Putting Minnesota Water First:

ACTIVATING A MOVEMENT FOR WATER

IMAGINE DELIVER

MINNEAPOLIS FOUNDATION

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INTRODUCTION

Securing Minnesota's Water Future Requires Immediate Action

WHY THE MINNEAPOLIS FOUNDATION COMMISSIONED THIS REPORT

Minnesota's waters define our history, culture, and economy. But we've long taken our abundant fresh water for granted, and this resource is under threat. Without a united and immediate effort, we risk putting our most vital resources in jeopardy.

Consider one of the most critical bodies of water in the state: The Mississippi River, which begins in Minnesota and flows to the Gulf of Mexico, supporting millions of people and countless ecosystems along its journey. In recent years, the river has seen record low levels and floods, both of which jeopardize transportation, agriculture, and drinking water supplies. In 2022, economic losses from low water levels—namely, cargo stalling for weeks on the river—reached $20 billion. Two years later, major flooding over a five-day period in two separate parts of the state caused damage that's still being calculated.

Water shortages, contamination, and competition for water rights are no longer hypothetical—they are immediate realities demanding our action.

Imagine a future where Minnesota safeguards its water resources and addresses competing water priorities sustainably—a place where people and industries thrive despite climate challenges. **This report invites us to realize a vision where Minnesota is the water leader of the nation.** Regions that secure their water future will thrive. Those that don't will face severe consequences. This is not a distant concern but a call to action.

> *"In Minnesota, we're surrounded by a treasure, but we don't say we're surrounded by a treasure."*
>
> — Minnesota Water Leader

There is so much water in Minnesota. Lake Itasca is the home to the headwaters of the Mississippi River, and Lake Superior—the world's largest freshwater body by surface area—contains 10% of the world's freshwater, benefiting our industry and residents. However, many Minnesotans don't know where their water comes from, the level of supply, or what is in it.

We must prioritize water in all our planning, policy-making, and marketing efforts. Our economic, social, and environmental future depends on it. This report presents a blueprint for a campaign in Minnesota called Water First to do just that.

The urgency is clear. Communities like Jackson, Mississippi, and regions dependent on the Colorado River are experiencing the devastating effects of water mismanagement. Even in Minnesota, communities like Blaine and Warren have struggled to maintain their own water supplies due to overuse. In 2019, a Lakeville-based railway proposed shipping 500 million gallons of Minnesota water annually to the drought-stricken Southwest. In June 2024, the Department of Natural Resources announced it would allow the city of Elko New Market to more than double the amount of groundwater it can pump each year in preparation for a proposed Niagara water bottling facility.

We cannot afford to wait until water becomes too costly, contaminated, or scarce. We must act now. As of April 2024, the Minnesota Department of Health identified 22 community water systems across the state with PFAS levels (per-fluoroalkyl or poly-fluoroalkyl substances, also known as forever chemicals) exceeding the new stricter federal limits set by the Environmental Protection Agency. These 22 water systems serve around 300,000 Minnesotans and include cities like Brooklyn Park, Stillwater, Wabasha, Cloquet, Alexandria, and Hastings. The $15 million that Minnesota is set to receive in federal aid won't cover the significant costs to remove these forever chemicals from our drinking water supplies.

All Minnesotans must make water management our top priority. The Minneapolis Foundation's focus on water began with a call to action inspired by Ray Harris and the Harris family. Ray Harris, a longtime visionary Minneapolis developer who is now 94 years old, assembled a community of leaders and friends to share and discuss ideas for changing the Minnesota water narrative. They looked to the Minneapolis Foundation to act as a convener and accelerator for this effort.

The Minneapolis Foundation drives collective action to realize strong and vibrant communities. Since 2014, we have supported local action on climate and environmental issues. This is why, in October 2023, the Minneapolis Foundation and the Harris family engaged Imagine Deliver, an equitable systems change and inclusive design firm, as the strategy partner to bring together a cross-section of water ecosystem leaders to create a collective sense of urgency to build a movement **to put the *Mni* back in Minnesota.**

Through the engagement of over 80 leaders across the state, Imagine Deliver and the Minneapolis Foundation seeded interest and excitement for a movement to reshape the narrative of how Minnesotans think, feel, and act about water. We began by bringing together the perspectives and experiences of a wide range of individuals to build a shared understanding of the urgent challenges a fragmented water ecosystem presents and the opportunities to create actionable long-term change. We started laying the foundations to change the narrative of water in Minnesota, from ever-flowing to a vital resource in need of protection—by all Minnesotans.

This work continued in October 2024 with an event we hosted called the Minnesota Meeting. More than 200 leaders from science, government, business, and communities across Minnesota gathered to learn, share ideas, and get inspired to act on issues affecting the environment.

One of the sessions at the Minnesota Meeting was dedicated to this water work and created a space for attendees to share perspectives, identify opportunities for action, and emphasize the critical need to address water challenges through equity-driven solutions.

As a foundation, we take seriously our role as a convener and incubator for new initiatives. At the Minnesota Meeting, we were pleased to announce the next phase of this water work would be handed off to an incredible organization, Conservation Minnesota.

But this emphasis on water isn't ending for the Minneapolis Foundation. We recently began a grantmaking program to distribute $40 million in federal EPA grants across six Great Lakes states and 35 tribal nations to fund environmental projects and programs in underinvested communities—the largest such investment in history.

Our grantmaking process will be accountable to communities and build the capacity of grassroots organizations to tackle public health and environmental challenges. Partnering with the Midwest Environmental Justice Network, the RE-AMP Network, and NDN Collective, we will reach tribes and Indigenous-led and grassroots organizations across the six-state Great Lakes region, including 36 federally recognized tribal nations.

The Minneapolis Foundation also runs its own Climate Action and Racial Equity Fund, providing grants to local organizations doing innovative work at the intersection of climate action and racial equity. This fund aligns with the Minneapolis Climate Action Plan and the city's Strategic Racial Equity Plan.

We urge you to join us in this critical effort. **This report provides a blueprint for building a movement for water in Minnesota**, outlining essential areas for action and collaboration. From our engagement efforts, we've created nine illustrative impact goals (see Table 1) to reach through a coordinated effort in the next 10 years. Following the blueprint, we created an Action Kit for Water Quality to provide tangible actions everyone can take to safeguard our most precious resource.

This is a unique opportunity to lead the way for Minnesota's water, reshape public perception, and realize a future with measurable impact on water quality, quantity, job creation, and equity. Let's not wait for others to shape our future. Let's take the lead and ensure Minnesota's water resources are managed wisely and sustainably.

What Would You Do for Water?

R.T. Rybak
President & Chief Executive Officer
The Minneapolis Foundation

EXECUTIVE SUMMARY

We propose a Minnesota Water First Strategy to address the current and forthcoming water challenges by changing how all Minnesotans think, feel, and act about water. This movement-building strategy, driven by an action network of diverse stakeholders, focuses on water quality and water quantity, with access and jobs as guiding principles. By integrating access and job creation, we aim for holistic water management that ensures equitable access and fosters economic and social resilience statewide. Water is our most precious resource, defining asset, and competitive advantage. It is central to our culture and well-being. However, a growing population, industry demands, and a changing climate strain our water systems. Pollution, aging infrastructure, and extreme weather events threaten water quality and availability, impacting public health and biodiversity.

The economic stakes are high. Agriculture, tourism, manufacturing, and the water technology sector contribute significantly to our economy, relying on clean water while contaminating it. Innovation and new ways of production are essential for sustainable growth and resilience.

Our vision is ambitious but achievable. By 2035, we envision a Minnesota leading in sustainable freshwater management, supported by robust governance, innovative solutions, and broad community engagement. We share illustrative impact goals (see Table 1) organized under the categories of health, culture, and innovation. These goals and categories are informed by the learnings from our engagement efforts. They provide tangible metrics for measuring progress toward reaching our vision. This includes restoring bodies of water, enhancing recreational opportunities, and promoting water-related industries for all.

The path forward requires collective action. This report includes an action kit focused first on water quality, with proposed actions for various stakeholders. These invitations for collective endeavor contribute to reshaping the public perception of water in Minnesota and are sequenced to build toward bold goals for a Water First future.

Minnesota stands at a pivotal moment. By prioritizing water today, we secure a prosperous and sustainable future for all Minnesotans and ensure clean, abundant water for generations to come.

The Case for Minnesota to Be Water First Now

MINNESOTA *IS* THE STATE OF WATER

In Minnesota, our story is written in water. It is our pride, joy, and most defining asset. We are the only state that can boast that our most precious resource is tied to human survival. Water is integral to our identity, economy, and way of life. With over 14,380 lakes, the headwaters of the Mississippi River, and more shoreline than California, Florida, and Hawaii combined, Minnesota, as its Dakota name translates to, is truly the "Land Where the Waters Reflect the Clouds."

