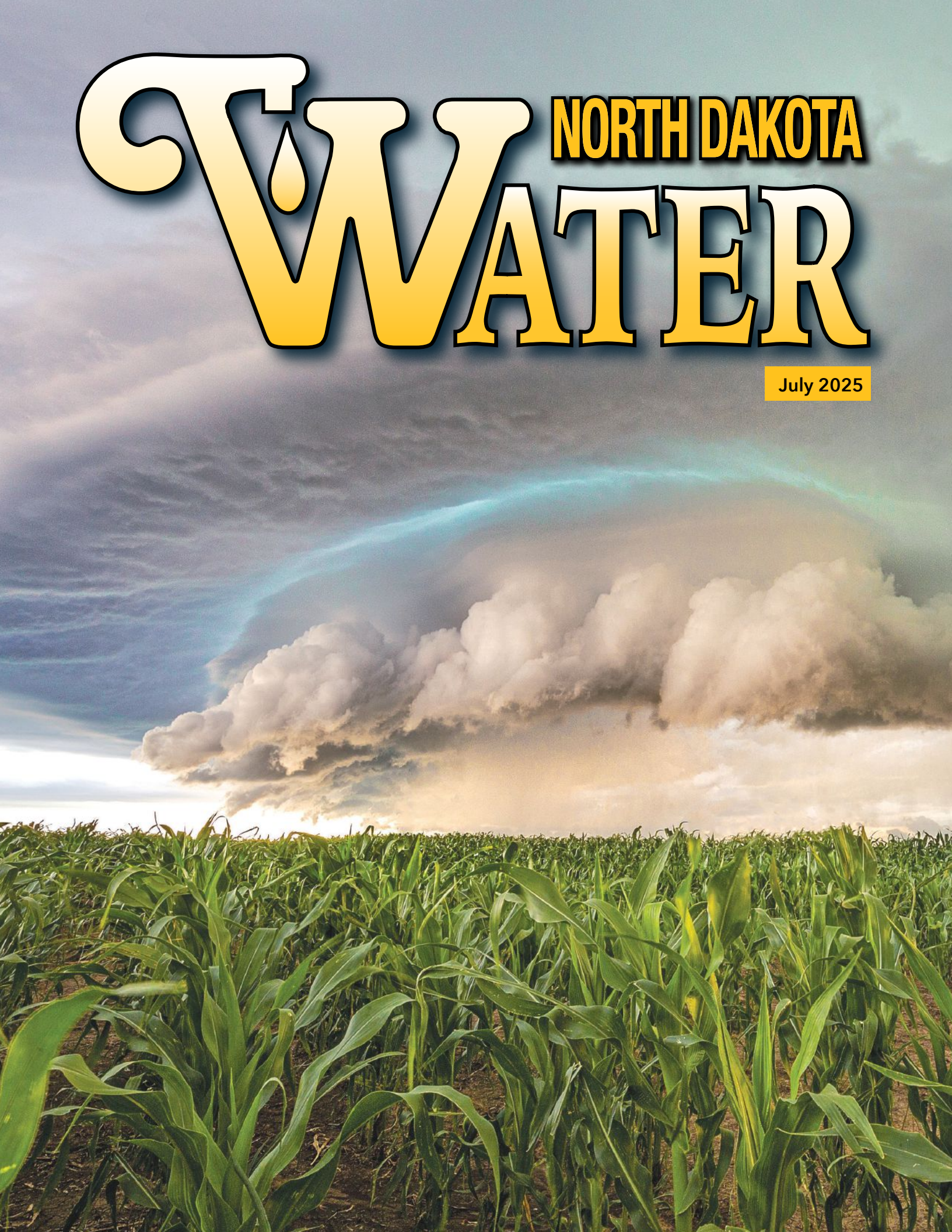
NORTH DAKOTA WATER

July 2025



THE IMPACT OF IRRIGATION

Dani Quissell
Executive Director
North Dakota Water
Education Foundation

The North Dakota water community lost a champion with the passing of Rep. Cindy Schreiber-Beck in May. In addition to her tireless advocacy for sensible drainage policy, Rep. Schreiber-Beck worked to pass policy to further develop irrigation in North Dakota. She authored HB 1531 which appropriates state dollars for a study of the economic contribution that irrigation has, and could have in the future, to North Dakota, both statewide and locally. The North Dakota Irrigation Association is working with Agriculture Commissioner Doug Goehring to complete this important study.

Today, approximately 300,000 of the 30 million acres in production in North Dakota are irrigated. A recent study completed by North Dakota State University in cooperation with the North Dakota Irrigation Association, Garrison Diversion Conservancy District and North Dakota Department of Water Resources, shows that up to two million additional acres are suitable for irrigation development based on soil type, land use and water availability.

We know the limited amount of irrigation we have today supports North Dakota's diversified agriculture and value-added processing in the state. Corn and cereal grain crops, livestock forage, and high value crops such as potatoes, sugar beets, and onions are all irrigated. Those crops provide the raw product needed by the ethanol and french fry industry to make fuel and food for North Dakotans and the world.

Irrigation is such an important part of water and agriculture, the North Dakota Water Education Foundation is dedicating a summer water tour to the topic. The tour in the Oakes, North Dakota area will look at existing irrigation systems as well as highlight ongoing research being done to ensure the right amount of water is used at the right time to maximize crop growth and yield.

Irrigation helps producers ensure they have a crop despite weather conditions and helps value-added businesses have a stable supply of raw commodities to process. We know that all of these things translate into more dollars for farm families, rural communities and North Dakota overall. What we don't know is exactly what that impact is in dollars and cents. Knowing that will help all of us advocate for state and federal funding for irrigation development. Thanks to the leadership of Rep. Schreiber-Beck and the 2025 Legislative Assembly, we'll soon have a better idea of what that impact is so we can effectively advocate for the future of irrigation in North Dakota.

Rep. Schreiber-Beck with Irrigation Association board members at the 2025 Ag Day at the Capitol

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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.

Contents

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Departments

On the Cover

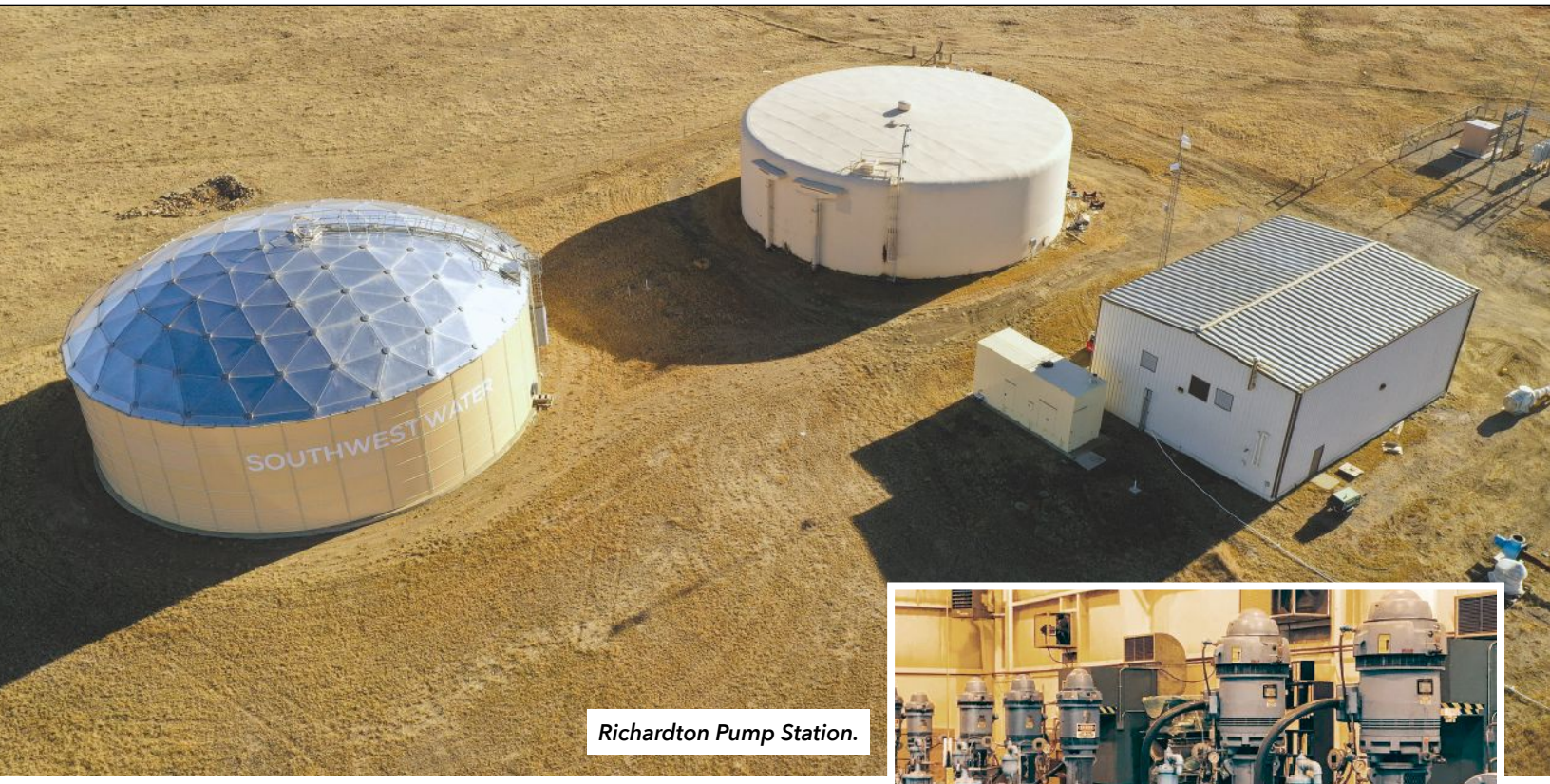
"Downpour" by Casey Helling, Golden Valley. This photo was the Winner in the 2024 North Dakota Waterways Photo Contest, sponsored by the North Dakota Water Education Foundation.

WATER You Doing This Summer?

Summer in North Dakota means sunny skies, longer days, and this year, a forecast that includes drought conditions across much of the state. At Southwest Water Authority (SWA), we know water plays a vital role in your summer plans, from growing crops and feeding livestock to keeping yards green and kids cool.

