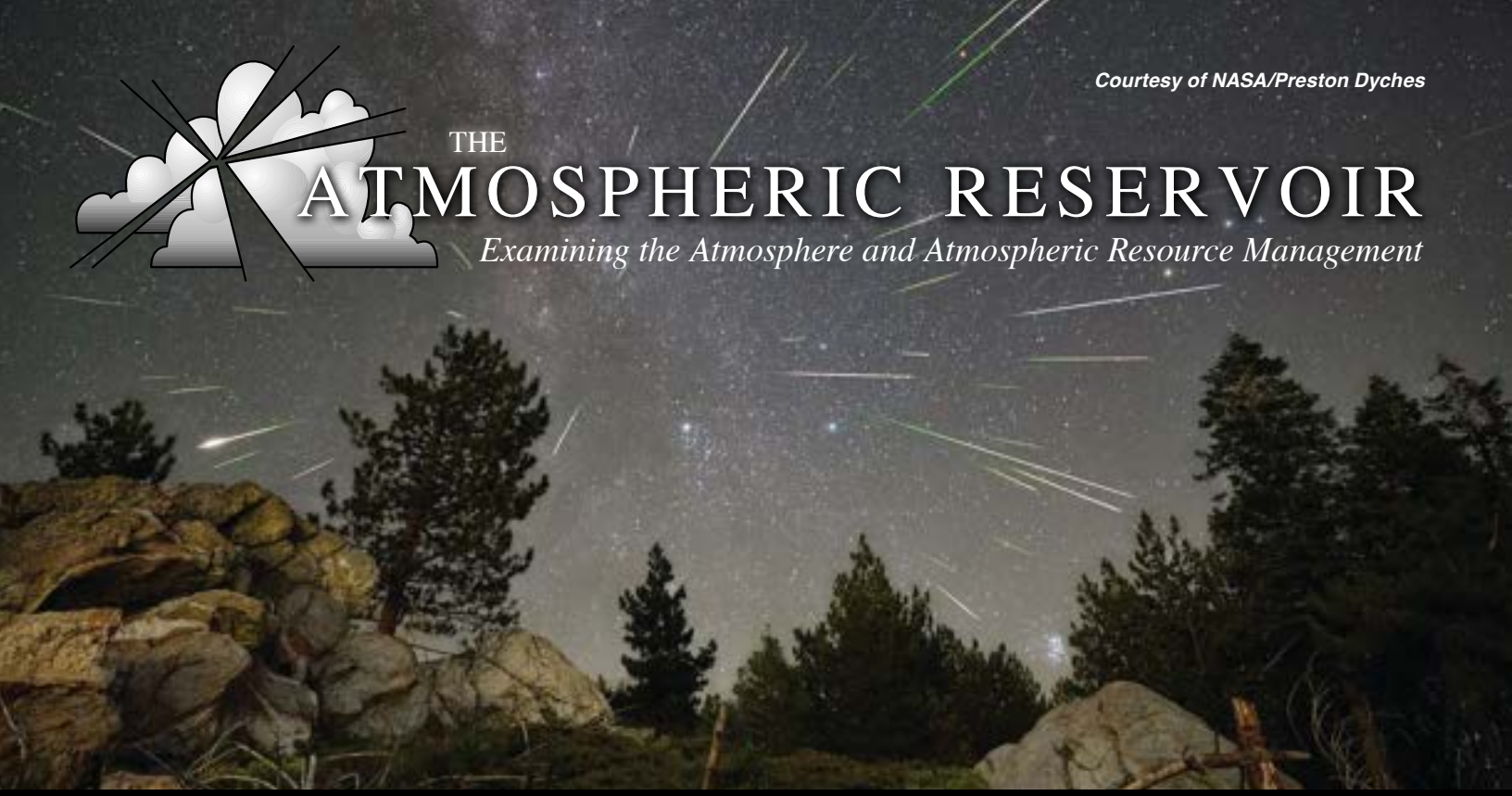
Still, for policymakers, water managers, and producers, the report paints a clear picture: **North Dakota holds significant untapped irrigation potential** especially near the Missouri River and in aquifer-rich regions of the central and south-central counties.