Water has always been central to Minnesotan identity. From the Dakota and Ojibwe Tribes — who view water as sacred and integral to their way of life — to the settlers who relied on our lakes and rivers for transportation, our state was built on water. Water quality in lakes and rivers has also been crucial to Minnesota's rich legacy of cabin culture, fostering community and many Minnesotans' deep appreciation for nature and outdoor recreation. Minnesota's water resources are under unprecedented pressure from population growth, resource competition, and environmental changes. These challenges include impaired or polluted waters, aging water treatment and delivery systems, runoff in rural areas, urban stormwater management issues, and extreme weather events.

According to the National Security Council, global water use is likely to increase by 20% to 50% above current levels by 2050.

New precipitation patterns are causing more frequent and severe droughts and floods. In 2023, all corners of the state experienced drought, with 16% facing extreme and exceptional conditions. A year later, flooding across many parts of the state was encapsulated with the viral video of part of a damn and nearby house being swept away by the currents in Blue Earth County. Pollution from agricultural runoff, industrial processes, and urban development is deteriorating water quality, affecting ecosystems and public health. Toxic algae blooms are becoming more common, and 56% of Minnesota's waterways are impaired by pollu-

tion or invasive species, posing significant risks to human health and biodiversity. Groundwater supplies 75% of our drinking water and nearly 90% of agricultural irrigation, making it a critical resource. However, overpumping and contamination threaten its sustainability.

Moreover, water issues in our state have significant impacts that transcend state boundaries, underscoring the need for coordinated action. Rivers like the Mississippi and St. Croix flow through multiple states, impacting water quality and availability beyond Minnesota's borders. The Mississippi River Basin, the fourth-largest basin in the world, stretches across 31 states and supplies water to millions of people. Pollution from industrial activities or excess fertilizers in our state can leach into water sources and travel downstream, impacting water quality regionally. Therefore, we have a responsibility as the headwater state.

Water is a cornerstone of Minnesota's prosperity, supporting diverse sectors from agriculture and food processing to manufacturing and tourism. Investing in water infrastructure and management is a strategic economic decision. The agricultural sector generates over $106 billion annually and supports over 380,000 jobs. Our outdoor recreation industry, heavily reliant on our pristine lakes and rivers, contributes $9.9 billion and supports over 90,000 jobs. Moreover, Minnesota's water technology sector, with over 1,400 locations statewide, is a leader in water treatment and purification innovations, contributing $3.4 billion to the state's economy.

Lastly, Minnesota has a robust network of more than 180 nonprofit organizations focused on water. According to a compilation of the latest tax filing data, these organizations employ over 160 people, earn more than $16 million annually, and have assets of $31 million. Minnesota-based businesses, such as Ecolab and Pentair, support initiatives for sustainable water-use worldwide with nearly $100 million in project funding. Additionally, these companies innovate for new ways to utilize and deploy clean water. In the process, over 50,000 people are employed and over 1 trillion customers served.

Future-proofing for Minnesota's Water

We analyzed factors and trends within Minnesota's current water landscape to anticipate the impact of future economic, social, and environmental changes. These are the key takeaways from our research report:

Collective Governance of Water

A complex regulatory landscape poses key risks to coordinated action. It requires mapping formal and informal avenues for collaboration, improving data sharing (including at the regional level), increasing local technical expertise and funding, and concerted goal setting. Global best practices include exploring more participatory and deliberative mechanisms for decision-making and building on community-led initiatives to ensure water decisions reflect the needs and values of all affected parties.

Water as a Competitive Edge

The report emphasizes the economic benefits of making water-informed decisions. As a finite and unequally distributed resource, competing water demands challenge existing management practices and underscore the need for longer-term strategies to increase water efficiency; build the water workforce; and invest in water infrastructure, technology, and conservation. Global best practices include addressing the hidden costs of the "low" price of water, incentivizing perennial crops, piloting residential water reuse solutions, and closing the water use loop in industrial ecosystems.

Water Quality to Activate for Change

Minnesotans care most about water quality. Increasing awareness, access to data, and knowledge sharing can increase individual ownership and care for water. Global best practices call for engaging in water education, leveraging art for connection, and fostering a sense of place-based stewardship.

Imagining a Future with and for Water in Minnesota

In Minnesota, we are trailblazers in water conservation, innovation, and management. Our state's water management policies reflect Minnesotans' ongoing commitment to protecting and managing our resources and reflect decades of changing land uses, cultural attitudes, and policy decisions.

Building on Current Bold Actions

$1.8B
raised by the Clean Water, Land, and Legacy Amendment since 2010

1,500+
CERTIFIED FARMS
on the Minnesota Agricultural Water Quality Certification program since 2016

4,500+
LAKES
monitored on LakeFinder with publicly accessible data

1,000
WATER STEWARDS
on the Minnesota Pollution Control Agency's Water Stewardship Program

180+
NONPROFIT ORGANIZATIONS
working on water and wetland conservation, restoration, management, and stewardship

83,000
VISITORS
at the Minnesota Humanities Center's We Are Water exhibit since 2016.

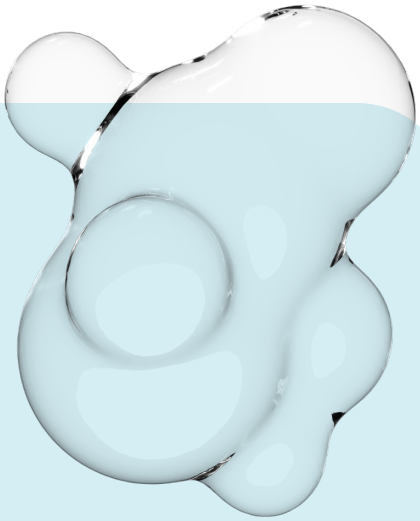
We engaged a broad cross-section of 87 water ecosystem leaders to build on existing water initiatives and accelerate successful efforts and invited them to establish a shared understanding of water issue priorities and avenues for collaborative action. We asked them to focus on changing the narrative about water in Minnesota and consider how to reshape the overarching public perception of water in Minnesota as an infinitely abundant resource and an issue of concern for only some communities.

These leaders elevated two primary tensions at the core of understanding the water ecosystem in Minnesota:

1. Water is finite yet in growing demand
2. Minnesota is the state of water, yet there is no statewide campaign for it

Their input emerged as key directions and strategic insights, making the case for leveraging the increased attention of everyday Minnesotans on water quality, the need for a more integrated stakeholder approach, and the centering of water in economic decision-making. It also underscored the complexity and interconnectedness of water issues in our state and the need for effective narrative change tools to shape public perception and build a more complete water picture, accessible to all Minnesotans.

These leaders were clear in their vision for elevating water as a priority for all Minnesotans, increasing awareness to make water central in decision making — the equivalent of figuratively — and literally — **putting water on the ballot in Minnesota.**



Who Governs Water in Minnesota?

Water governance is at the core of a comprehensive assessment of Minnesota's water policies because effective governance structures are essential for managing water resources sustainably. In Minnesota, all lakes, rivers, ponds, wetlands, streams, ditches, springs, and waters from underground aquifers are public resources. The regulation of water happens at the federal, state, and local levels, and in tribal nations. In turn, different agencies enforce the laws, statutes, and ordinances developed.

This complex regulatory interplay in Minnesota features eight federal agencies, six state agencies, and hundreds of local and regional entities, including county, township, city, and tribal governments, watershed districts, soil and water conservation districts, municipal utilities, public works departments, joint boards and collaboratives, and regional entities, such as the Metropolitan Council.

This decentralized approach prevents any single entity from exerting outsize control over water management. It can also create situations where no one entity is leading on an issue or project. Decentralization allows expertise to be applied to specific issues, aiming to address regional variations better and ensure the representation of local interests. However, overlapping agency jurisdictions have led to implementation challenges, potentially creating silos and conflicts in water governance. The Clean Water Council (composed of representatives from organizations with a role in achieving clean water) and the Environmental Quality Board (composed of state commissioners and public members) are meant to elevate issues, make recommendations, and foster coordination. But they don't have final say the way a water commission or some other entity might. There is growing interest from some in the water ecosystem to explore the creation of a cabinet-level water position in Minnesota.

The 2020 Minnesota State Water Plan outlines the state's strategy for managing and protecting water resources and aims to create equitable solutions to water challenges while fostering collaboration between the state and tribal nations. More recently, the University of Minnesota Water Council submitted to the State Legislature a plan to promote and protect clean water in Minnesota for the next 50 years. The 50-Year Clean Water Plan proposes work over five years to create the plan and seeks $14.6 million in funding. Bill MN HF4269 is currently in committee.

Effective governance goes beyond developing systems, processes, policies, laws, and institutions to manage water as a public resource. It relies on incorporating diverse stakeholders, being responsive to needs, having transparent accountability mechanisms, and, most importantly, having participatory processes encouraging civic engagement from all Minnesotans.

Building a Water First Movement

A VISION FOR MINNESOTA WATER FIRST 2035

Imagine a future where Minnesota leads in sustainable freshwater management, ensuring clean and abundant water for all residents while driving economic growth and social equity through water stewardship.