As a water utility, we're proud to provide clean, reliable water to our customers throughout southwest North Dakota. And while we certainly don't want to discourage water use, we do encourage everyone to use it wisely.

"We understand how important water is to everyday life, especially during the summer months," said Jen Murray, SWA Manager/CEO. "Our goal is to make sure customers have the water they need, when they need it, while also helping them understand the value of using it efficiently."



Richardton Pump Station.

What It Takes to Keep Water Flowing

While you may not see it, a lot goes on behind the scenes to deliver safe, clean water to your home or business, especially in summer.

During the cooler months, SWA treats approximately 4 million gallons of water per day. But once peak season begins, typically from mid-June through September or even October, those numbers rise significantly. On an average summer day, treatment can range from 7 million up to 10 million gallons per day, depending on temperature, rainfall and agricultural demand. For example, we see spikes in production when customers spray fields, when rain is scarce or when prolonged heat sets in.

In total, SWA treated approximately 2.4 billion gallons of water in 2024.

This increase in water production also means a surge in power use. Power and water go hand in hand, as production goes up, so does the electricity needed to move and treat that water. SWA operates a range of pumps to deliver water from Lake Sakakawea to communities across southwest North Dakota, including raw water users like the ethanol plant in Richardton.

Here's a quick snapshot of the journey your water may take:

- Raw water is pumped from Lake Sakakawea to our Zap water treatment plant, which serves the customers in the OMND (Oliver, Mercer, North Dunn) Service Area.
- From there, raw water moves by gravity to the Dodge Pump Station where it gets a boost and is pumped to the Richardton Pump Station. From Richardton it is pumped west to the water treatment plants in Dickinson.
- Treated water is then pumped through a series of pump stations to communities across southwest North Dakota.
- From source to tap, our water can travel more than 200 miles!

Our pump systems range in size, from a two-horsepower pump at the Medora Booster and Highway 1806 stations to a massive 1,250-horsepower pump at the Richardton Pump Station, each working hard to keep clean water flowing when it's needed most.

Together We Can All Make an Impact

"Water shortages are real even if we don't live in the desert Southwest. If you've ever had to haul water either for personal or livestock use, you understand how important adequate supply of water is and how much extra work is involved in hauling water," SWA Director Harold Gaugler said. "SWA is in the business of selling water, but when low flow or pressure occurs it's not good for our customers."

SWA is committed to helping our customers stay informed, prepared and connected. Summer brings higher demands, but also an opportunity: with a few simple adjustments, we can each do our part to conserve resources, reduce strain on the system and support our region's water supply for generations to come.

So, **WATER** you doing this summer?

Whatever's on your list, we hope it's filled with fun and that you continue to count on us for clean, dependable water every step of the way.

Easy ways to use WATER WISELY this summer

Install a timer or smart irrigation controller
to prevent overwatering lawns or gardens. Water early in the morning or late in the evening to reduce evaporation.

Check private service lines regularly.
A small leak can waste thousands of gallons over time. Catching issues early saves water and money.

Inspect stock tanks often for overflow
or stuck floats. Make sure tanks are the right size for your needs to avoid waste.

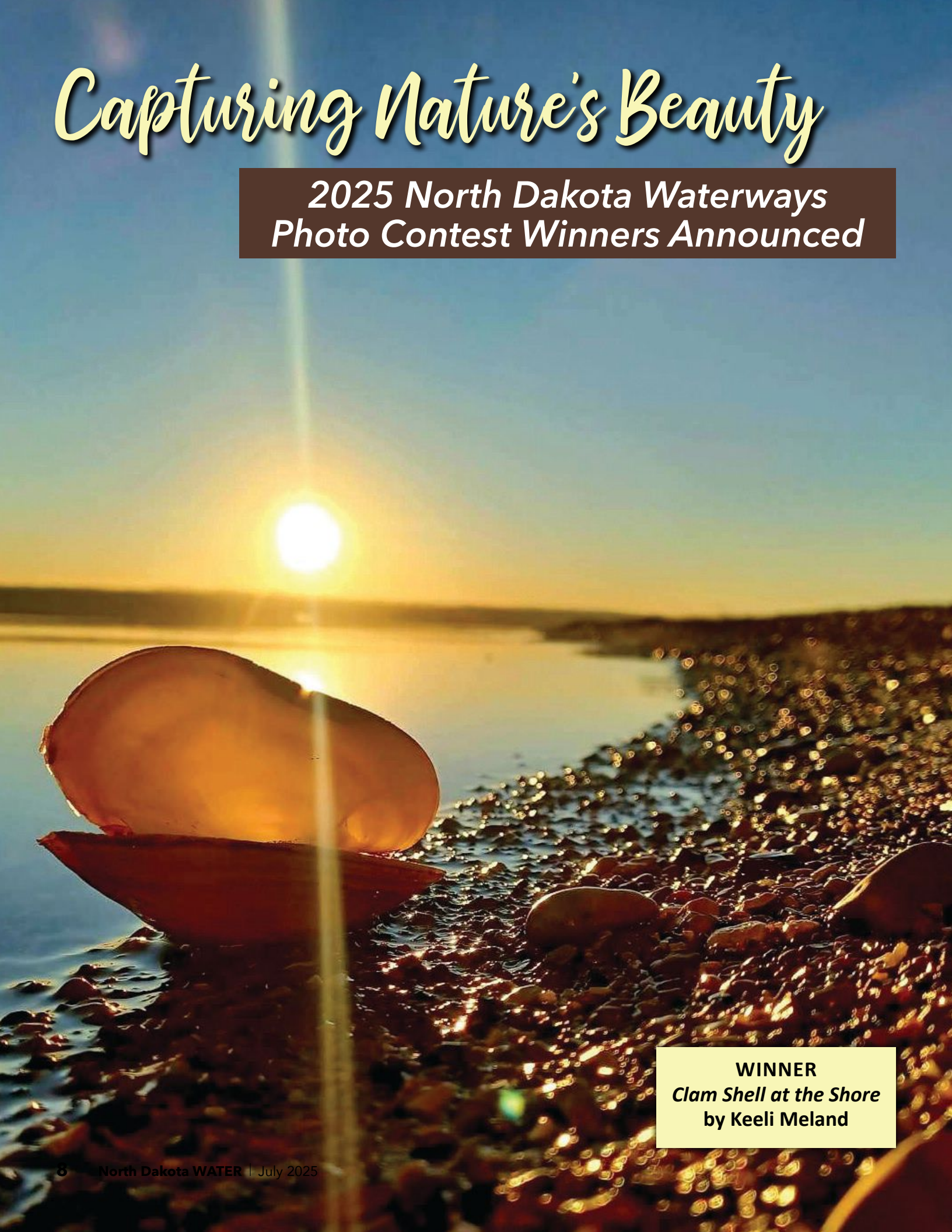
Use shade structures over tanks
or covers for pools to limit evaporation caused by the sun.

Use SWA's Customer Service Portal
to view and track your usage patterns. It's a great way to catch unusual spikes that could indicate a leak or inefficiency. Visit our website, hover over the Customers tab, and click on Customer Service Center to learn more.

Don't have an automatic meter reader?
Contact SWA to schedule an installation. These devices give you near real-time water usage data and help detect issues before they become costly problems. Call our main line at 701-225-0241 or toll-free at 1-888-425-0241.

Capturing Nature's Beauty

2025 North Dakota Waterways Photo Contest Winners Announced



WINNER
Clam Shell at the Shore
by Keeli Meland

The 2025 North Dakota Waterways Photo Contest, hosted by the North Dakota Water Education Foundation, drew more than 150 entries from photographers across the state. With so many stunning submissions, selecting a single winner was no easy task.

Keeli Meland of Ross submitted the winning photo for the 2025 North Dakota Waterways Photo Contest, titled *Clam Shell at the Shore*. The open clamshell, positioned on the shoreline, captures the golden glow of the setting sun, creating a natural spotlight effect that draws the viewer's eye. It's a simple moment captured in a stunning way—peaceful, creative, and full of warmth, making it a standout among the entries.

The winning photo, along with three runners-up and four honorable mentions, will be showcased on the covers of *North Dakota Water* throughout the coming year.

Winner: *Clam Shell at the Shore* by Keeli Meland

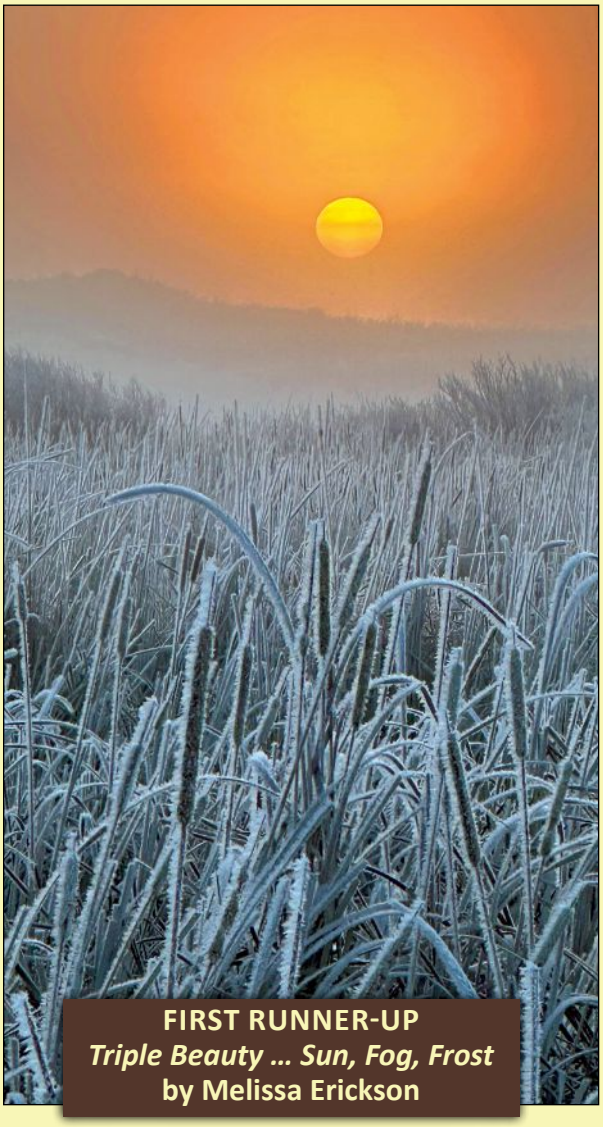
First Runner-up: *Triple Beauty … Sun, Fog, Frost* by Melissa Erickson, McHenry