As the state balances agricultural growth with sustainable water use, this research helps set the stage for data-driven decisions showing, for the first time in decades, where the science and the resources may align to grow opportunity.

Source: "North Dakota Statewide Irrigation Reconnaissance Study," NDSU Agricultural and Biosystems Engineering Department, June 2025, prepared for the North Dakota Department of Water Resources, North Dakota Irrigation Association, Garrison Diversion Conservancy District, and NDSU Office of Research and Creative Activity.

STUDY IS AVAILABLE ON OUR WEBSITE

DWR.ND.GOV



Courtesy of NASA/Preston Dyches

THE
ATMOSPHERIC RESERVOIR
Examining the Atmosphere and Atmospheric Resource Management

WINTER METEOR SHOWERS

By Mark D. Schneider

On crisp, clear nights this winter, there will be many opportunities to observe "shooting stars" or meteors. *Meteoroids*, *meteors*, and *meteorites* are sometimes used interchangeably; however, they have slightly different meanings. NASA defines *meteoroids* as rocks still in space, *meteors* as *meteoroids* that enter Earth's atmosphere and burn up, and *meteorites* as *meteoroids* that survive the fall through Earth's atmosphere and hit the ground. It makes more sense that meteorologists get their name because they study hydrometeors such as rain and snow falling from clouds.

You may have wondered how astronomers are able to predict meteor showers with accuracy on an annual or regular basis. When Earth's orbit passes through debris fields of dust and ice left by comets, these meteoroids burn up as they enter the atmosphere. The orbits of these comets are predictable, and unless they pass too close to the sun or collide with something in space, we can continually observe them when they pass by Earth.

As for the names of meteor showers, they take the name of the nearest constellation in the sky. For example, the upcoming Geminids meteor shower occurs nearest the constellation Gemini and will be active until around the winter solstice on December 21. The Geminids are usually the most spectacular meteor shower of the year due to their brightness and colors. Next there is the Ursids meteor shower that begins around the winter solstice and ends right after Christmas. Finally, the Quadrantids meteor shower begins just after Christmas and lasts until mid-January.

It's beneficial to watch meteor showers outside of cities where light pollution isn't such a factor; however, larger meteors can be seen even from city backyards. If you get cabin fever this season and need to get outside, just remember to bundle up and look up to see the "stellar" sights.

North Dakota Department of Water Resources | Data & Atmospheric Resources | 1200 Memorial Highway, Bismarck, ND 58504
(701) 328-2788 | dwr.nd.gov

ND Weather Modification Association | PO Box 2599 | Bismarck, ND 58502 | (701) 223-4232

2026 North Dakota Waterways PHOTOGRAPHY CONTEST

The 2026 North Dakota Waterways Photo Contest will be begin accepting entries **January 1, 2026**

Be creative! If you "Discover our Cover," you win!

| Deadline for submitting photos is May 15, 2026 |

More information at www.ndwater.org/photo-contest-winners/

Winter, Summer, Spring or Fall . . . WE WANT TO SEE THEM ALL!

We're looking for those hidden away people and places to help us showcase North Dakota's water treasures. Take a picture suitable for the magazine's front cover. It could be taken in your backyard, at the neighborhood playground, by the creek, behind the farm house, or near your favorite fishing hole - in any season.

Photography Contest Rules:
Entries will be judged on suitability for publication on the front cover, appropriate representation of North Dakota's water, and photographic creativity and quality. Photographs must have been taken in North Dakota and water must appear in some form (i.e., snow, rain, ice, lake, river, etc.) in the photograph. Digital photos preferred and must be at least 300 DPI at 9 x 12 inches, vertical orientation. Photographs not meeting these specifications will be disqualified. There are no categories.

E-mail digital photos to editor@ndwater.net.

Send entries to: 2026 Waterways Photo Contest, c/o *North Dakota Water* magazine, P.O. Box 2254, Bismarck, ND 58502.