This vision is founded on six principles:

- prioritizing water conservation and equitable access
- positioning the state as a leader in water innovation and industry
- utilizing water to spur economic prosperity and fair resource distribution
- enhancing recreational opportunities
- involving all stakeholders in water management decisions
- integrating Indigenous wisdom to promote sustainability and cultural harmony.

We aim to ensure that every Minnesotan, from Baudette to Bloomington and Warroad to Wayzata, can access clean, abundant water.

Minnesota must ignite a collaborative movement across sectors to achieve this vision, bringing together various stakeholders driven by a shared mission to safeguard Minnesota's water resources. This movement to make Minnesota Water First aims to build on existing initiatives and spur new partnerships to galvanize action statewide to make water the focal point of policy, community actions, and economic strategies. This is possible by reshaping the public perception of water in our state and inviting Minnesotans to care for a vital resource that belongs to everyone.

Minnesota Water First Strategy

The main goal of Minnesota's Water First Strategy is to change the narrative of water in Minnesota to activate a sense of collective responsibility, focused on balancing competing water interests sustainably for the long term.

A Water First Strategy includes an action network of stakeholders and leaders in business, academia

and research, local and state government, philanthropic and community organizations, and tribal nations. This network is focused on two key areas of action for changing the narrative of water in Minnesota: water quality and water quantity, with access and jobs as throughlines. Figure 1 visualizes the composition of the action network for Minnesota's Water First Strategy. Water quality refers to the physical, chemical, and biological characteristics of water that make it suitable for drinking, supporting the ecosystem, and recreation. Water quantity refers to the volume of water in a specific place at a specific time. Since water is essential for life, its quality and quantity are invaluable.

Integrating access and jobs into a water movement ensures a holistic water management approach that addresses social equity and economic sustainability. It is meant to empower communities statewide, urban and rural, by creating jobs and ensuring equitable access to water, fostering social cohesion and economic resilience. Balancing water quality and quantity with access and job creation supports sustainable development goals, meeting current and future generations' environmental, social, and economic needs.

What Is an Action Network?

An action network is a coalition of stakeholders from diverse sectors working collaboratively toward a common goal to reshape public perception and activate a movement for water in Minnesota. The primary roles of these stakeholders for Minnesota Water First will include:

- **Informing:** Setting targeted goals and providing strategic direction for the Water First movement
- **Influencing:** Steering the movement's initiatives within their spheres of influence
- **Collaborating:** Coordinating actions and resources to implement key initiatives
- **Contributing:** Raising funds and resources to support the movement.

Figure 1.
Minnesota Water First Strategy

The Action Network uses the Action Network Model (Figure 2) to convene, co-create solutions, and implement sustainable actions. The model aims to establish the practices, relationships, and authority needed to scale the Water First movement, with the purpose of achieving transformation through collective action, resource distribution, economic development strategies, and policy changes.

Figure 2. ***Action Network Model***

The solutions and actions resulting from the Action Network Model can be thought of as issue and engagement campaigns, or **narrative change tools.** These tools aim to shape how people perceive and understand the world around them and influence the way they think about and engage with key issues. These tools can include elements of storytelling and media.

Action Network Participants:

- Local and State Government Agencies: Ensuring regulatory support and public policy alignment
- Academic and Research Institutions: Providing scientific and technological expertise
- Businesses and Industries: Leveraging corporate social responsibility and innovation
- Community Organizations and Nonprofits: Mobilizing grassroots support and advocating for community needs
- Tribal Nations: Integrating Indigenous knowledge and ensuring equitable representation
- Philanthropic Organizations: Offering financial support and strategic guidance
- Recreational and Cultural Groups: Promoting water-based activities and elevating cultural heritage.

See the *"Who You May Want on Your Team"* section for proposed action network participants.

Activating a Water First movement hinges on ongoing issue and engagement campaigns, or narrative change tools, shaping the narrative about water issues in Minnesota and activating grassroots action across the water landscape at the individual, community, and institutional levels by:

- Raising Awareness: Educating the public about critical water issues, highlighting urgency, and mobilizing community involvement
- Mobilizing Support: Fostering collaboration among diverse stakeholders, sharing goal creation, and building grassroots advocacy
- Influencing Policy: Exerting public pressure on policymakers, advocating for specific policies, and sustaining long-term momentum through ongoing engagement
- Empowering Communities: Giving all Minnesotans a voice in decision-making and building local capacity.

Organizations, leaders, or individuals can utilize these narrative change tools to understand, shape, and influence the stories and messages circulating in the public sphere.

To maximize the areas of stakeholder convergence for Action Network members, we propose grouping opportunities for action by key themes of health, culture, and innovation. Table 1 showcases illustrative bold goals for the Water First Minnesota Strategy for 2035, informed by the 87 water ecosystem leaders we engaged as part of this effort.

Table 1. Illustrative Impact Goals

Health	Culture	Innovation
Water challenges significantly impact the health of our environment and our bodies. Water contamination can harm fish populations, cause cancer or gastrointestinal disease, disrupt plant growth, and much more.	Water is a foundation of our cultures, traditions, and connections to land and community. Increased access to and protection of clean water ensures the nickname "the Water State" for future generations.	Water is Minnesota's competitive advantage. Expanding on existing business and governance success with infrastructure in place, innovative solutions from Minnesota can lead the way in water management.
By 2035, clean up 35% of Minnesota's bodies of water through collaboration between government, private sector, and community participation.	Renew the Clean Water, Land, and Legacy Amendment in 2034 to continue funding water protection, conservation, and restoration projects and encourage over 1 million Minnesotans to engage in a movement for water stewardship.	An increase of 25,000 jobs related to water — water tech, water conservation and restoration, water recreation, and water research — by 2035 through collaborations between private companies, government, and higher education. These jobs will be well-paying, provide opportunities for growth, embrace diversity, and foster innovation.
Legal and cultural protections of important species for biodiversity, such as wild rice, enforced by 2035 in order to restore thriving ecosystems.	By 2035, tribal nations should be involved in 90% of all projects related to water and land, expanding collaborations and consultations beyond state agencies.	Advancements in efficiency and transparency of usage will reduce everyday Minnesota residents' average water use by 20 percent by 2035.
Over 1 million acres will be transformed by native flora by 2035, and 15% of Minnesota's land will be covered in regenerative agriculture — thus reducing fertilizer use, enriching the soil, and preventing erosion and runoff.	Water recreation is accessible to over 60% of Minnesotans by 2035 because access to clean water is easy and plentiful.	According to the U.S. Patent & Trademark Office, Minnesota will be ranked first for water treatment and purification patents by 2035, leading the way in clean and safe drinking water for all.

The following Water Quality Action Kit provides tangible actions for tackling our water challenges. A future series focused on water quantity will include actions that emphasize decision-making around the competing demands for water use.

The Water Quality Action Kit outlines actionable steps that can be taken immediately, with coor-

dinated effort and focused intent. It provides specific actions for improving water quality to be implemented within distinct timeframes: within 90 days — Do Now, within the following six months — Do Next, and within the next 18 months — Do Together. These actions are designed to collectively contribute to achieving the Water First impact goals.

An Ecosystem Action Kit for Water Quality

Water is more than just a resource in Minnesota—it's a vital component of our health and well-being. From kayaking to fishing and ice skating, Minnesotans take immense pleasure and pride in their identity as "the Water State." However, contaminated water poses significant risks to public health, leading to gastrointestinal illnesses, nervous system disorders, reproductive effects, and even cancer. Human activities such as industrial chemicals, road salt usage, polluted runoff, and excessive fertilizer use have taken their toll on water quality. The decline in wetlands, which are crucial for stormwater retention and wildlife habitat, further exacerbates these issues.

A NOTE ON THE ROLE OF CITIES, SUBURBS, AND RURAL COMMUNITIES AS THE NEXUS FOR THE WATER FIRST ACTION NETWORK:

We believe local governements are essential to the Action Network and crucial for implementing Minnesota's Water First Strategy, in tandem with a watershed focus.

Cities, suburbs, and rural communities are located near essential water resources supporting their population and economic activities. Access to water can drive economic growth and sustainable development, in turn creating jobs and attracting talent. Cities have the infrastructure and capacity to innovate in water management, enhancing resilience to flooding, droughts, and extreme weather events. With adequate funding, rural communities can move quickly and have the privilege of space to try and perfect sustainable practices. Overall, at the community level - either entire towns or neighborhoods in a larger city - everyone can engage with water conservation and foster a culture of water stewardship.

The Regional Council of Mayors (RCM), the League of Minnesota Cities (LMC), or the Coalition of Greater Minnesota Cities (CGMC), could play a pivotal role in Minnesota's Water First Strategy to drive impactful change.

While water quality challenges may seem geographically bound, they have far-reaching impacts beyond boundaries. This requires regional and watershed-level approaches to tackling water challenges. Every community deserves access to clean, safe drinking water to thrive economically and socially. As one water leader noted, "If every city in Minnesota could say, 'You can move here and work here. Not only do you get access to broadband, but you can be confident of the drinking water for decades, which would be a huge economic development play."