Second Runner-up: *Suspended Animation* by Marshall Lipp, Mandan

Third Runner-up: *Something Unexpected* by Suanne Kallis, Carrington

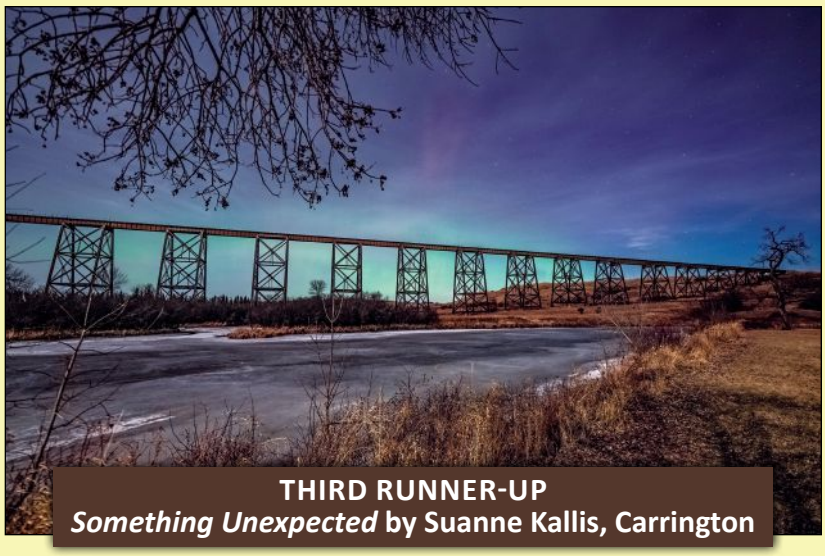
Honorable Mentions:

- *Where the Green Grass Grows* by Jamie Haukenberry, Dickinson
- *Christmas is Coming* and *Dewy Crocus* by Cathy Myrum, Petersburg
- *Northern Lights* by Katherine Plessner, Verona

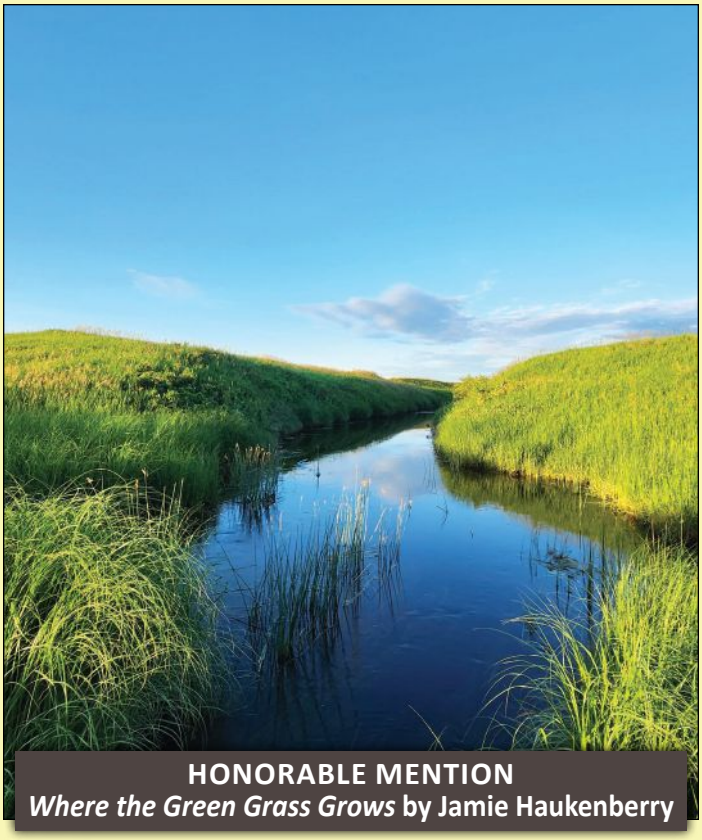


FIRST RUNNER-UP
Triple Beauty … Sun, Fog, Frost
by Melissa Erickson

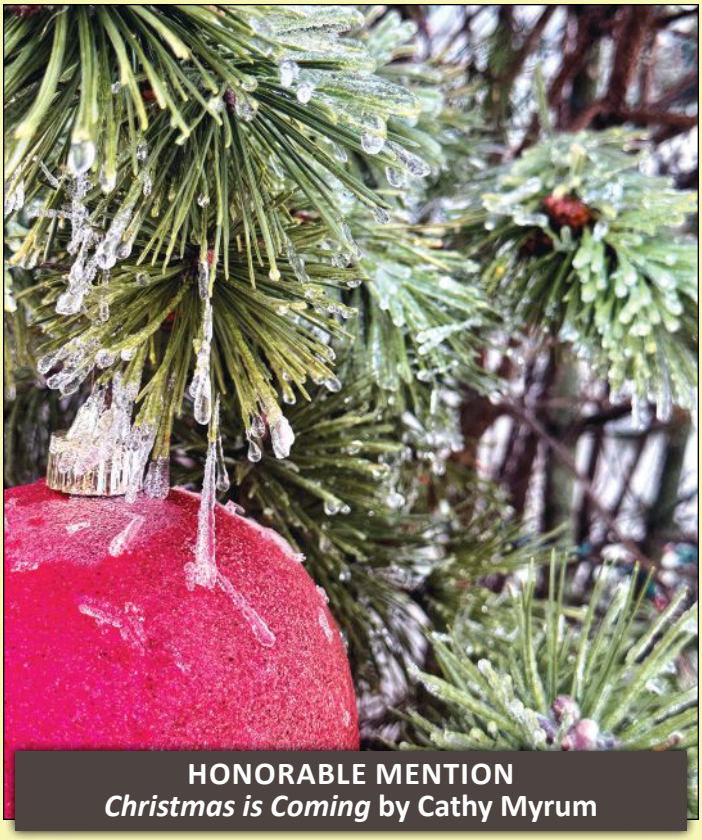
SECOND RUNNER-UP
***Suspended Animation* by Marshall Lipp, Mandan**



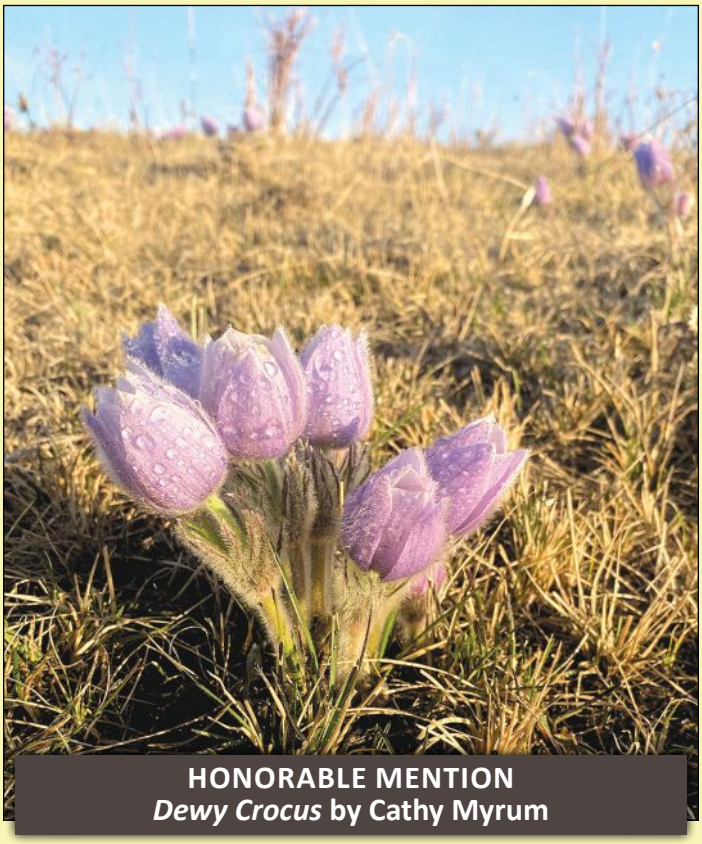
THIRD RUNNER-UP
***Something Unexpected* by Suanne Kallis, Carrington**



HONORABLE MENTION
Where the Green Grass Grows **by Jamie Haukenberry**



HONORABLE MENTION
Christmas is Coming **by Cathy Myrum**



HONORABLE MENTION
Dewy Crocus **by Cathy Myrum**

HONORABLE MENTION
Northern Lights **by Katherine Plessner**

North Dakota Water extends heartfelt thanks to everyone who submitted photos for this year's contest and encourages readers to start snapping shots for next year's competition.

Water Day

North Dakota State Fair

Water Wiz Trivia Game
Prizes Awarded

Door Prizes

Frost Fest
Free Snow Cones 3pm to 4pm

THURSDAY
JULY 24
11 AM TO 4 PM

MINOT
NORTH DAKOTA STATE FAIRGROUNDS
FESTIVAL TENT

Organized by North Dakota Water Education Foundation

Dushinske & Jamison Water Resources Scholarship

GOLF SCRAMBLE

21st Annual Top 0' the Day

TEE-OFF

Monday, August 11

Registration and Sack Lunch
11 a.m.

Shotgun Start
Noon

Dinner and Awards
5 p.m.

CrossRoads Golf Course
Highway 281 N, Carrington, ND

$100/Person Entry Fee
18-hole four person scramble.
Groups formed prior to registration or by tournament officials.

To Register, contact Stacey at Garrison Diversion Conservancy District at 701-652-3194 or staceyg@gdcd.org.

Legislature Keeps Water Flowing:

Funding Secured for Projects Across North Dakota

To paraphrase Samuel Taylor Coleridge, "*Water, water everywhere; and funding enough to keep it there."* That could be a simple roundup of water-related action from the recently concluded 69th legislative assembly.

Water was certainly on the minds of legislators last winter in Bismarck. Luckily for water interests in North Dakota, legislators kept the taps open, funding most of the legislation prioritized by the North Dakota Water Users Association and its partners.