Entries must be received by May 15, 2026.
One overall winner, runners-up, and honorable mention winners will be chosen at the judge's discretion. The decisions of the judge are final. There is no entry fee and no limit on the number of photographs you may enter. ***Only the winners will be notified.*** There will be no acknowledgement of receipt of entries. Results will be published in the July issue of North Dakota Water. Prizes: Winners will receive cash prizes.
Any winners' photos may appear on a future front cover of the magazine.

2026 North Dakota Waterways Photo Contest Entry Form

Attach this form to each entry. Copies of the entry form are acceptable.

Photographer's name _____

Address _____

Phone _____

Email address _____

Photograph title _____

Where was the photo taken? _____

WINNER AGREEMENT:
If I'm selected a winner of this contest, I hereby grant permission to the North Dakota Water Education Foundation to use my photograph(s) in future issues of *North Dakota Water* and for any publicity associated with future photo contests or the North Dakota Water Education Foundation.

☐ Check here to allow us to add your photo submissions to the North Dakota Water Education Foundation's photo library for possible future use.

_____

Signature Date

THE SPIGOT
from the NORTH DAKOTA RURAL WATER SYSTEMS ASSOCIATION

40th Annual Water Systems EXPO AND Conference

February 10-12, 2026

Delta Hotels by Marriott - Fargo

TUESDAY - FEBRUARY 10

8:00 am Registration Opens
9:00 am Pre-Conference Sessions:
- Noon Cyber and Physical Security Best Practices, CISA or Tour of Northern Pipe Products with Lunch
2:00 pm NDRWSA Annual Board Meeting, EXPO Opening Session and Jay Gubrud Keynote: Jumping in the Driver's Seat
3:00 pm Exhibit Hall Opens and Meter Change-Out Competition: Preliminary Round
5:00 pm Exhibitor Appreciation Social
6:00 pm Exhibit Hall Closes for Evening

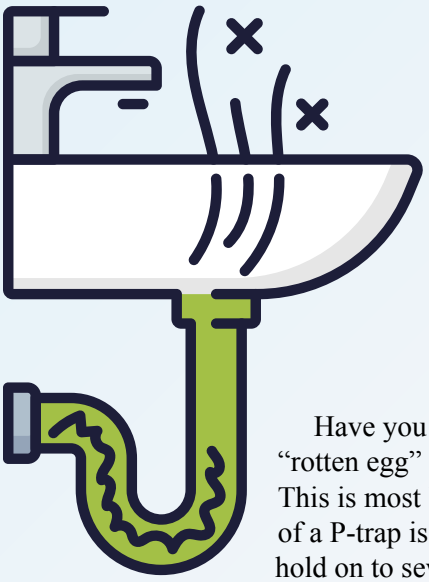
WEDNESDAY - FEBRUARY 11

7:30 am Breakfast Buffet
8:30 am Board Roundtable Discussions and Exhibit Hall Demonstrations
9:00 am Water Taste Contest
11:00 am Meter Change-Out Competition: Final Round and Exhibit Hall Drawings
Noon Exhibit Hall Closes and Buffet Luncheon
1:00 pm Operations & Maintenance and Board & Management Tracks
5:00 pm Awards Banquet and Scholarship Live Auction

THURSDAY - FEBRUARY 12

7:30 am Breakfast Buffet
8:30 am Operations & Maintenance and Board & Management Tracks
11:45 am Closing Session: Grand Prize Drawing
(Must Be Present to Win)

Additional EXPO information available at www.ndrw.org/EXPO2026



Why Does My House Smell Like Rotten Eggs ?

By Keith Hegney
North Dakota Rural Water Systems Association
Wastewater Technical Advisor

Have you ever experienced a "rotten egg" smell in your home? This is most likely an indication of a P-trap issue. P-traps are what hold on to sewer gases so that they will not pass through the pipes and back into your home or dwelling. They do this by keeping a small amount of water in a little "dip," which then creates a seal for the dangerous gases, ultimately trapping the sewer gases. Thusly, if a P-trap does NOT get any water, it cannot create that seal, and will not prevent the harmful sewer gases from shooting back into the pipes and into your home.

P-traps dry out for a few different reasons, but the most common is due to a frozen or clogged vent stack that is no longer allowing air into your plumbing system. The air flow is important to force water throughout the pipes. If there is an obstruction, the water will become stagnant and eventually, water will flow back up and out of the drains. Homes that have heated floors are more likely to have issues due to higher evaporation.