People's concerns about water often stem from what matters most to them personally, thus fragmenting care and action. Still, whether it's ensuring the safety of drinking water, preserving fish populations, or maintaining the beauty of shorelines, Minnesotans are united by their shared connection to the quality of water in their lives.

The following section reflects that deep care by translating it into action. With a keen focus on how water quality affects our health and culture, and provides opportunities for innovation, we encourage all Minnesotans to engage in nurturing, deciding upon, and actively pursuing a future where water comes first.

Health & Water Quality

In recent years, there's been a growing recognition of the interconnectedness of water quality issues and health. In 2023, policy and funding initiatives underscored the importance of addressing water quality concerns. Governor Tim Walz signed a $240 million bill to replace lead pipes[1], complementing federal funding efforts. Residents in southeastern Minnesota petitioned the EPA to address nitrate contamination in drinking water[2], highlighting the urgency of the issue. Additionally, Minnesota took proactive steps to address PFAS by banning nonessential use of these chemicals after years of concern and litigation with 3M[3].

1. Rooting Out PFAS: Uniting Communities for Clean Water Solutions

The extensive family of PFAS chemicals, comprising over 5,000 manufactured compounds, poses significant health risks, including liver damage, immune system impairment, and various cancers. Minnesota's proactive stance, banning nonessential PFAS chemicals in products by 2032, has been complemented by EPA regulations targeting six PFAS chemicals. These regulations mandate water treatment centers to monitor and eliminate PFAS from drinking water by 2029[4]. However, the need for affordable treatment technologies presents a formidable challenge.

The initial costs associated with addressing PFAS contamination exceed $20 million per utility site, rendering it unattainable for many communities[5], including the 22 counties in Minnesota directly impacted. Additional funding and technical support are imperative to ensure compliance with federal and state mandates.

Beyond financial considerations, monitoring industrial leaks and tracking PFAS presence in our ecosystem demand coordinated efforts among industries, state agencies, community organizations, and residents themselves. Successful removal of PFAS from drinking water hinges on reducing or eliminating PFAS in our environment. Minnesota's adoption of Amara's Law, phasing out PFAS production, provides a promising avenue to address the root cause of contamination and catch up with ecosystem contamination.

Tackling the PFAS challenge necessitates collaboration and innovation across various sectors and

1 Learn more here: Lead pipe replacement bill signed.

2 Learn more here: EPA Southeast Minnesota Groundwater.

3 Learn more here: Amara's Law.

4 Learn more here: EPA PFAS regulation.

5 Learn more about PFAS removal challenges here: Expert conversation, Hastings, Cottage Grove.

communities. By effectively reducing PFAS contamination, Minnesota can enhance its quality of life and attractiveness, fostering economic growth and workforce development in the process.

Do Now:

- Civic Participation: Individuals and community organizations engage directly with local officials to voice concerns regarding water quality in your community. Local officials establish a communication plan to proactively share information, including risk and remediation efforts; the Minnesota Pollution Control Agency and the Minnesota Department of Health advise on the plan.

Do Next:

- Coalition of Cities: Cities, water treatment plants, and community organizations convene to create and advocate for funding schemes and technical assistance to protect safe and clean water across Minnesota.
- Standards of Water Excellence: In collaboration with state agencies and accredited organizations, city mayors develop standards of water excellence as a tracking system of water sustainability and marketing success, leveraging the attention brought by PFAS to also center water decision-making in urban planning, resource conservation, and business development.

Do Together:

- City Resiliency Plan: Cities and local governance structures revise city resiliency plans, with water as a key consideration for planning and infrastructure upgrades.
- Supplement Funds: State government officials provide supplemental funding for PFAS monitoring and removal beyond appropriations at the city level, including considerations such as those in current bill HF 5309, calling for a report on PFAS remediation and the appropriation of unspent funds appropriated from PFAS manufacturers.
- Open-Source Data: Private companies, higher education, and government agencies activate open-source data sharing policy for PFAS mitigation and removal innovations.

2. Protecting Our Communities: Prioritizing Environmental Justice in Lead Pipe Replacement

In Minnesota, there are approximately 100,000 service lines still made of lead, posing a serious health risk, particularly for children and pregnant individuals. Lead exposure can lead to severe damage to the brain and nervous system, stunted growth, and behavioral and learning difficulties. This issue disproportionately affects communities with older housing and limited resources, often highlighting disparities in race, income, and geography.

The Bipartisan Infrastructure Law allocated $3 billion for lead pipe replacement across the country. The state of Minnesota followed up with its own allocation in 2023 of $240 million for lead pipe replacement. The first step to replacement is identifying where lead pipes are present. Replacing lead pipes is an environmental justice issue and is crucial for rural prosperity; seven of the nine locations identified so far of needing service line replacement due to lead are in rural communities[6].

The effort to replace lead pipes presents an opportunity for job creation, estimated to generate over 2,000 jobs over the next decade[7]. These jobs offer a chance to reskill Minnesota's existing manufacturing and mining workforce. Moreover, this endeavor could coincide with other infrastructure projects aimed at enhancing public spaces and improving community aesthetics. Minnesota has a historic opportunity to not only safeguard public health and address environmental justice, but also to stimulate economic growth, transform communities, and set a national example of innovation and equity in infrastructure development.

Do Now:

- Civic Participation: Individuals and community organizations utilize the UMN lead pipes service map to assess the status of the community's drinking water. Equipped with the available information, individuals and community organizations engage directly with local officials to voice concerns regarding water quality in their communities.
- Environmental Justice Prioritization: Individuals and community organizations advocate for local officials to prioritize environmental justice areas for lead pipe replacement.

Do Next:

- Environmental Justice Prioritization: State agencies prioritize lead pipe replacement in areas of environmental justice concern. This prioritization is informed by resident concern and assessment of community resources and needs, building on the plan put forward by the Minnesota Department of Health.
- Beyond Service Lines: State agencies offer funding and technical assistance for lead pipes in homes and businesses that do not serve as service lines. Homes with plumbing fixtures built before 1986 and wells built before 1995 likely have lead parts. These parts can be expensive and unaffordable for many to replace.

6 Learn more here: Identified lead pipes.

7 Learn more here: Service Line Replacement.

» Reskill for Lead Replacement: Technical colleges, state agencies, and workforce-focused community organizations offer reskilling programs to replace lead pipes with the existing workforce in mining and manufacturing.

Do Together:

» Monitor Metals: State agencies continue to monitor the state's water supply for changes in lead and other metal contamination. Assessment of service lines for lead is currently underway; consistent funding is important to monitor for emerging contaminants of concern.

3. Transforming Agriculture: Coordinating Efforts for Water Quality Solutions

While agriculture contributes to water quality issues, it is vital to our economy, food system, and rural communities. Food and agriculture hold a significant share of Minnesota's overall economy, supporting over 380,000 jobs and generating an annual economic impact of $106 billion. In addition, Minnesota is home to major industry players, including global leaders like Cargill, General Mills, Hormel, CHS, and Land O'Lakes. Our state leads the nation in food patents per capita and has long been at the forefront of research and innovation in agriculture, food production and food safety. Moreover, Minnesota is also a food retail and distribution leader, with headquarters companies such as Target and distribution leaders like United Natural Foods and SpartanNash.

Nitrogen and phosphorus, common nutrients from manure and fertilizers, pose significant threats to our water supplies, especially when used near bodies of water or areas prone to runoff. Elevated levels of these nutrients can trigger harmful algae blooms, diminish biodiversity, and endanger human health, leading to conditions like blue baby syndrome and cancer. Livestock and cash crops, such as corn and soybeans, dominate modern agriculture and support many livelihoods, thus, making the challenge of nitrate contamination a contentious one to solve.

Water quality and agriculture aren't opposing forces. They can coexist with the right approach; there is no reason why economic success should come at the expense of water quality. Farmers play a crucial role as stewards of the land and key stakeholders in water quality preservation. Recognizing their importance and adopting regenerative agriculture[8] practices can yield transformative outcomes, benefiting both the economy and water quality.

> *"The federal government will pay a farmer to stop doing bad things, but they don't pay them for doing good things."*
>
> — Minnesota Farm Leader

Transforming agriculture requires collective efforts beyond farmers alone, it requires support from community organizations, policymakers, and companies such as Cargill and General Mills that buy farmers' wares. Awareness campaigns can empower consumers to make sustainable choices,

8 Learn more here: MN 350, The Nature Conservancy, USDA.

while policy measures can incentivize and support the transition to regenerative practices. Industry innovation can also play a role by developing products that align with sustainable farming methods, such as cover crops and perennials.

By embracing a collaborative approach involving farmers, consumers, businesses, policymakers, and industry, we can achieve a balance where the agriculture economy thrives while safeguarding our precious water resources for future generations.