Chief among them was HB 1020, which provides a $615.2 million appropriation for the North Dakota Department of Water Resources (DWR) and State Water Commission (SWC) for the 2025-27 biennium. Lawmakers listened to those in the industry and understood the importance that water infrastructure and management play North Dakota's long-term success. The bill provides the funding needed for smart investments and planning. It also provides important financing tools to maximize state investment and get projects completed.

Funding for water projects in the state comes from the Resources Trust Fund, which receives 20.5% of the state's oil extraction tax. North Dakota uses those tax dollars to invest in vital drinking water and flood control projects across the state. Resources Trust Fund dollars are also used to support the agriculture industry through irrigation and water supply for livestock. There was an unsuccessful attempt to reduce the percentage of oil extraction tax dollars allocated to the Resources Trust Fund during the legislative session. A reduction in the percentage of dollars allocated to the Resources Trust Fund would result in reduced funding for all types of water projects.

HB 1020 FUNDING BUCKETS

Of the total SWC budget, $358.6 million is allocated to large regional water supply systems:

- $205 million for the Red River Valley Water Supply Project (RRVWSP)
- $101 million for the Southwest Pipeline Project (SWPP)
- $40 million for the Western Area Water Supply (WAWS)
- $12.6 million for the Northwest Area Water Supply Project (NAWS)

$118.6 million is allocated for flood control projects:

- $81.1 million for the Mouse River
- $17 million for south Bismarck
- $12 million for Valley City

- $7.5 million for Heart River
- $1 million for Devils Lake Outlet

The water supply bucket received $70 million for rural projects and $40 million for municipal projects; the general water buckets received $15 million for conveyance and $3 million for other needs that may arise. It also placed $10 million in a discretionary fund.

HB 1020 also authorized a $260 million line of credit, of which $50 million is for the Southwest Pipeline Project's water treatment plant. This will give the SWC and DWR the flexibility to work with project sponsors to maximize dollars and complete projects as soon as possible.

The budget bill also expanded the responsibilities of the Water Topics Overview Committee, a standing committee that traditionally has met in the legislative interim. Under the new provisions, the committee will be tasked with reviewing all new projects that would request $10 million or more from the SWC. If necessary, the committee could meet during a legislative session to conduct such a review.

"The projects supported by the State Water Commission provide clean, reliable drinking water to farms, ranches, and communities across the state. These projects also protect homes, businesses, roads and other infrastructure from flooding. Legislators this session understood the need to continue the state's strong investment in these types of projects by delivering a robust budget for the State Water Commission and ensuring the policy is in place to get projects completed in a timely and efficient manner," said Dani Quissell, executive vice president of the North Dakota Water Users Association. "This support will keep projects that benefit all of North Dakota moving forward at this critical time."

POLICY ACTION

More than 80 bills with varying impacts on water were introduced during the session, most notably:

- HB 1218 places a moratorium on the use of economic analysis for drain projects coming before the State Water Commission in the 2025-2027 biennium and requires an interim study of the use of economic analysis for drain projects.
- Despite the failure of HB 1385, the DWR is developing administrative rules establishing timelines for permit review for construction and drainage permits.
- Two attempts to ban weather modification in the state (HB 1514 and SB 2106) were defeated.
- HB 1531 provides $75,000 for a study of the economic impact irrigation has on the state.
- SB 2039 clarifies the classification of certain commodity storage facilities for property tax purposes.
- SB 2276 removes the requirement that all water resource districts join basin boards and gives water resource districts additional tools to use joint project boards to review and undertake assessment projects.
- SB 2379 requires any entity conducting surveying for a project provide notice via certified mail prior to entering private land.

The State Water Commission also approved increasing their cost share for drainage projects up to 60%.

PROPERTY TAX RELIEF

Property tax relief was on everyone's mind during the session and HB 1176 addressed that longstanding issue. The bill backed by Gov. Kelly Armstrong passed both chambers in the last hours of the session. It provides a $1,600 credit for primary residences. Like the existing primary residence credit, homeowners will have to apply for the credit. To fund the credit, legislators tapped into earnings off the Legacy Fund.

The bill also places a 3% cap on many local political subdivisions to curb further growth of property taxes. It is important to note that HB 1176 does not cap water resource districts.

INTERIM STUDIES

Water will be a topic of several interim studies as determined by Legislative Management. The studies will be split between two committees: the Water Topics Overview Committee and the Agriculture and Water Management Committee.

Water Topics will study:

- **Establishment of a Wastewater Project Fund.** Study the feasibility and desirability of establishing a wastewater project fund to provide grants for upgrading, constructing, or replacing wastewater infrastructure. The study must include input from cities, counties, townships, and water resource districts.
- **Water Management Based on Watershed Boundaries.** Study the feasibility and desirability of assigning management authority for the waters of the state to the area located in the naturally occurring watershed, rather than assigning management authority based on political subdivision boundaries. The study must review the approaches used for managing water in surrounding states; the powers, duties, and organizational structure of watershed boards; dispute resolution procedures afforded to individuals residing within the boundaries of a watershed district; the mechanism to initiate, implement, and improve works projects within a watershed district; and the role of the Department of Water Resources in mapping and establishing watershed boundaries.
- **Storm Water Project Funding.** Study funding for storm water projects in the state, including current funding sources, related statutes, and the policies of the State Water Commission. The study must include information regarding recently completed storm water projects and funding needs for future storm water projects in the state.

The Agriculture and Water Management Committee will study:

- **Economic Analysis Formula for Assessment Drain Projects**. Study the formula for conducting an economic analysis for assessment drain projects and the projected cost threshold for conducting economic analyses.
- **Wetland Regulations and Inundated Land Taxation**. Study water and wetlands regulations and the taxation of inundated lands in the state. The study must include a review of the different methods to assess and document boundaries for wetlands; an examination of the regulation of water, wetlands, and inundated lands laws of other states; an inventory of all federal, state, and local laws, regulations, and policies relating to the jurisdiction of water and wetlands; an analysis of the environmental protection and public health jurisdictional framework, including an identification of potential conflicts, overlaps, and gaps in authority; and recommendations for improving the clarity, consistency, and efficiency of the jurisdictional framework in water management. The study also must explore viable legal options to fill and drain nuisance areas, examine the impacts of seasonal wet areas on agriculture productivity and soil health, and identify the value of these areas to resident wildlife.

Our Missouri River ... We Are Being Watched

KEN ROYSE
Program Manager, Missouri River Joint Water Board

In recent articles, we have often referenced the growing interest in the Missouri River by downstream and out-of-basin water users. The relative abundance of Missouri River water has not escaped the attention, nor the interest, of the water-starved western and southern parts of our country.

To provide context, the Missouri River system transects western states that generally appropriate water under the "prior appropriation" doctrine and eastern states that tend to appropriate under the "riparian" doctrine. Under the prior appropriation doctrine, the first person to beneficially use water from a source has the most senior water rights for the use of the water. This intent to use water is typically completed by a permitting process, in states where such processes are in place. Upon state approval and development, the rights to the water are secure and subject to senior water rights.

This permitting process establishes an order of water rights based on seniority. Therefore, during times of water scarcity, water use by junior water rights holders may need to be curtailed to satisfy senior water rights holders. Additionally, the requirement for a water permit is to construct works to apply water to a beneficial use. Failure to construct works and put permitted water to beneficial use may result in the cancellation of a water permit.

Most Missouri River basin states appropriate water under the prior appropriation doctrine. However, there are some exceptions. For example, the state of Missouri recognizes the riparian doctrine, which grants reasonable use to water on or under your property and the state of Iowa operates under a hybrid system, using aspects of both the prior appropriation and riparian doctrines.

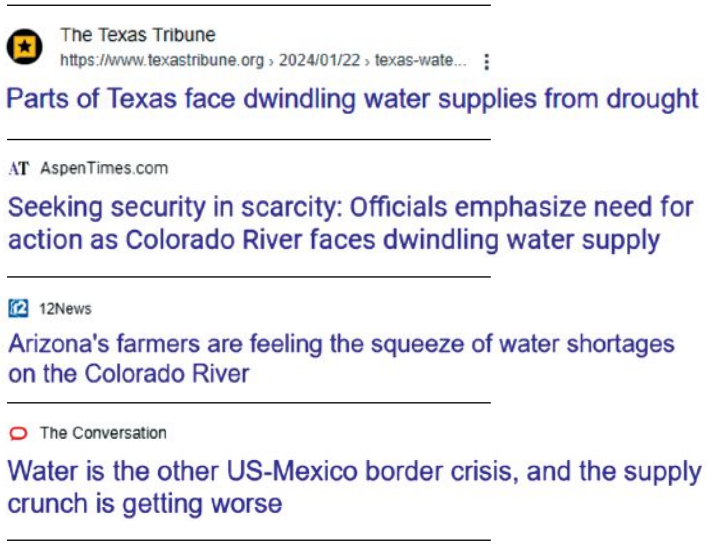
Tribal water rights are governed by a legal principle called the "reserved rights doctrine." Tribal water rights are generally the most senior in prior appropriation systems as tribal use of water pre-dates state-based water rights. Many tribal water rights are yet to be quantified throughout the basin. Given the large number of tribal reservations in the basin, tribal water rights are an important component of water appropriation in the Missouri River basin.

Therefore, the appropriation of water, and the related beneficial use of that permitted water, becomes very important. Note that beneficial use is not solely defined as "consumptive" use. Water can be permitted and left in the river and still be considered as having a beneficial use. That allows river flows to be protected for power generation, fish and wildlife enhancement, navigation, recreation, and other such non-consumptive uses.

But even after the allowance for all the permits, permitting doctrines, and all the uses, consumptive and non-consumptive included, there remains the fact that most of the water from the Missouri River basin is unused, unclaimed, unappropriated, and flows to the Gulf of Mexico. For example, North Dakota alone inputs nearly 4.8 million acre-feet of water into the Missouri River each year and has permitted nearly 3.7 million acre-feet, most of which is of non-consumptive nature. In any given year, it uses only approximately 3.4% of such permitted water. That same low usage of permitted water is an issue that is common to all the states of our Missouri River basin.

Out-of-basin states have taken notice of this limited consumptive use. Particularly because of the historic drought over the last decade in the southwestern part of our country. Water supply has become a primary issue of concern for their current needs, their continued growth and their economies.