The first indication that you have a P-trap issue is a foul smell. Ammonia and hydrogen sulfide are toxic gases that smell like rotten eggs. Methane gas is the largest and most dangerous constituent of sewer gases. Methane is colorless and odorless, but when inhaled, it can lead to symptoms like nausea, dizziness, and headaches. If you detect a foul smell or experience any symptoms of methane gas, chances are that what you are smelling is the result of a dried-out P-trap.

P-traps are the U-shaped pipes in toilets and underneath sinks. Floor drains, typically found in storage rooms, washrooms, or utility rooms, also have a P-trap. It is very common to have hidden or unused floor drains in your home as well. These drains can become dry at any time of year, resulting in the harmful effects of sewer gas. If this

is the case, after locating the problematic drain, simply fill it with water. You can also administer an environmentally safe oil, such as mineral oil, into the drain. (Mineral oil will reduce the evaporation rate of the water in the trap and is safe to use in any septic system.)

If you are still experiencing sewer gas odors inside your home and are unable to pinpoint the problem to an exact drain, North Dakota Rural Water Systems Association (NDRWSA) has the equipment available to assist with a "smoke test" in your home, business, or city's sewer system. A sewer smoke test can conveniently locate the source of the sewer odor, allowing the source of the sewer gas leak to be fixed. Quite often, the smell from a sewer is traced back to unused drains with dried-up traps. However, there may also be a worn-out pipe, a tree root that has cracked and entered the pipe, causing a leak, or simply an unsealed toilet wax ring. In any event, a leak may be very hard to find on your own. Smoke testing allows for "visual proof" to locate the exact source of a leaky sewer system.

The smoke testing method can be administered by the highly trained technical advisors of NDRWSA and is a very efficient and cost-effective way to identify a sewer leak. The smoke is non-toxic, non-staining and odorless; it is harmless to humans, pets, plants, food, and material goods.

Our Water
Keeping it Clean

North Dakota Department of Environmental Quality

On-site Wastewater Treatment Systems

Meridith Miller, Environmental Scientist
North Dakota Department of Environmental Quality

On-site wastewater treatment systems, commonly referred to as septic systems, are used by one in five American households to treat their wastewater (US EPA). These systems are designed to treat small amounts of wastewater in locations not served by a public sewer system.

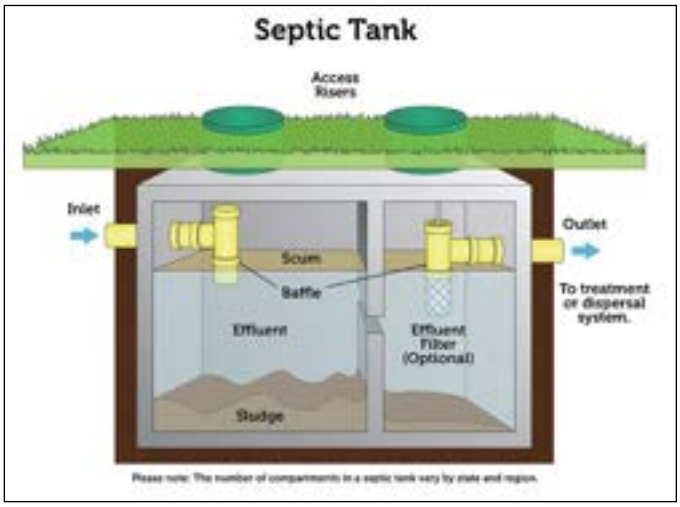
Septic systems are wastewater treatment structures that use a combination of natural and technological processes to treat wastewater produced in households. In a typical septic system, water and waste material exit the house through a pipe into a septic tank. In the tank, scum (oil and grease) floats to the top of the tank, solid material (sludge) settles to the bottom, the liquid wastewater (effluent) is in the middle layer and exits the tank to the drainfield. The pretreated wastewater is discharged into the drainfield, an area with porous surfaces in an excavated area of unsaturated soil. The water percolates through the soil, naturally removing bacteria, viruses and nutrients before it reaches groundwater.