Do Now:

- Fertilizer Fee: Individuals and community organizations participate and support a statewide campaign for a fee on fertilizer use. Bill HF4135[9] was introduced in the Minnesota House of Representatives in February 2024 to increase the fee on fertilizer for research and cleaning up drinking water. It currently resides with the House Environmental Committee.
- Connect with Farmers: Individuals and community organizations converse with local farmers about their practices and barriers to sustainability at events such as farmers markets, agritourism[10], and community gatherings.
- Enjoy Agriculture Community: Individuals and community organizations engage in agritourism to connect with farmers and understand how food, water, and the environment are interlinked in atmospheres that inspire joy and community building.

Do Next:

- Support for Farmers: State agencies enable farmers to utilize available funding for the adoption of optimized irrigation practices and other sustainable approaches with increased education and technical assistance, building on the Minnesota Agricultural Water Quality Certification Program. Existing programs to amplify include cost-sharing, sustainable agriculture demonstration grants, best practices programs, and loan offerings. Community organizations could be equipped with the information to support farmers in obtaining funding and technical assistance.

Do Together:

- Mechanisms to Safeguard Livelihoods: State agencies and private industry incentivize sustainable agriculture practices through adjustments to crop insurance and other funding mechanisms that de-risk the adoption of regenerative agricultural practices. These incentives should be informed by farmers' needs.
- Market Innovation: Private companies innovate products to support a robust perennial and cover crops market.

9 *Learn more here: Fertilizer tax proposal advances.*

10 *Learn more here: Agriculture and tourism meet.*

Culture & Water Quality

The declining quality of our natural surroundings and waterways threatens the sense of place and connection intertwined with Minnesota's identity. Water serves as the foundation of our cultures, traditions, and connections to the land and community. For many groups, particularly Native peoples, poor water quality disrupts activities deeply tied to their cultural identity. Pollution from mining and manufacturing operations jeopardizes the viability of wild rice, a sacred food source for the Ojibwe[11]. Additionally, the encroachment of private residences and retail developments onto natural shorelines worsens issues like increased algae production, reduced water clarity, and erosion, ultimately impacting the quality of recreational opportunities[12].

Moreover, access to water recreation often remains limited to those who can afford it, perpetuating exclusivity in outdoor activities[13]. Yet, it's essential for everyone — regardless of background, beliefs, or values related to water — to prioritize caring for and stewarding our precious water resources.

Over time, various initiatives have emerged to advance efforts in safeguarding and revitalizing Minnesota's water quality.

"The state of water needs the people of the state."

— Minnesota Water Leader

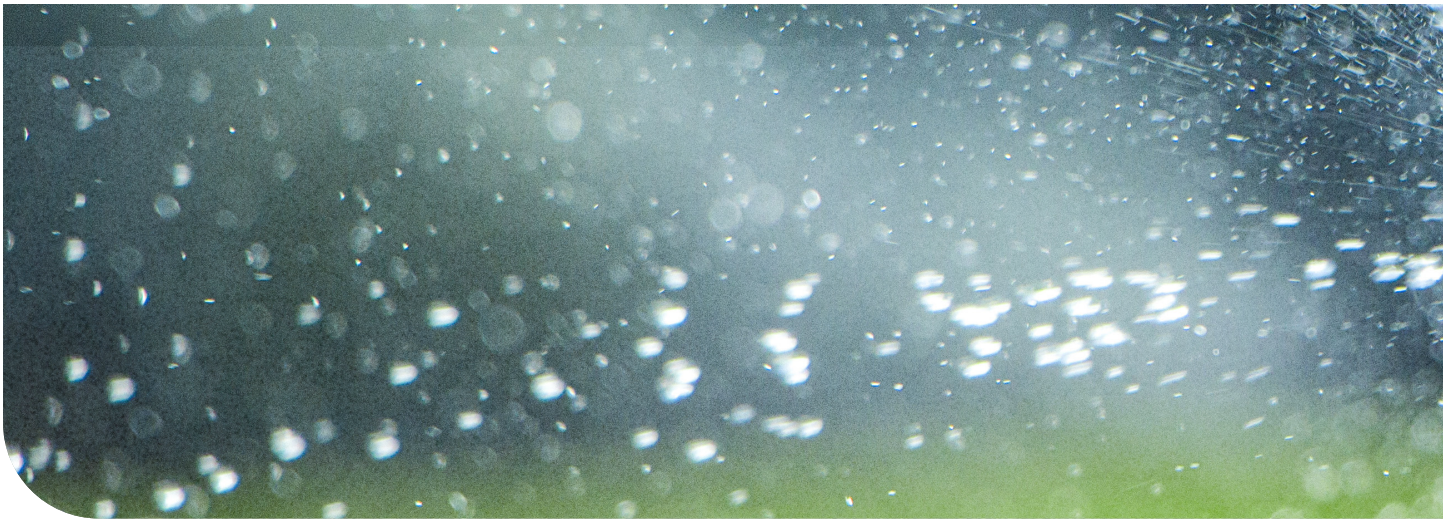
"I have found what works on a small scale, like on a lake to lake scale, is engaging stakeholders in shared responsibility for projects that remediate or restore the water bodies that they care about."

— Minnesota Water Leader

11 *Learn more here: Line 3, Line 5, NorthMet Mining Project, Twin Metals Mining Project.*

12 *Learn more here: Suburban Aestetics scarring shoreline.*

13 *Learn more here: Lake Adney, Next Generation cabins.*



1. Revitalizing Minnesota's Landscapes: Mobilizing Public Participation for Water Quality

The shift from natural landscapes to manicured lawns has had detrimental effects on Minnesota's water quality. Despite its widespread presence, the grass covering many lawns is actually an invasive species that requires fertilizers and pesticides, contributing to biodiversity loss. When these lawns are situated near bodies of water, runoff can carry harmful substances like fertilizers, pesticides, and lawn mower oil into the water, further degrading water quality. Moreover, concrete surfaces like slabs, walkways, and patios compound the problem by channeling stormwater runoff instead of acting as natural filters like native plants.

Beyond individual households, Minnesota's landscape has undergone significant changes over time due to pollution and varied land uses. In 1988, Minnesotans approved the establishment of the Environment and Natural Resources Trust Fund (ENRTF) to safeguard the state's natural beauty, resources, and wildlife. Funded by sales of the state lottery, the ENRTF has supported over 1,500 projects totaling more than $1 billion in the last three decades[14].

One notable initiative, launched in 2019, is the Lawns to Legumes program, which provides grants to households to transition their landscaping to native flora. These native gardens enrich soil, prevent erosion, and serve as natural stormwater infrastructure systems. Implementation of native gardens has resulted in the sequestration of over 160 metric tons of carbon annually and the capture of more than 3 million cubic feet of water annually. Importantly, over 40% of funded garden projects have been in environmental justice areas.

When Minnesotans go to the ballot box in November 2024, they will vote on whether to continue to allocate lottery funds towards projects that benefit the outdoors. If renewed, additional funds will establish a new community grants program aimed at ensuring a more equitable distribution of funding[15].

14 Learn more here: ENRTF.

15 Learn more here: Renew the ENRTF.

Do Now:

- Publicize Successes: Community organizations funded by the ENRTF publicize and celebrate the accomplishments achieved due to the fund's grant programs.
- Lawn to Legume Program: Individuals and communities plan household rain gardens using native plants and resources from the Lawn to Legume Program.
- Civic Participation: Individuals and community organizations engage in a campaign to support the renewal of the ENRTF by amplifying the success stories from the funds and creating awareness of the ballot measure.

Do Next:

- Vote Yes: Individuals vote "yes" for the "Minnesota Continue to Provide Lottery Revenue to Environment and Natural Resources Fund Amendment" in November 2024.
- Collect Art, History, and Stories: Government agencies, tribal nations, community organizations, and individuals work together to collect and curate place-based history, art, and storytelling for learning and awareness of community bodies of water.

Do Together:

- Water-Centric Community Centers: Government agencies, tribal nations, community organizations, and private companies partner to create water-centric community centers across the state; these can be partnerships or on-site watershed management organization premises.
- Host Celebrations: Government agencies, tribal nations, community organizations, and private companies host opportunities for public participation and celebrations of water bodies that cultivate community and inspire action.
- Share Successes: Community organizations and state agencies with programs funded by the Clean Water, Land, and Legacy Amendment publicize the accomplishments achieved with the funds.
- Strategy for the Clean Water, Land, and Legacy Amendment: Community organizations convene to create a campaign strategy for renewing the Clean Water, Land, and Legacy Amendment in 2034.

2. Elevating Minnesota's Tourism: Uniting for Economic Growth and Environmental Conservation

Minnesota's water resources play a central role in driving the state's vibrant tourism industry. Whether it's the Chain of Lakes in Minneapolis, the north shore of Lake Superior, the gateway to Canada through Lake of the Woods, or the Mississippi River that tranverses the entire state past thousands of lakes, millions of visitors, both in-state and out-of-state, flock to Minnesota's waters each year. Popular destinations like Voyageurs National Park and the Boundary Waters Canoe Area, along with cherished cabins of friends and family, contribute to the state's allure as a premier tourist destination. With over 75 million annual visitors, tourism generates a staggering $22 billion in economic impact and supports over 170,000 jobs statewide.