At any given time, in almost any southwestern state, one can see the local headlines focusing on water shortages. Additionally, more and more organized efforts from both government and private sectors are now taking deep and serious looks at the Missouri River as a future source of water for their needs.



The US Army Corps of Engineers, in a series of reports starting in the late 1990s and now branded as the "Kansas Aqueduct Project," has identified the Missouri as a source of water to recharge the rapidly depleting Ogallala Aquifer of the Central Plains. The Ogallala Aquifer underlies five in-basin states (Wyoming, South Dakota, Nebraska, Kansas, and Colorado) and three out-of-basin states (Oklahoma, Texas, and New Mexico). The Corps estimated needing approximately four million acre-feet per year – all planned to come from the Missouri River. That study, as noted starting in the 1990s, has recently been resurrected and is now getting another look. That is no small amount of water; that is a volume of water that could provide nearly 20 million homes with their annual water needs.

The US Bureau of Reclamation, also in the late 1990s, started a series of investigations which yielded a report showing the Missouri River as a likely source of water for the states of Colorado, New Mexico and Arizona. The 1990s estimations were for approximately 400,000 acre-feet per year. That is a volume of water that could provide nearly two million homes with their annual water needs and is all proposed to come from the Missouri River. That 1990s study, too, is being resurrected for additional consideration.

Arizona has embarked on a Water Infrastructure Finance Authority Program which seeks to identify what it has termed "water importation" projects. It is a near certainty that they will identify the Missouri River as a water importation source. Arizona already has a planning budget of $450 million, with more money to be available once plans for obtaining water for Arizona can be vetted. Those plans are specifically stated as importing more than 100 billion gallons per year into the state. That equals nearly 307,000 acre-feet of water, which will have to come from one or more large unused, or underused, water sources. For water planners in the West, that typically translates to the Missouri River.

Adding to the demands being placed on the Missouri River are our friends in the Mississippi River basin. They have a large interest in seeing substantial flows from the Missouri being continued. They rely on large amounts of Missouri River water to be channeled to the Mississippi to support the navigation interests in that region. Without a sustained and unimpeded flow of Missouri River water into the Mississippi system, their navigation industry would face significant challenges.

The threat of politically and economically powerful out-of-basin states seeking to lay claim to the currently unused water of the Missouri River is an issue that should unite all Missouri River basin states. In the past, North Dakota has been challenged by downstream states when attempting to use Missouri River water across our entire state. Ironically, those challenges by downstream states were counterproductive to their long-term interests and have paved the way for out-of-basin states to attempt to lay claim to our Missouri River water. Now, those same lower basin states that have challenged our use of water will ultimately need to unite with us, and we with them, to stand together as a unified basin against efforts to divert Missouri River water to out-of-basin states.

In North Dakota, we have long respected the principle that each state along the Missouri River has the right to manage water use within its borders and we do not seek to interfere with how other states pursue or approve water projects. At the same time, we remain committed to protecting North Dakota's ability to access and use its fair share of the Missouri River, both now and in the future. Because of that, any downstream withdrawals or appropriations that could affect our access and use of Missouri River water are of particular interest to us.

This entire discussion goes back to the issue of appropriation of water, specifically the prior appropriation doctrine. The states of the Missouri River basin need to appropriate Missouri River water collectively and individually and put that permitted water to beneficial use to protect our Missouri River interests. Use it or lose it.

The Oxbow

FROM THE DEPARTMENT OF WATER RESOURCES

REICE HAASE

NORTH DAKOTA'S **NEW DWR DIRECTOR**

In January 2025, Gov. Kelly Armstrong appointed Reice Haase as director of the North Dakota Department of Water Resources (DWR). With a career that bridges both public service and private-sector expertise, Haase brings a balanced, thoughtful approach to managing and developing North Dakota's water resources.

Originally from Williston, North Dakota, Haase earned his degree from the University of Iowa in 2011 before launching his career as a regulatory consultant and environmental scientist in the oil and gas industry. He supported environmental and energy projects across the Upper Midwest and Canada, developing technical expertise in areas such as site assessments, injection well permitting, radioactive materials licensing, and NEPA compliance.

Haase's commitment to public service began in 2018 when former Gov. Doug Burgum appointed him senior policy advisor, where he oversaw portfolios in water, energy, agriculture, tribal affairs, and natural resources. He later served as deputy director of the North Dakota Industrial Commission, leading energy research projects and advocating for the state's natural resources. These roles prepared him well for his current leadership at DWR.

Haase views water management as a complex but essential task; one that demands sound science, strong partnerships and public trust. Under his direction, DWR is focused on modernizing infrastructure, improving permitting processes and aligning funding systems with the long-term nature of water projects. Recent changes to cash management and funding disbursements have already unlocked hundreds of millions of dollars to support communities and rural areas across the state.

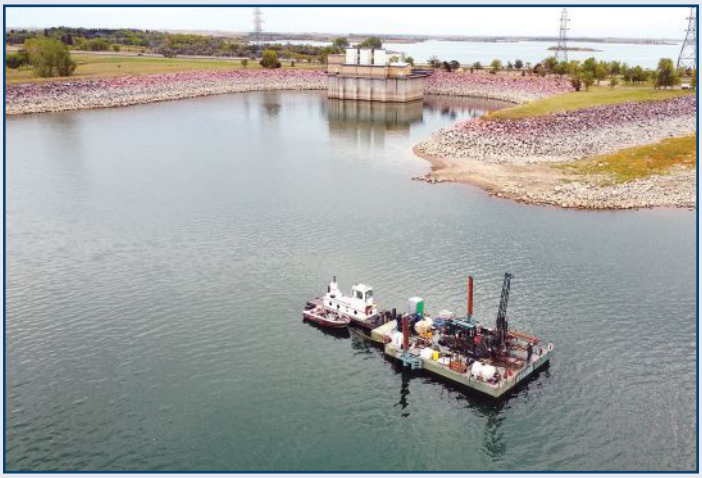
While his professional resume is impressive, Haase's story is also defined by his strong sense of family and community. He lives in Mandan with his wife, Kylie, and their two children, John and Fiona. The Haase family enjoys homeschooling, music, dance, scouting, and outdoor adventures, often joined by their chocolate labrador, Colt. From fishing and hiking to a memorable 2023 camping trip along the Arctic Ocean in Alaska, Reice's connection to nature runs deep.

Whether he's leading water strategy at the state level or volunteering as a Cub Scout den leader, Reice Haase exemplifies balance, commitment, and vision. As North Dakota enters a new chapter in water resource management, the Department is in good hands.

2025–2027
A NEW BIENNIUM FOR DWR

PROJECT FUNDING & CASH MANAGEMENT

The 2025-2027 biennium brings $615.2 million in new state investment into North Dakota's water infrastructure through House Bill 1020, DWR's budget bill. Of that, $358.6 million supports large regional water supply systems, including $205 million for the Red River Valley Water Supply Project, $101 million for the Southwest Pipeline, $40 million for the Western Area Water Supply, and $12.6 million for the Northwest Area Water Supply. HB 1020 also included $118.6 million for flood protection, $110 million for municipal and rural water supplies, and $28 million for other general water and discretionary projects. To support project schedules, a $260 million line of credit from the Bank of North Dakota gives DWR added financial flexibility.



INVESTING IN PEOPLE & INTERNAL CAPACITY

DWR will also strengthen internal operations, adding five new full-time positions, including a deputy director, general counsel, staff accountant, NAWS system operator, and a Silver Jackets flood risk coordinator. These additions enhance DWR's ability to manage complex projects and partner with local governments.

EXPANDING ROLES IN ENERGY & CONSERVATION

This biennium marks an expanded role for DWR beyond traditional water management. The department now serves on the Clean Sustainable Energy Authority, the Outdoor Heritage Fund Advisory Board, and the Interstate Oil and Gas Compact Commission. DWR is also participating in the Interim Nuclear Energy Study, ensuring that water resources are considered in future energy development strategies.

THE ATMOSPHERIC RESERVOIR
Examining the Atmosphere and Atmospheric Resource Management

A MIRACULOUS MAY

By Mark D. Schneider

North Dakota's growing season was slow to start, but ample rainfall in mid to late May provided farmers and ranchers the moisture needed to get crops going and put water in stock ponds. Most of western and central North Dakota received four to six inches of rain between May 14-22, while the eastern half of the state varied between one and four inches.

PRECIPITATION SUM
May 14-22, 2025

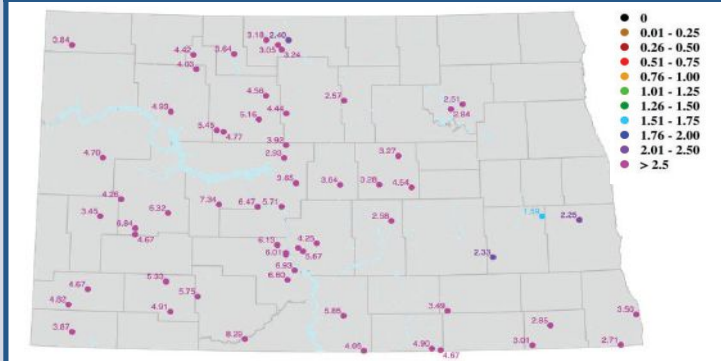


Image courtesy of the ND Atmospheric Resource Board Cooperative Observer Network.

Looking at soil moisture conditions in the western half of the state, significant improvement could be seen between April and May.