There are a variety of on-site wastewater treatment systems (a conventional tank and system are shown on this page). If systems are properly installed and maintained, they can have many benefits, including:

Public health benefits: Proper installation and use of septic systems reduce the risk of disease transmission and human exposure to pathogens (such as *E. coli*) that are found in wastewater.

Environmental benefits: Septic systems remove pollutants from surface water as well as recharging and replenishing groundwater.

Economic benefits: Onsite treatment systems reduce large infrastructure costs to collect and treat wastewater.



Above: A typical septic tank. *Image courtesy of US EPA.*
Below: A conventional on-site wastewater treatment system, including a septic tank and gravel drainfield. *Image courtesy of US EPA.*

Septic System Maintenance Tips

- Inspect regularly (every three years) and pump on schedule (every 3-5 years for typical household system)
- Keep records of the tank and drainfield locations, and pumping, inspection and maintenance.
- Do not pour or flush: diapers, wipes (even "flushable" ones), sanitary products, grease, chemicals (paint, pesticides, strong disinfectants).
- Protect the drainfield by not parking or driving on it, avoid planting trees or deep-rooted plants nearby.
- Use only licensed septic pumpers and installers; confirm they follow requirements for disposal and reporting.

In North Dakota, both on-site treatment system installers and septic pumpers (the companies that remove built-up sludge and scum from septic tanks) are required to have a license or permit from the North Dakota Department of Environmental Quality (NDDEQ) to operate.

The septic pumpers permit is a requirement for anyone in the business of pumping septic systems in North Dakota. The permit consists of both educational and reporting components. The educational component requires everyone at the company to complete an annual exam, covering regulations, safety and reporting requirements. Additionally, one representative of the company is required to attend an in-person training every five years. The reporting component consists of an annual report submitted to NDDEQ, documenting land application sites of septic waste and other requirements. Septic waste can be taken to a wastewater treatment facility or applied to the land as fertilizer. If it is land applied, there are requirements to treat the waste for pathogens and vectors, and setback requirements from roads, waterbodies, or buildings. Septic pumpers may be subject to inspection and review of land application sites.

The on-site wastewater treatment system installer program is new to NDDEQ, as of August 2025. Prior to that, installers were licensed through the local public health department. The installer license program at NDDEQ was created to have universal statewide code for installers to follow, as the requirements at the local level varied between public health units. NDDEQ is in the process of developing administrative rules for the program, detailing the training and licensing for installers, a permitting process and applicable building codes. Currently, installers are required to complete an application with the department and certain training courses are recommended for completion.

For an interactive, animated model of how septic systems work, visit this page from the Guadalupe-Blanco River Authority in partnership with US EPA and the Texas Commission on Environment Quality: www.gbra.org/presentations/septic/index.html

Additional information about septic systems, maintenance and safety tips and more can be found at the US EPA's septic system website www.epa.gov/septic. Find additional education materials at the US EPA's SepticSmart website, www.epa.gov/septic/septicsmart-education-materials.

For more information about the septic pumper and installer programs at NDDEQ, please call the NDDEQ Division of Water Quality at 701-328-5210 or visit the following sites:

- https://deq.nd.gov/WQ/2_NDPDES_Permits/7_SepticSystems/Septic.aspx
- https://deq.nd.gov/WQ/2_NDPDES_Permits/6_SepticPumper/sp.aspx

Be Septic Safe

If your property is served by a septic system, it is time to inspect the covers of your septic tank.

Check to make sure that the lid is secure. The lid should cover the opening and be weighted or secured. Ensure there are no missing, broken, or rusted safety equipment. Inspect lids for damage, including weather exposure or being driven on. Replace any broken parts or lids immediately!

If you have questions, contact your septic pumper, or a qualified service provider for an inspection.

Mark the opening of your septic tank so it is not accidentally driven over and teach children to avoid the covers. A child playing around the opening can have deadly results.