The success of Minnesota's tourism industry is intricately linked to the preservation of our natural resources. Restoring water quality not only enhances the recreational value of our water bodies but also has the potential to boost tourism's economic impact. Nature-based tourism, in particular, benefits rural communities, as experiencing the wilderness often entails venturing away from urban centers. This influx of visitors supports small businesses across the state, fostering economic vitality in rural areas.

In recent years, Minnesota has made significant investments in bolstering its tourism sector. These efforts, which range from enhancing outdoor experiences[16] to promoting the film industry[17], underscore the importance of tourism to our state's future growth. Leveraging tourism to attract prospective residents is a strategic approach to fostering economic development. By showcasing the best of what Minnesota has to offer, we can entice individuals to experience our high quality of life firsthand, potentially leading to increased workforce participation, job creation, and preservation of our natural resources.

Do Now:

- Sustaining Engagement: Tribal nations, watershed management organizations, and other stewardship-focused organizations collaborate with recreational organizations to convene people's individualized care and translate it into action. The feedback of joy and community by cultivating water stewardship from a basis of care creates sustainable engagement.
- Bolster Minnesota's Nature-Based Tourism Economy: Create and maintain exceptional outdoor recreation experiences to create jobs and support local economies. Partner with Explore Minnesota to increase industry outreach, prioritizing underserved and diverse communities.
- Promote Existing Initiatives: Community organizations, state agencies, and private companies promote the Minnesota Humanities Center's "We Are Water" traveling exhibit to engage new partners, funding, and awareness. Since 2016, the exhibit has reached 30 communities, and visitors share an 88% increase in knowledge of the threats to our water supply.

Do Next:

16 Learn more about Gov. Walz' funding for tourism here: DNR, Explore MN.

17 Learn more here: Incentives for the Film Industry.

- Celebrate Water: Community organizations, local governments, and private companies plan and execute statewide celebrations of local watersheds that include live music, art, recreation activities, learning, and opportunities for engagement.
- Water Roadshow: Community organizations, industry, and government establish a Minnesota roadshow for water that builds on Minnesota's lake culture by highlighting the possibilities for joy and community across the state. Produce social media content such as short-form videos and photos for increased engagement.
- Highlight Water Landmarks: Community organizations, cities, industries, and governments identify and highlight water landmarks, both natural and built, around the state to promote water tourism in Minnesota. Private companies, small businesses, and government agencies could introduce guides, maps, and interactive adventures for visiting Minnesota's water landmarks.

Do Together:

- Recreation In All Places: Government agencies and infrastructure companies infuse recreation into city planning by funding projects such as beautifying walking paths, installing informational signs about nature, and installing park benches.

3. Preserving Minnesota's Water Legacy: Honoring Indigenous Wisdom for Action and Restoration

The Ojibwe and Dakota people have long cherished their deep connection to abundant waterways since long before Minnesota was a state. They have served as stewards, safeguarding our waters, for generations.

Originally hailing from east of the Mississippi, some Ojibwe members migrated westward in search of a land where food thrived on water. This led them to discover *manoomin*, or wild rice, in Minnesota, which holds profound cultural significance. In Anishinaabemowin (Ojibwe language), *Nibi Aawon Nbiish* translates to "Water is Life."

Similarly, one of the Dakota people's origin stories lie at the confluence of the Mississippi and Minnesota Rivers, an area known as Bdote. In Dakota, *Mni Sota Makoce* means "Land Where The Waters Reflect The Clouds," a name that greatly influenced the naming of our state.

However, the cultural bond between land, water, and food faces significant threats from water contamination. Historically, wild rice flourished across more than 64,000 acres of Minnesota's waters, serving as a vital component of the ecosystem. It prevents erosion, deters algae blooms, and enhances water quality. The increase of sulfide, primarily from nearby mining, hinders the harvest of wild rice and, therefore, the entire ecosystem and cultural ties to the land.

To honor and preserve this habitat, we can come together to celebrate its harvest, collaborate with tribal nations to enact protective regulations, and invest in essential infrastructure and restoration techniques to nurture wild rice growth. These collective efforts not only benefit rural and tribal com-

munities by fostering tourism and creating job opportunities but also contribute to improving water quality.

By embracing Indigenous perspectives on water, we gain a deeper understanding of its intrinsic value and the adverse impacts of activities such as mining, drilling, and traditional farming.

Do Now:

- Tribal Nations Consultation: Companies and community organizations develop an implementation plan for regular consultation with tribal nations. For inspiration, look to a historic 2021 law that requires state agencies to implement and execute a plan to consult tribal nations on projects that pertain to them regularly[18].
- Wild Rice Experience: Individuals and community organizations, working with willing tribal governments and partners, arrange visits to wild rice paddies during harvest season for learning opportunities from tribal nations about the importance and practice of harvesting wild rice.
- Consumer Demand: Encourage ongoing efforts by the state of Minnesota to find new markets for Minnesota-grown indigenous products, especially in Canada. More demand for wild rice to new markets will also create more need for the pristine water conditions needed to grow wild rice.

Do Next:

- Indigenous Water Education: Tribal leaders, educators, and state officials convene to explore expanding the Minnesota Department of Education's "Indigenous Education for All"[19] academic standards to the natural sciences, emphasizing water and land stewardship.
- Integrate Indigenous Knowledge: Community organizations and state agencies develop requirements for integrating and consulting Indigenous knowledge in state grant applications, review, and reporting.
- Innovate Regulation: The Minnesota Office of the Attorney General and Department of Tourism explore unique forms of regulation and protections for wild rice, such as a protected designation of origin for wild rice or protecting the intellectual property of harvesting knowledge.
- Educational Opportunities: Educators and community organizations provide educational outreach opportunities for identifying, cultivating, and harvesting wild rice. These opportunities could also include Minnesota history, geography, natural sciences, and experiential learning.

Do Together:

- Programs to Protect: State agencies activate state programming to monitor and protect wild rice, taking inspiration from loon and wolf restoration projects[20]. Funding mechanisms could vary with contributions from wild rice sales, polluter pay principles, and private support.

18 Learn more here: Minnesota leaders improve relations with tribal nations.

19 Learn more here: Indigenous Education for All.

20 Learn more here: Loon Restoration Plan, Wolf Management.

Innovation & Water Quality

Minnesota — renowned for its business prowess[21] and innovation with 17 Fortune 500 companies spanning medical technology, finance, retail, and renowned medical facilities — faces challenges in talent attraction, economic growth, and water management. Ranked 40th for talent attraction and retention and 36th in economic growth, the state grapples with balancing economic ambitions and preserving its vital water resources.

Industries like agriculture and mining, pivotal to Minnesota's economy, often prioritize economic gains over water quality, leading to significant environmental impacts. Neglecting water quality not only causes environmental degradation but also economic setbacks. Clean water is indispensable for agriculture, recreation, drinking water, energy production, and more. Businesses must adopt forward-thinking strategies to prioritize clean water, ensuring sustainability and consumer well-being.

Embracing a Water First decision-making framework is crucial to safeguarding Minnesota's water resources for future generations.

> *"One, we're trying to compete in the economy that exists, and two, we're trying to build the next economy. And the rules are different."*
>
> — Minnesota Business Leader

1. Navigating Minnesota's Water Future: Inspiring Innovation and Workforce Development

The shifting demographics of Minnesota have profound implications for the future workforce in water management, environmental engineering, and innovation. With over 30% of the current water workforce set to retire in the next decade, the state faces a looming shortage of skilled professionals, exacerbated by sluggish population growth[22]. This gap presents a pressing need for innovative solutions in water treatment, filtration, and reuse, as well as a robust and adaptable workforce.

As new water challenges continue to emerge, investing in both innovation and workforce development is paramount to mitigating potential crises. By proactively addressing these challenges, Minnesota can position itself for sustained economic growth and environmental stewardship.

21 Learn more about Minnesota's business landscape here.

22 Learn more here: Minnesota's workforce challenge.

"The water sector lacks kind of a national approach that can scale all of the job opportunities in the water sector that really are family-supporting careers that people can have, that protect public health and protect the environment. We think of water jobs as the true green jobs out there."

— Minnesota Business Leader

By 2029, federal regulations will mandate cities with PFAS contamination levels exceeding the limit to treat and remove these chemicals from drinking water. However, the current technology is prohibitively expensive for many municipalities. A collaborative effort involving private industry, public incentives, and academic institutions could drive research and development of new, cost-effective PFAS removal technologies, thus breaking down the affordability barrier.

Moreover, addressing other water quality challenges demands innovative, scalable, and affordable solutions that benefit all Minnesotans. In doing so, the state can not only safeguard its precious water resources but also create high-paying employment opportunities that contribute to overall prosperity and well-being.