CALCULATED SOIL MOISTURE
May 29, 2025 From April 30, 2025

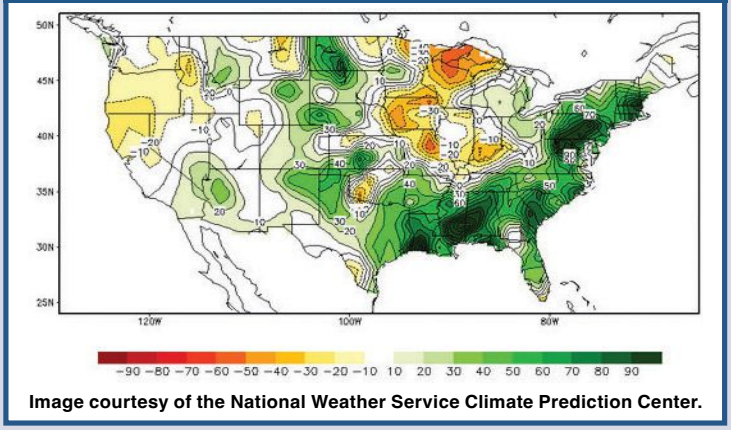
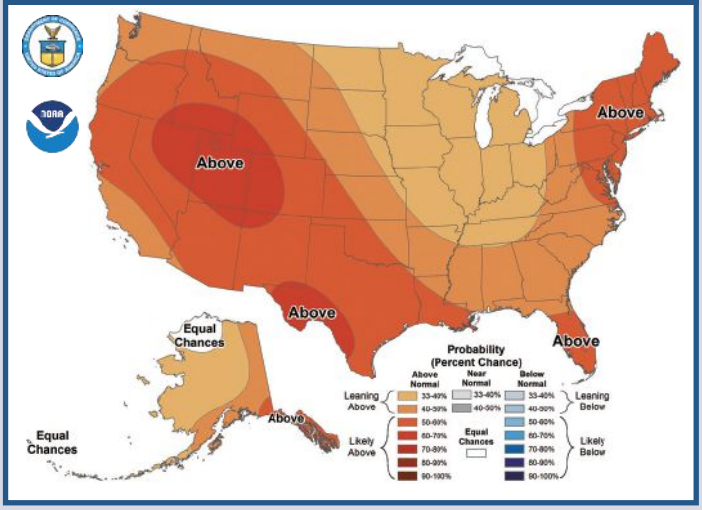


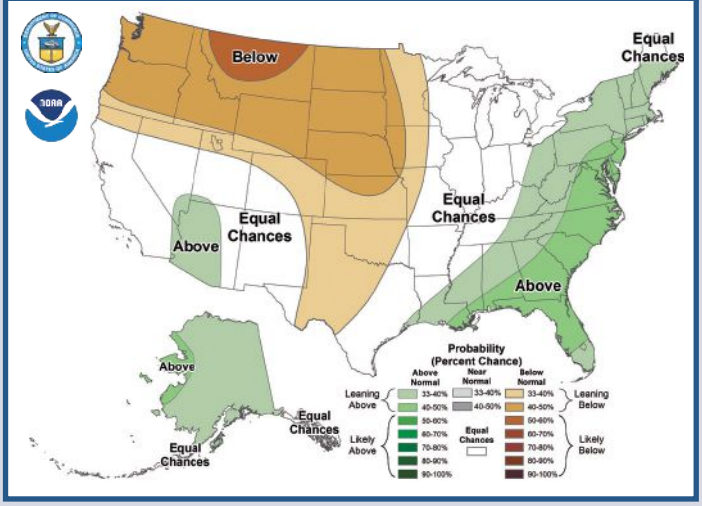
Image courtesy of the National Weather Service Climate Prediction Center.

SEASONAL TEMPERATURE OUTLOOK
June, July, August 2025 (May 15, 2025)



The seasonal temperature and precipitation outlooks from the Climate Prediction Center are predicting an increased chance for hotter and drier conditions for this summer; however, the summer season is difficult to predict, and localized rain showers and thunderstorms can make all the difference for a specific area.

SEASONAL PRECIPITATION OUTLOOK
June, July, August 2025 (May 15, 2025)



Atmospheric Resource Board | North Dakota Department of Water 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

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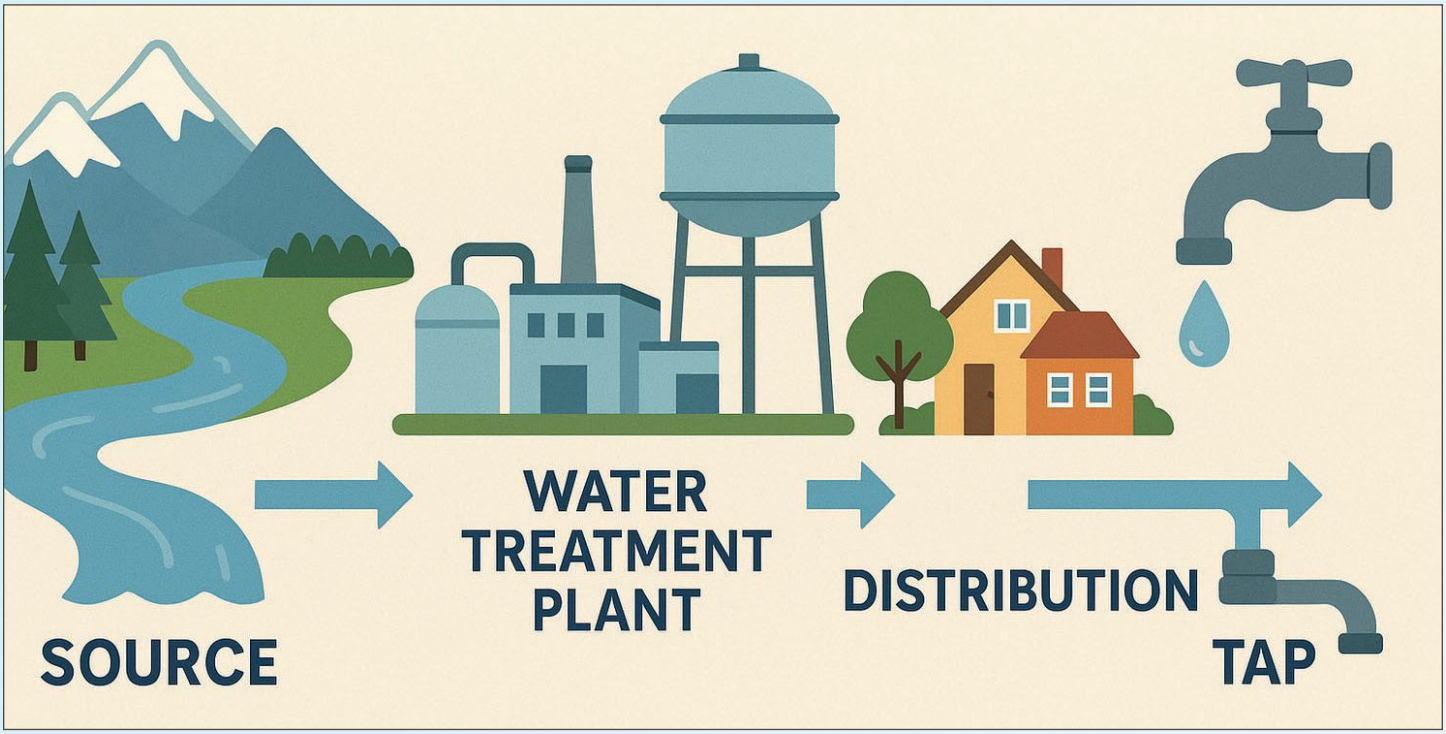
THE SPIGOT
from the NORTH DAKOTA RURAL WATER SYSTEMS ASSOCIATION



FROM SOURCE TO TAP:
The Journey of Your Drinking Water

By Rachel Takala, Source Water Specialist

Life as we know it depends on water. It is the most essential element for the survival of every living organism on Earth, yet it is something we often take for granted. How often do we stop to think about where our drinking water comes from or how it becomes so conveniently available to us? Today, it is commonplace to turn on a faucet and have an endless supply of clean, safe drinking water at our fingertips. But with this convenience, we may forget just how hard it was to secure fresh, clean drinking water throughout history. In the early days of our nation, pioneers often struggled to find reliable water sources. Through exploration, innovation and technological advancements, we have developed systems that can now provide clean drinking water to vast populations.

So, have you ever wondered, "Where does my water come from?" Understanding the source of our water is essential, not just for our awareness but for making informed decisions about how we use and conserve this vital resource. By learning more about where our water originates – whether from underground aquifers or surface bodies like lakes and rivers – we can gain a greater appreciation for the systems that bring this life-sustaining resource into our homes.

If you get your water from a municipal system, you can find detailed information about its quality and safety in the system's Consumer Confidence Report (CCR), also known as the "water quality report" or "annual drinking water report." These reports are mandated by the U.S. Environmental Protection Agency (EPA) under the Safe Drinking Water Act and are designed to help consumers understand where their drinking water comes from, how it is treated, and its overall quality.

Your local CCR will typically include the following key information:

WATER SOURCE INFORMATION: This section explains where your water originates, whether from a river, lake, reservoir, or underground aquifer. It may also describe efforts made by the utility to protect the water source from pollution and contamination.

WATER QUALITY DATA: This includes details on the contaminants tested for during the year, such as biological, chemical and physical pollutants. The report provides the levels of each contaminant detected, comparing these levels to the EPA's maximum allowable limits for safe drinking water. If any contaminants exceed these limits, the report will highlight the issue and may include recommendations or actions the utility is taking to address it.

DEFINITIONS AND EXPLANATIONS: This section clarifies key terms, such as health effects, units of measurement, maximum contaminant levels (MCLs), and maximum contaminant level goals (MCLGs), helping you better understand the technical details of the report.

WATER TREATMENT AND MEASURES: If any water quality issues are identified, this section outlines the treatment methods used, such as filtration or chlorination, and any ongoing improvements being made to ensure the water remains safe.

LEAD AND COPPER TESTING: Many reports include information about lead and copper levels in the water. This is especially important for homes with older plumbing systems, where these metals can sometimes leach into drinking water.

ADDITIONAL INFORMATION: Some reports provide advice for specific groups, such as pregnant women or individuals with weakened immune systems, if certain contaminants are present. It may also include plans the utility has for future improvements to water quality or infrastructure.

CONTACT INFORMATION: The report will include contact details for the water utility, giving you a direct line to ask questions or raise concerns.

WHAT TO LOOK FOR IN A CONSUMER CONFIDENCE REPORT:

COMPLIANCE: Does the utility meet EPA standards, or are there any violations?

CONTAMINANTS: What contaminants were detected and at what levels? Are any of these levels above the EPA's maximum allowable limits?

HEALTH RISKS: Does the report highlight any risks for specific populations, such as children, pregnant women, or individuals with compromised immune systems?

TRANSPARENCY: Does the report clearly explain where the water comes from, how it is treated, and what actions the utility is taking to improve water quality?