Prevent a Needless Death

- Find and mark your septic lid
- Inspect your septic lid at least yearly
- Fix or replace broken or missing parts
- Ensure screws and locks are in place
- Keep lid secure with screws, locks, or weight (lid weighing more than 95 lbs).
- Install a secondary safety device

Find out more at:
https://ndeha.org/wp/septic-tank-lid-safety

NORTH Dakota Be Legendary. | Environmental Quality

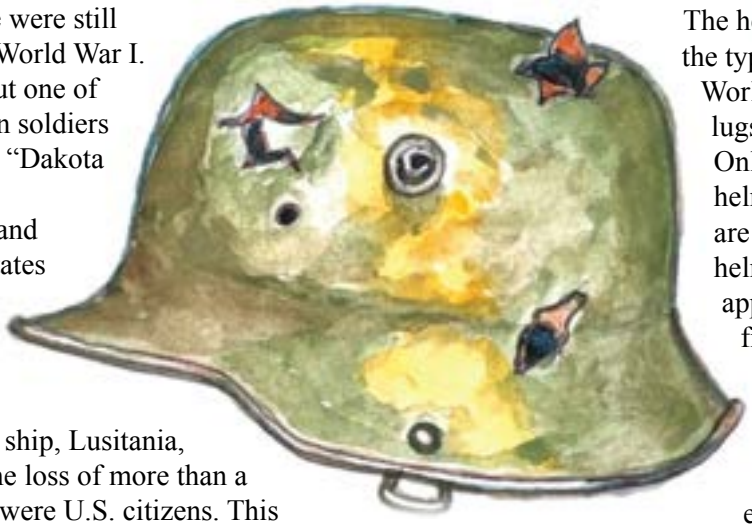
4201 Normandy Street
Bismarck, N.D. 58503-1324
701-328-5210 | *www.deq.nd.gov*

THE Timmer Chronicles

By Scott Nelson

Back when I was a kid, there were still men around who had served in World War I. I remember reading a book about one of the last surviving North Dakotan soldiers from the First World War called "Dakota Doughboy" by Marvin Baker.

World War I started in 1914 and lasted until 1918. The United States was a latecomer to the war and didn't become involved until 1917. One reason we entered the war was the tragic sinking of the British passenger ship, Lusitania, by a German submarine, with the loss of more than a thousand souls, many of whom were U.S. citizens. This struck a note with my grandparents because this was the same ship that had brought them to America from Sweden in 1908.



World War I involved a lot of trench warfare with the loss of a whole generation of young men from England, France, Russia, and Germany. The war was so terrible that it was called the war to end all wars. Too bad that didn't end up being true.

A movie came out in the last several years called "All Quiet on the Western Front," which was made in Germany and shows the horrors of that war. It's in German and has English subtitles. For those who want to see it, it's available on many viewing platforms.

I've always had an interest in history, especially military history. Knowing this interest, a friend gave me a treasured artifact that had come to their family by way of a box of stuff bought at an auction sale. This artifact is a battle-scarred World War I German helmet. No one remembered which auction sale it was bought at or which family owned it. It probably came to this country by way of a North Dakota soldier who served in World War I. It was likely a treasured war trophy for the soldier to bring it all the way back from the battlefields of France. The veteran eventually passed away and his family didn't see the significance of the helmet, and it was thrown in a box of odds and ends to be sold.

The helmet is very similar to the type used by the Germans in World War II, except for two lugs on the side of the helmet. Only World War I German helmets had these lugs. There are war damage holes in the helmet but not bullet holes. It appears to be shrapnel holes from artillery bursts. My guess is that the owner of the helmet was killed, and the helmet lay on the battlefield exposed to artillery fire. Artillery shards had pierced large and small holes in the helmet several times. There are no stamps or identification on the helmet to show who it belonged to. We will never know the name of the young German soldier who wore the helmet over 100 years ago.

The design of the helmet is a very good one, so good that the same basic design was used by the Germans for the Second World War. It was made to protect the whole head and upper neck. British and American helmets from World War I were of an inferior design and protected only the top of the head and were nicknamed dish pans. By the Second World War, Americans had a much better head protection helmet called the steel pot. The German helmet, although a good design, was not used after the Second World War because of its ominous connection with the Nazis and their war crimes.