Do Now:

- Market Water Jobs: State agencies and utility companies begin a marketing campaign for water jobs, the true green jobs. Marketing efforts can lead future-focused initiatives toward creating robust pathways by seeding interest.
- Education to Career Pathway: Water utility companies and water technology companies connect with K-12 and higher education to consider developing programs for career pathways for water jobs. In the beginning phases, private industry and education can convene to understand what is present and what may be missing to link the pathway. These can build on the Minnesota Rural Water Association's two-year training apprenticeship program (with a focus on earn-as-you-pay) and on expanding the Minnesota State Colleges and Universities system's one-year and four-year water-related degrees.

Do Next:

- Reskill For Water: State agencies, higher-education institutions, community organizations, and private companies should establish programs to reskill the workforce for water jobs, especially mining and manufacturing. Many water jobs involve technical skills found across sectors, allowing for the transfer of personnel with minimal additional training. Additionally, water utility jobs often come with on-the-job training, which reskilling programs can build upon.
- Innovation Hubs: State agencies, higher-education institutions, and private companies set up water innovation hubs with accelerator programs, externship opportunities, and incentives for high-skill water job opportunities. The built infrastructure for innovation, along with marketing campaigns that seed interest, can lead to a robust ecosystem around water-centric careers.

Do Together:

» Water Entrepreneurship: State agencies and entrepreneurial support organizations encourage innovation in water treatment, filtration, and reuse systems through tax credits, competition rewards, and low-interest business loans. Collaboration across sectors can increase the attractiveness of water innovation in Minnesota.

2. Boosting Sustainable Agriculture: Converting Consumer Tastes for Water Quality and Economic Growth

Kernza, a perennial crop hailed as a solution to the challenges posed by climate change and growing food demands, was developed over a decade ago but has yet to fully realize its potential[23]. While Kernza boasts significant advantages over traditional wheat crops, such as its ability to thrive with less water and soil erosion, its comparative yield remains lower, resulting in higher production costs and limited availability for most consumers. However, this setback underscores the importance of exploring other perennial and cover crops to address market needs and transform our food systems toward sustainability.

Consumer demand plays a pivotal role in driving changes in supply chains and raising awareness about the impact of food production on water resources. This can catalyze a shift toward more sustainable practices. Diversifying diets and creating engaging experiences that promote the development of new crops aligned with sustainable agriculture practices are essential strategies for fostering consumer interest and demand.

Tribal leaders and communities, with their deep understanding of native foods and sustainable practices, serve as invaluable guides in promoting sustainable agriculture. By connecting consumers to the concept of sustainable agriculture through the lens of water quality, we can stimulate economic incentives for its adoption and expansion.

Farmers who embrace sustainable practices play a crucial role as stewards of the land and guardians of Minnesota's water resources for future generations. Supporting these farmers not only benefits their individual and collective well-being but also safeguards the future of water in our state.

Research demonstrates that on-farm profits can significantly increase with consumer and government support for startup costs and transitioning to sustainable agriculture practices. The benefits of investing in sustainable agriculture far outweigh the costs, offering a promising path toward a more resilient and prosperous future for Minnesota[24].

Do Now:

» Conscious Consumerism: Individuals and organizations support the movement with their wallets; consumers should look for perennial and cover crop products at farmer's markets, grocery stores, and restaurants. Conscious consumers invest in innovation and the promotion of sustainable products.

23 Learn more here: The Promise of Kernza, Consumer's Taste, General Mills & Kernza, Multifunctional crop.

24 Read the research here: Putting Down Roots.

Do Next:

- Innovate Food: Food producers and government entities innovate new uses and best practices to maximize harvest and use of perennial and cover crops. As home to three Fortune 500-level food processing companies and several others with a presence in the state, the funds and infrastructure for investment in innovation are available.
- Highlight Successes: Food producers, farmers' associations, and grocery stores highlight food products' impact on water as part of a consumer awareness campaign. Similar to the Water For All label by Continental Fresh and Vanguard[25], label products that utilize sustainable farming practices or come from water quality-certified farms for consumer awareness and support.

Do Together:

- Perennial Restaurant Hub: Economic developers, small business owners, food producers, and the government should establish a hub for restaurants in Minnesota that embrace foods that support water quality. This development strategy attracts tourism, innovation, and investments.
- Food Innovation Incubator: Economic developers, private industry, government agencies, and community organizations establish an incubator for food products that utilize perennials and cover crops and offer financial and technical support. This complements aspirations for sustainable food products, locally made products, restaurant hubs, and even agritourism opportunities.

3. Advancing Water-Friendly Fuels: Empowering Research for Sustainable Energy Solutions

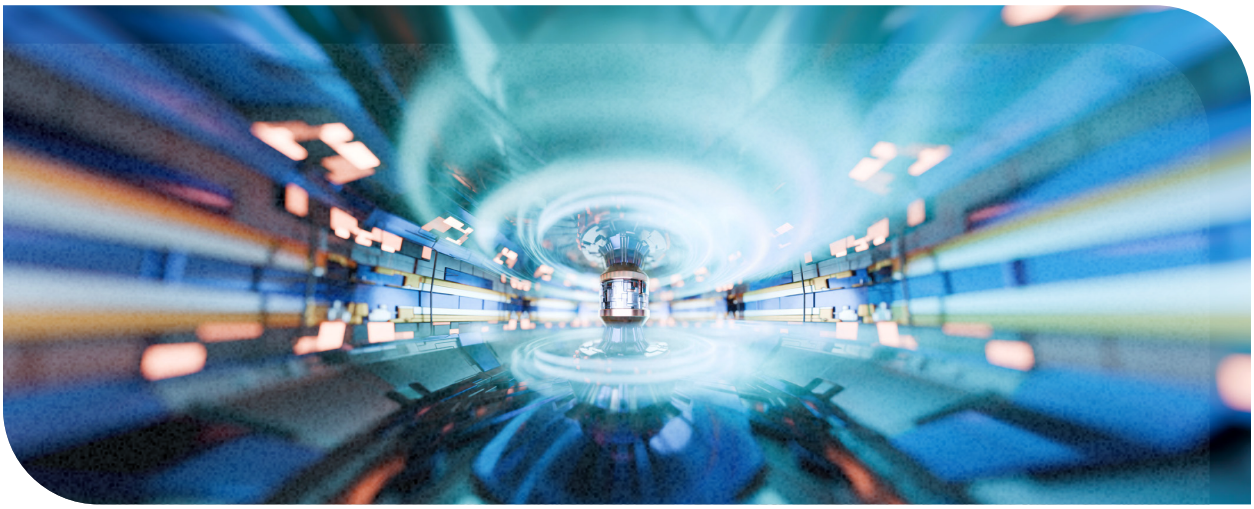
Traditional fuel sources pose significant environmental risks, with emissions evaporating into the air and potentially returning as acid rain or contaminating water sources through runoff. The global pursuit of alternative fuel sources is intensifying, with ethanol long heralded as a more sustainable option. However, the water impact of ethanol production has often been overlooked, especially considering its reliance on water-intensive processes and its association with cash crops like corn, which contribute to nitrate runoff and soil degradation.

In recent years, green and blue hydrogen fuels have emerged as promising alternatives. The U.S. Department of Energy has initiated several regional projects, including the Heartland Hydrogen Hub in Minnesota, North Dakota, and South Dakota, to explore the potential of hydrogen as a fuel source[26]. However, further research is needed to fully understand the implications of hydrogen production on water quality. Concerns remain about the potential increase in atmospheric NOx levels and the risk of acid rain associated with hydrogen production.

As we navigate the transition to alternative fuels, it's essential to prioritize water-friendly options that minimize environmental impact and protect our natural resources for future generations.

25 *Learn more here: Water For All Labeling.*

26 *Learn more here: Hydrogen Hubs.*



Do Now:

- Winter Seed Oil Advocacy: Individuals and community organizations engage with the Consortium for the Sustainable Aviation Fuel Hub in Minnesota to voice their support for the best possible outcome of the initiative. SAF developed with winter seed oils, a cover crop, would bring benefits beyond cleaner air emissions. Using winter seeds over corn for SAF would reduce fertilizer use and thus nitrate contamination, runoff contamination, and soil erosion.
- Hydrogen Fuel Impact: Researchers, state agencies, and private companies explore the impacts of producing hydrogen fuel on water prior to a full launch or backing of the operations. Minnesotans deserve the best possible alternative fuel sources that don't compromise our most precious resource.
- Shared Goals: Farmers and the members of the Sustainable Aviation Fuel Hub convene to create shared goals for rural prosperity as an outcome of the hub's development. Whether sustainable aviation fuel is made with corn or winter seed oil, farmers and rural communities are vital to the effort's success.