The Consumer Confidence Report is an invaluable resource for understanding your drinking water's safety and quality. If you find any contaminants listed, you can reach out to your water utility for further information or take necessary precautions based on the guidance provided in the report.

Our Water Keeping it Clean

North Dakota Department of Environmental Quality

Harmful Algal Blooms

When in Doubt, Stay Out!

Meridith Miller, Environmental Scientist
North Dakota Department of Environmental Quality

Algae exist naturally in all waterbodies, including saltwater oceans and freshwater lakes and streams. While individual algae are so small you need a microscope to see them, under certain conditions, the algae population can grow rapidly, creating an algal bloom. Blooms often occur in summer in standing water (lakes, reservoirs, or stock ponds) due to excess nutrients (phosphorus and nitrogen) entering the water from fertilizer, livestock or septic systems.

Harmful Algal Blooms (HABs) can cover large areas of water, blocking sunlight from reaching aquatic life, lowering oxygen levels in the water and clogging fish gills. Large algal blooms, toxic or not, can lead to very low oxygen in the water column, resulting in higher mortality rates for aquatic plants, invertebrates and fish populations in the waterbody. The decrease in oxygen can be accompanied by a decrease in pH. This increase in acidity can affect the growth of fish and healthy algae. Lower light levels due to the blooms can make the water murky and limit plant growth.

In North Dakota, HABs typically consist of blue-green algae, also known as cyanobacteria. Cyanobacteria can produce cyanotoxins that may cause serious health effects for humans and animals. The most common cyanotoxin in North Dakota is called microcystin. Skin contact with cyanotoxins may cause irritation such as rashes, blisters, swelling and itching. Ingesting water with cyanotoxins can cause abdominal pain, nausea, vomiting, diarrhea, or liver damage. Anatoxins, which are not common in North Dakota, can affect the nervous system, causing dizziness, numbness or seizures. Livestock and pets can die from ingesting water containing cyanotoxins.

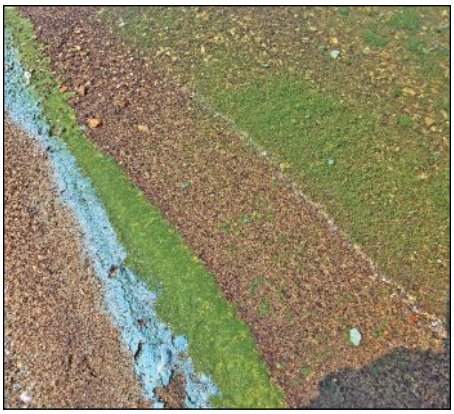
The North Dakota Department of Environmental Quality (NDDEQ) monitors HABs across the state. Staff investigate potential blooms, post informational signs and work on nutrient reduction efforts. Depending

Above: Information sign posted at waterbodies with suspected HABs.

Left: Buffalo Lodge Lake in McHenry County.

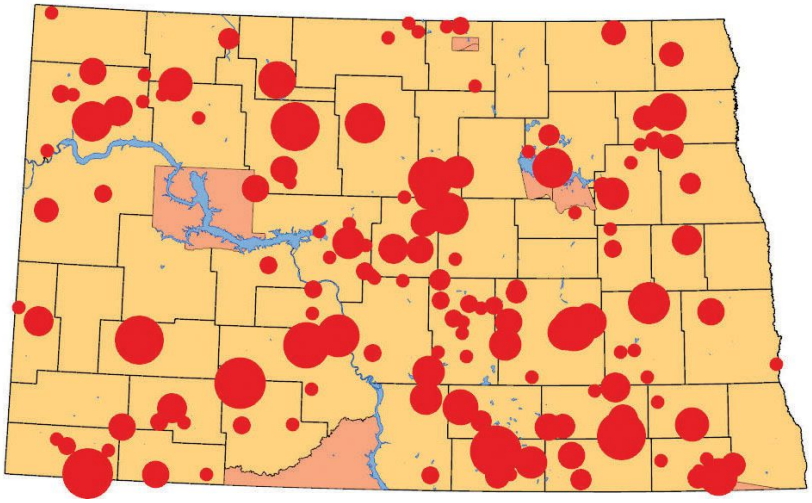
Middle: Lake Tschida in Grant County.

Right: Bowman-Haley Reservoir in Bowman County.



on the level of toxins found in a waterbody, an Advisory (moderate levels of toxins) or Warning (high levels of toxins) may be issued for the waterbody.

HAB appearances can vary greatly. An HAB can be blue or green in color. It may appear like a crust on the water, grass clippings, green cottage cheese, foam or scum, spilled green paint or thick green pea soup. Waterbodies with HAB warnings or advisories contain harmful levels of cyanotoxins and are unsafe to use or recreate in. In 2024, seven lakes had warnings issued due to high toxin levels, and 18 had advisories due to moderate toxin levels.



Above: Heat map of HABs reports on waterbodies in North Dakota, 2016-2024. The larger the red circle, the higher number of reports received. Right: Overview of HABs reports, Warnings and Advisories, 2022- 2024. Many of the lakes are recurring from year to year, as shown above.

The NDDEQ relies on the public to report potential HABs. If you suspect a Harmful Algal Bloom, you can report it online on the NDDEQ HABs website, or scan the QR code located on the HABs information sign. Areas with suspected HABs are posted with water information signs and waterbody status is posted to the HABs Story Map on the Environmental Quality website. The NDDEQ HABs website also includes links to additional resources for HABs from the CDC and EPA, as well as information about testing livestock water sources and other private waters for HABs.

The NDDEQ would like to thank our many HAB monitoring partners across the state for their assistance, including soil conservation districts, public health units and state parks.

Use caution on all North Dakota waterbodies throughout the year, especially those that have experienced warnings or advisories in previous years. When in doubt, stay out!

For current waterbody status, more information about HABs, or to report a bloom, please visit the NDDEQ website (visit deq.nd.gov and enter search criteria "HABs") or contact the Watershed Management Program at 701-328-5210 or DEQ-HAB@nd.gov.

Pet Exposure to HABS

Livestock and pets are more commonly exposed to HABs through ingestion by drinking the water or by licking themselves or items covered in cyanobacteria, such as sticks or dead fish. Contact exposure from swimming in contaminated water is also common in animals. Symptoms of HAB exposure in animals can include:

- Seizures
- Liver failure
- Respiratory paralysis
- Vomiting
- Fatigue
- Shortness of breath
- Difficulty breathing
- Coughing
- Diarrhea

Pet exposure to HABs is often fatal. If exposure is suspected, contact a veterinarian immediately. Prevent pet exposure to HABs by avoiding standing or stagnant water, bringing fresh water for drinking and rinsing off after swimming, and discouraging licking or chewing on items covered with algae. Further information about pet and livestock HAB exposure is available on the NDDEQ website and the CDC website.

North Dakota HAB Overview 2022-2024

Year	Lakes Monitored	Warnings	Advisories
2024	58	7	18
2023	65	9	11
2022	45	2	13

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THE Timmer Chronicles

By Scott Nelson

I was out the other day and started fixing fence in kind of a washed-out area that had many years ago been a dump spot for one of the homesteads that once was on our land. There were all kinds of broken glass, metal and odds and ends.

I was tightening a wire with the stretcher when I looked down and saw the top of a bottle sticking out of the dirt. I figured it was just a broken part of a bottle neck but it was solid when I tried to pull it out. I carefully dug around it with the fencing tool and extracted a pristine whiskey bottle! What a find! I forgot all about fencing as I admired the treasure I had just found.

Imprinted in the glass was the name HAYNER WHISKEY, DISTILLERY, TROY, OHIO. On the bottom was the date, 1897. Finding this bottle brought up the memory of a story my uncle Emit told me years ago. Emit's dad, my grandpa, Oscar Peterson, ranched along the Cannon Ball River. My grandpa Peterson was the local unofficial vet, horse trainer and cattle rancher.

My great-grandparents wanted my granddad to become a pastor, but when my grandpa found out what kind of folks they were making pastors out of, he wanted nothing to do with the profession. Grandpa wanted to be a veterinarian and went to vet school until he ran out of money and his parents wouldn't help him. They were sore that he spoiled their dream of having a preacher in the family. Grandpa quit vet school and filed on a homestead in North Dakota.

One fall in the 19-teens, he drove a carload of 2-year-old steers to Timmer to be shipped by rail to the Chicago Stockyards. While they were loading the steers, one of my grandpa's friends who was in Timmer that day speculated on the price he may get for them. They ended up making a wager on the price with the winner getting a fifth (about a quart) of whiskey. As it turned out, my grandpa's friend won the wager.

Sometime later, it was time to settle the debt. My grandpa, with a just-bought fifth of whiskey, saddled up and rode 10 miles to his friend's homestead. Upon reaching the homestead, my grandpa found his friend was not at home. He let himself in the shack, boiled a pot of coffee and rustled up some sowbelly and beans. Back in those days, this was common. There was no calling ahead to make sure someone would be home. No one locked their doors and the latch string always hung on the outside so it was the practice to let yourself in and fix something to eat if no one was home. Grandpa's friend was a no-show so he prepared to leave the fifth of whiskey on the table and head for home before it got too late.

Then he had an idea. Grandpa fished around until he found an empty pint whiskey bottle. He opened the new bottle and filled the pint bottle. He left the pint bottle on the table with a note telling his friend he had won the bet. Then he took the big bottle and hid it in his friend's bed!

As he rode home, my grandpa chuckled at the thought of his friend's reaction when he returned home. He would find the pint bottle knowing full well that the wager was a fifth. He would probably fume until he went to bed and then realize he'd been had.

I never knew my grandpa Peterson. He passed away in 1957 and I was born six years later. My mom and my uncle Emit are gone. Gone, too, are most of the neighbors who knew my grandpa Peterson and the stories they told me about him. I'm thankful that finding this old whiskey bottle jogged the old memory in me. Well, time to get back to fencing.

See yuh next time, Scott.

2025 Legislative Wrap-Up

Submitted by
Garrison Diversion Conservancy District

With North Dakota's 2025 legislative session now in the rearview mirror, the co-sponsors of the Red River Valley Water Supply Project (RRVWSP) are adjusting the work plan for the 2025-2027 biennium to match the budget approved by the legislature. Garrison Diversion Conservancy District (Garrison Diversion) and Lake Agassiz Water Authority (LAWA) requested $221 million from the Department of Water Resources Budget through House Bill 1020.