The American steel pot helmets were used for many years up through Vietnam and the late 70s. The modern U.S. military Kevlar helmets now look amazingly similar to the old World War German helmets. I guess that shows how advanced the German design was.

What will happen to this helmet when I'm gone? Hopefully, my family will skip the auction sale route and donate it to the Heritage Center in Bismarck and the soon-to-be-added military wing of the museum.

See yuh next time, Scott.

NDSU Recognizes Garrison Diversion's Partnership

Duane DeKrey accepting the partnership award with Garrison Diversion former board member Norm Haak, former board member Dennis Wendel, Director Kenny Rogers, Director Greg Bischoff, Mike Ostlie, CREC Director, and Director Brian Orn

By Kimberly Cook

The Garrison Diversion Conservancy District (Garrison Diversion) was the proud recipient of the Partnership Award presented by North Dakota State University (NDSU) at the Oakes Irrigation Field Trials in August. Garrison Diversion has supported the Oakes Irrigation Research Site (OIRS) since it was founded in 1970.

NDSU's Partnership Award recognizes the long-term commitment between NDSU and Garrison Diversion and its vision for supporting producers in the area.

When the OIRS was established, it was a 20-acre research site operating under a cooperative agreement between Garrison Diversion, NDSU and the Bureau of Reclamation. Garrison Diversion provided most of the financial resources and NDSU faculty and staff conducted experiments at the site. The NDSU Carrington Research Extension Center (CREC) has been administratively responsible for implementing the research program at Oakes.

Due to the outdated nature of the site, the OIRS was in serious need of major upgrades and improvements in order to continue irrigation research at the high level expected from the site. Over the past 10 years, there has been a major effort to modernize the OIRS.

"It was a big lift to put this package together," SBARE (State Board of Agricultural Research and Education) representative Mike Clemens said.

In 2013, Garrison Diversion and the CREC set a plan in motion to update the facilities for the OIRS, and in time, for NDSU to take over full funding of the site.

A proposal was developed, which included Garrison Diversion's assistance in constructing a new building at the site, a six-year funding exit plan and passage of the land lease onto NDSU. Several individuals and agricultural organizations worked together for the improvements

Pictured are Garrison Diversion General Manager Duane DeKrey, CREC Director Mike Ostlie, multiple Garrison Diversion former and current board members with NDSU-CREC staff.

to come to fruition. Procuring new equipment, adding additional staff and expanding the acreage became a reality through a generous land donation by Robert (Bob) and Elsie Titus.

The final piece of the puzzle was the construction of a new building to house offices, a research laboratory and equipment storage. Garrison Diversion committed to funding the insulated shell of the building, with NDSU completing the inside of the facility.

"This partnership is awarded to Garrison Diversion because, as a state entity, we can't do it alone, and we need support from other entities. Everything we do is a service to our community. They have been with Oakes since the site was founded in 1970," said Mike Ostlie, CREC director. "Garrison Diversion chose to invest in the shell of the building, which is a capstone project in the overhaul of the OIRS."

"It's not a stretch to say this place was on life support 10 years ago, but to now come and be in a building like this and see the crops, the research and the progress that's been done here is totally amazing," Garrison Diversion General Manager Duane DeKrey said. "Thank you to the

community, NDSU and a great Garrison Diversion board who believed in moving forward with this initiative. Today we're celebrating a lot of success!"

The OIRS is a highly effective irrigation research facility in southeast North Dakota. The data procured from the OIRS has been invaluable to southeastern North Dakota and throughout the remainder of the state for over 50 years, and now, with the facility upgrades, it will continue to benefit farmers and irrigators for years to come.

Matching Recreation Grants Awarded

The enhancement of one of North Dakota's most treasured resources – our recreational opportunities – is a key initiative for Garrison Diversion, and this spring, the Recreation Committee awarded matching recreation grants to 12 projects, totaling $282,138.

Garrison Diversion staff and directors are proud to invest in the promotion, development and enhancement of recreation facilities and opportunities within the district.

Garrison Diversion established a Matching Recreation Grant Program dedicated to returning mill-levy funds within the 28-county member district in 1990, enabling communities of all sizes to enhance their recreation facilities or develop new opportunities through this beneficial program.