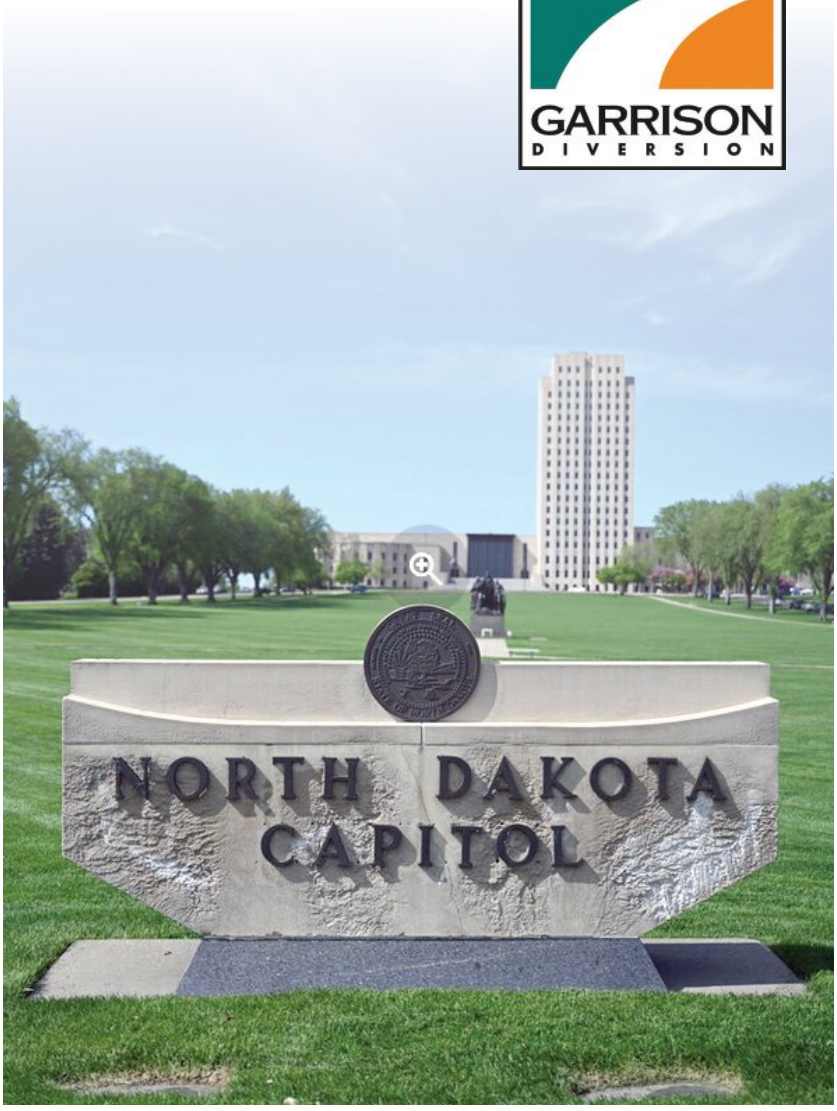
Ultimately, the legislature appropriated $205 million for the RRVWSP. Gov. Kelly Armstrong signed House Bill 1020 on May 17. "We are grateful for the amount approved by legislators, which allows us to continue moving this historic project forward," says Duane DeKrey, Garrison Diversion General Manager.

The $205 million represents the State's 75% cost share for the upcoming biennium. End users of the emergency and supplemental water supply are responsible for the remaining 25% cost share.

"We appreciate the legislature's support to move the project forward in a timely manner," says LAWA Chair and Fargo Mayor Dr. Tim Mahoney.

On June 13, the State Water Commission approved 26 water infrastructure funding requests for the 2025-2027 biennium, including $150 million for the RRVWSP. One goal of the 2025-2027 work plan is to continue progress on the installation of the transmission pipeline. Currently there are more than 40 miles of shovel-ready pipeline. The upcoming biennium will also see the final designs of the biota water treatment plant, McClusky Canal Pump Station, main pump station, and ground storage reservoirs.

During the 2023 legislative session, lawmakers approved legislative intent for the RRVWSP totaling $953 million in future funding. With the $205 million approved this year, that leaves $568 million for RRVWSP in future biennia.



The Garrison Diversion Conservancy District distributes a quarterly newsletter to provide updates on the Red River Valley Water Supply Project. Are you subscribed? Visit www.RRVWSP.com to sign up to receive the newsletter in your inbox each quarter.

Earliest RRVWSP Construction Start to Date

North Dakota's relatively mild and dry winter allowed construction crews to begin pipe installation on the RRVWSP earlier than previous years. The early start comes on the heels of the 2024 construction season which saw the most pipe installed to date.

Carstensen Contracting Inc. was back in the field by mid-April to continue construction of Contract 5D, which includes 10 miles of pipeline and a trenchless crossing of Pipestem Creek in western Foster County and eastern Wells County. Carstensen will also begin Contract 6A this year. That contract includes the installation of a 7.1-mile transmission pipeline from the James River to Eastman Township in Foster County.

Garney Construction will work on land restoration, structure build out, hydrostatic testing, and soil haul off for Contract 5B, east of Carrington. Oscar Renda Contracting will continue working on Contract 5C this year, which includes approximately eight miles of pipeline and two major trenchless crossings east of Carrington, in Foster County.

When the RRVWSP transmission pipeline is complete, it will span from the McClusky Canal to the discharge structure, which empties into the Sheyenne River, located about six miles south of Cooperstown. The RRVWSP is projected to serve nearly half of North Dakota's population, from the central part of the state to the eastern side of the state.

To date, 19 miles of the 125-mile buried pipeline are installed.

RED RIVER VALLEY WATER SUPPLY PROJECT

Alan Idso

Introducing Alan Idso, LAWA Board Member

There is a new face on the Lake Agassiz Water Authority (LAWA) board of directors. Alan Idso has served on the Cass Rural Water Users District board of directors for the past four years. When Mark Johnson retired from the Cass Rural Water Users and LAWA boards earlier this year, Alan stepped into the LAWA Director role to represent Cass Rural Water Users.

"As a rural water user, I have always had some interest in how the water system delivers water to all of Cass County and beyond. I knew several of the board members before I joined the Cass Rural Water Users board and I thought this is a good group of people to work with. It was the right time for me to serve on the board," Alan says.

Rural water plays a role in multiple facets of Alan's life. A few years after he graduated from NDSU with a degree in crop and weed science, he went to work for The Arthur Companies. Twenty-five years later, he's still with the organization and works in Ayr, North Dakota. In addition to his career and water board responsibilities, Alan has been the treasurer/clerk of Erie Township for more than 20 years. He lives on a farm site outside of Erie with his wife, Kari, and sons, Isaac and Ian. The Idso family tries to go on a few camping trips each year and Alan and the boys like to ride snowmobiles in the winter.

The impact the Red River Valley Water Supply Project (RRVWSP) will have on Cass County and beyond is not lost on Alan. The emergency and supplemental water supply is co-sponsored by LAWA and Garrison Diversion Conservancy District. Alan says the additional water supply will be of critical importance.

"With the continued population growth around the Fargo area, not to mention the entire Red River Valley, the demand for clean, quality water will continue to increase," he explains. "Being highly dependent on precipitation to supply surface water for a growing population is a risk if the region enters a prolonged dry period. Having another source of water is critical to our state's population and economy.

"In my area of the state, I don't think a lot of people realize that this project is being built and has pipe in the ground. Around Fargo, people see all the construction associated with the FM Diversion project to redirect excess water around the city. But as people who work with water know, the Red River can run low just as easily as it can flood, and the Red River Valley Water Supply is an equal project to manage flow in our critical waterway," Alan added.

In his short time thus far on the LAWA Board, Alan says he has already learned a lot about the RRVWSP. "I look forward to continuing to learn more and being part of such an important project for North Dakota," he says.

Lake Agassiz Water Authority

NORTH DAKOTA WATER

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2025 CALENDAR

Aug. 4	Southwest Water Authority's Board of Directors Meeting, Dickinson
Aug. 7	North Dakota Water Education Foundation's Up for the Challenge Tour, Williston
Aug. 11	21st Annual Top O' the Day Tee-off, CrossRoads Golf Course, Carrington
Aug. 13	Devils Lake Basin Joint Water Resource Board Meeting, Ramsey County Courthouse, Devils Lake
Aug. 14	North Dakota State Water Commission Meeting
Aug. 15	North Dakota Rural Water Systems Association's Backflow Preventer Tester Recertification
Aug. 18	North Dakota Rural Water Systems Association's 40-Hour Backflow Preventer Tester Recertification
Aug. 20	Upper Sheyenne River Joint Water Resource Board of Directors Meeting, Carrington
Aug. 28	Metro Flood Diversion Authority's Board Meeting
Sept. 2	Southwest Water Authority's Board of Directors Meeting, Dickinson
Sept. 10	Devils Lake Basin Joint Water Resource Board Meeting, Ramsey County Courthouse, Devils Lake
Sept. 10	Red River Joint Water Resource District's Board of Directors Meeting, West Fargo
Sept. 15-17	National Rural Water Association's WaterPro Conference, Ernest N. Morial Center, New Orleans, Louisiana
Sept. 18	North Dakota State Water Commission's Pre-Commission Meeting
Sept. 25	Garrison Diversion Conservancy District's Executive Committee Meeting, Carrington
Sept. 25	NAWS Authority Meeting virtually or at the Minot Public Works
Sept. 25	Metro Flood Diversion Authority's Board Meeting
Oct. 6	Southwest Water Authority's Board of Directors Meeting, Dickinson
Oct. 8	Devils Lake Basin Joint Water Resource Board Meeting, Ramsey County Courthouse, Devils Lake
Oct. 9	North Dakota State Water Commission Meeting
Oct. 15	Upper Sheyenne River Joint Water Resource Board of Directors Meeting, Carrington
Oct. 16-17	Garrison Diversion Conservancy District's Board of Directors Meeting, Carrington
Oct. 23	Metro Flood Diversion Authority's Board 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.

North Dakota Water Education Foundation • P.O. Box 2254 • Bismarck, ND 58502