The Matching Recreation Grant Program distributes 20 percent of Garrison Diversion's one-mill levy to eligible projects within the district. Projects are eligible to receive up to 25 percent of the non-federal share of the project. Garrison Diversion's Recreation Committee meets twice a year, in the spring and fall, to award money to applicants.

More than $9 million in matching recreation grants has been awarded over the life of the program, enabling the completion of valuable recreation projects around the state. Through the years, projects have included boat ramps and docks, picnic facilities, restrooms, campgrounds, bathhouses, playground areas, and recreational trails.

The following counties received Matching Recreation Grant funds in fall 2025:

- ***Barnes County*** – $15,404 to Valley City Parks and Recreation for the Chautauqua Park project; $6,250 to the city of Rogers for the Rogers Park playground project
- ***Benson County*** – $40,175 for the city of Maddock to assist with service upgrades at the Maddock Campground
- ***Cass County*** – $17,000 to the Argusville Park Board to purchase playground equipment
- ***Foster County*** – $9,720 to the Foster County Fair Board to purchase bleachers for the fairgrounds
- ***Grand Forks County*** – $50,000 to the Grand Forks Park District for the Ryan Lake trails and outdoor classroom
- ***LaMoure County*** – $12,515 to the LaMoure Park District for the completion of the Sunset Park Swim Center's final phase
- ***McLean County*** – $13,830 to the Riverdale Parks and Recreation to make improvements at the Lakeside Park tennis courts
- ***Ransom County*** – $32,742 to the Lisbon Park District to make improvements to the Sandager Park baseball field
- ***Ward County*** – $25,729 to the Rice Lake Recreation District/Ward County Parks for the Rice Lake pickleball courts; $50,000 to the Minot Park District to develop the South Hill Complex inclusive playground; $8,773 to the Ward County Parks for park improvements at Old Settlers, Eastside Estates and No Man's Land disc golf

The spring deadline of March 1 is the next chance to apply for grant funds.

Local connections, great ideas

Join us for the Early Bird Social, co-hosted by HDR and the Garrison Diversion Conservancy District at the upcoming Joint Annual Water Convention and Irrigation Workshop in Bismarck!

Early Bird Social - December 9, 2025
6:00-8:00 pm @ the Bismarck Hotel & Conference Center

HDR

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2026 CALENDAR

Jan. 5	Southwest Water Authority's Board of Directors Meeting, Operations and Maintenance Center Office, Dickinson
Jan. 8-9	Garrison Diversion Conservancy District's Board of Directors Meeting, Carrington
Jan. 22	North Dakota State Water Commission's Pre-Commission Meeting
Feb. 2	Southwest Water Authority's Board of Directors Meeting, Operations and Maintenance Center Office, Dickinson
Feb. 2-5	National Rural Water Association's Rural Water Rally, Washington, D.C.
Feb. 10-12	North Dakota Rural Water Systems Association's 40th Annual Water EXPO & Conference, Delta Hotels by Marriott, Fargo
Feb. 12	North Dakota State Water Commission Meeting
March 2	Southwest Water Authority's Board of Directors Meeting, Operations and Maintenance Center Office, Dickinson
March 19	North Dakota State Water Commission's Pre-Commission Meeting
March 12	Garrison Diversion Conservancy District's Executive Committee Meeting, Carrington
April 6	Southwest Water Authority's Board of Directors Meeting, Operations and Maintenance Center Office, Dickinson
April 9	North Dakota State Water Commission Meeting
April 16-17	Garrison Diversion Conservancy District's Board of Directors Meeting, Carrington
April 27-29	National Water Resources Association's Policy Conference, Royal Sonesta WDC Capitol Hill, Washington, D.C.
May 4	Southwest Water Authority's Board of Directors Meeting, Operations and Maintenance Center Office, Dickinson
May 21	North Dakota State Water Commission's Pre-Commission Meeting

For more information or if you would like a water event listed here, call 701-223-8332 or email *jellingson@ndwater.net*.
Submissions are due the first Monday of each month preceding the next issue.

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