Do Next:

- Increasing Solar and Wind Capacity: Private and public sectors invest in research and development of truly clean energy options, including increasing solar and wind power's productivity and storage capabilities. This will support the energy transition and have profound impacts on water quality.
- Impact Statistics: Utility and energy companies share water impact statistics with consumers to promote awareness and transparency. The City of San Antonio's utilities gamified water use through transparency and comparative statistics. Since the initiative started, water use has decreased by at least 5% per household.

Do Together:

- Strategy for SAF: The coalition supporting the Sustainable Aviation Fuel Hub develops guides and strategies to scale across the country to fully decarbonize air travel. Minnesota will lead the nation in the adoption of sustainable aviation fuel as well as premier water management.

Who You May Want on Your Team

To amplify the efforts of our state agencies, we propose engaging diverse stakeholders including community organizations, watershed management districts, Indigenous-led groups, industry pioneers, and economic development agencies. Together, we aim to catalyze a powerful movement dedicated to advancing water stewardship and resilience. The following list is not exhaustive.

Akiing is a community organization from the White Earth Reservation dedicated to culturally restoring the land, economy, and ways of life for the Great Lakes region. The organization supports the development of cooperative models for farming, hemp, solar, and green construction.

Bassett Creek Watershed Management Commission is a watershed management organization in the western metro area. The commission oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Black Dog Watershed Management Organization serves Northwest Dakota County's watershed. The organization oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Brown's Creek Watershed District in Washington County oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Capitol Region Watershed District serves most of St. Paul and parts of the Mississippi River. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Cargill is an agricultural company with strong ties to farmers across the country. Cargill has committed to a water-positive impact in its operations in priority zones by 2030.

Carnelian-Marine-St. Croix Watershed District serves the east metro area that shares the St. Croix River. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Carver County Watershed Management Organization serves Carver County. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Clean Water Action Fund in Minnesota focuses on advocating for safe drinking water by addressing lead contamination, outdated infrastructure, and emerging pollutants. They work on education, community engagement, and policy changes to ensure clean water access for all communities.

Comfort Lake Forest Lake Watershed District in the north metro area, supporting capital improvement projects, permitting, and water monitoring. The district set a goal of reducing phosphorus beyond state requirements.

Comunidades Organizando el Poder y la Accion Latina (COPAL) is a Minnesota community, member-based organization that mobilizes Latino community leaders statewide for environmental justice, health and wellness, and organization and leadership. In June 2024, COPAL members joined the Center for Popular Democracy to advocate for workers in extreme heat. In May 2023, COPAL joined other partner organizations to develop Equitable Grid Principles for a just transition.

Coon Creek Watershed District serves central Anoka County. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Conservation Minnesota is a nonprofit organization on a mission to protect "the Minnesota you love" by bringing Minnesotans together based on a shared love and mobilizing toward action. The Minnesota Waters program engages lake associations and river organizations to restore and protect the water quality.

Eagan—Inver Grove Heights Watershed Management Organization serves the Eagan area. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Ecolab, headquartered in Minnesota, offers solutions for water, hygiene, and inflection prevention; solutions for decreasing water use; and technology for water protection, conservation, and treatment. In March 2024, Ecolab published its inaugural Watermark™ report, which reveals consumer perceptions of access and availability of clean water around the world.

Elm Creek Watershed Management Commission serves the area around Elm Creek. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. Recently, Fish Lake, which resides in this watershed, was removed from the impaired waters list.

Forever Green University of Minnesota is a multi-sector partnership to advance year-round productive living cover on farmland across the state. The initiative promotes research to improve perennial crops and new uses.

Freshwater Society is a nonprofit organization focused on preserving water in Minnesota through advocacy, research, stewardship programs, and water workforce pathways. Freshwater leads groundwater governance work in the Great Lakes region.

Friends of the Boundary Waters is an advocacy organization for the Boundary Waters Canoe Area (BWCA) Wilderness. The organization takes a holistic view of the BWCA with economic development and sustainability principles. It hosts a program to connect students from diverse backgrounds and underserved communities to the nature and wildness of the BWCA called "No Boundaries to the Boundary Waters."

Friends of the Minnesota Valley is a community organization that works with the Minnesota River Watershed to promote a healthy and sustainable river area with grassroots organizing. A program hosted by the organization includes high school students in water monitoring and stewardship of the Minnesota River.

Friends of the Mississippi River (FMR) supports the adoption of clean-water crops and a market for them. In January 2024, FMR, with the University of Minnesota's Forever Green Initiative and Ecotone Analytics, released a report on the environmental and economic benefits of continuous living cover crops. FMR advocates for protecting, restoring, and enhancing the Mississippi River and the surrounding watershed.

General Mills, headquartered in Minnesota, is a Fortune 500 company with a written plan to mitigate and adapt to future water risk as well as develop strategic partnerships and invest in new solutions.

Greater MSP is a regional economic development organization working to create partnerships that promote economic well-being for the Greater Minneapolis area. Greater MSP is a key partner of the Sustainable Aviation Fuel Hub collaboration.

Indigenous Peoples Task Force is a community organization that initially focused on delivering culturally appropriate education and care for Indigenous peoples regarding HIV but has evolved to include many aspects of health for Indigenous communities. Indigenous Peoples Task Force is a sponsor organization of Nibi (water) walks, an extended ceremony to pray for water.

Lower Minnesota River Watershed District serves the Minnesota River Valley to the confluence of the Mississippi River. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. It also provides channel maintenance and promotes education through recreational opportunities.

Lower Mississippi River Watershed Management Organization serves the southeast metro area waters. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Lower Rum River Watershed Management Organization serves the northern metro area. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Metropolitan Council is a regional policy-making and planning agency, and a provider of essential services, including water, waste management, and transportation. The Met Council provides grants to increase water efficiency in the region and a plan for sustainability by 2050. The council was part of the partnership that won the Clean Water Champion award for the St Paul Saints' stadium stormwater management.

Middle St.Croix Watershed Management Organization serves the east metro along the St. Croix River. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. It is also a member of the East Metro Water Resource Education Program, which supports education and outreach programs across the area.

Midwestern Environmental Justice Network is a grassroots organization that supports other organizations throughout the Midwest with a focus on environmental justice. Recently it was selected as a Thriving Communities Regional Grantmaker along with the Minneapolis Foundation, NDN Collective, and RE-AMP.

Minnehaha Creek Watershed District serves southwest Minneapolis and the southwest metro area. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The district focuses on balanced urban ecology by connecting people to water and nature.

Minnesota Center for Environmental Advocacy (MCEA) is a team of legal and policy experts dedicated to protecting Minnesota's environment, natural resources, and public health. They work through legal action, policy advocacy, and partnerships to enforce environmental laws, hold polluters accountable, and push for sustainable practices.

Minnesota Coalition of Lake Associations (COLA) is a volunteer organization dedicated to protecting and improving the waters and shorelands of Minnesota through sharing best practices and advocacy. Members include lake and river associations. The organization promotes communication and coordination between members to advance conservation and restoration efforts.

Minnesota Farm Bureau is a membership-based organization that supports farmers and rural communities through legislation advocacy, continuing education opportunities, and community engagement activities. The Minnesota Farm Bureau is a state chapter of a nationwide American Farm Bureau Federation; at the recent national conference, the Minnesota chapter won awards for its innovation and community events.

Minnesota Farmers Union is a membership-based organization that supports farmers and rural communities through legislation advocacy, cooperation, and education. The Minnesota Farmers Union just announced its second round of grantees for the Cooperatives for Climate program, advancing new partnerships and community efforts for climate-resilient food systems.

Minnesota Lakes and River Advocates is a membership-based organization of lake associations across the state. Its focus is on safeguarding cabin and lake culture through affordability, water quality improvement, shoreline restoration, aquatic invasive species control, and transparency in the permitting and governance processes.

Minnesota Pollution Control Agency is the leading state agency for protecting and restoring water from pollutants. This organization has the authority to issue fines for noncompliance with regulations and offers water monitoring programs.

Minnesota Waterfowl Association is an organization for the protection and preservation of wetlands and waterfowl habitats in the view of hunting. The organization funds habitat restoration projects across the state.

Minnesota Watersheds brings together member watershed management organizations to support and advocate for watershed leaders and broader initiatives across the state.

Mississippi Park Connection is an organization that hosts programming along the Mississippi National River and Recreation Area. Mississippi Park Connection utilizes recreation-based engagement methods to create and sustain water stewards, such as "paddle with a ranger" and "yoga in the park" programs.

Mississippi Watershed Management Organization is an organization focused on the watershed surrounding the Mississippi River in the Twin Cities and offers programming on arts, monitoring, development projects, and water stewardship. A current active project includes a 53-acre redevelopment at the Upper Harbor in North Minneapolis toward a city park, housing, and stormwater management.

MN350 is a community organization that advocates for a just transition for all Minnesotans. Home to campaigns for clean heat, electric school buses, transparency in the oil industry, and accessible transportation.

MN FISH is a grassroots fishing advocacy group for clean water and healthy fish habitats — connectWe ng recreation and advocacy for the benefit of Minnesota waters.

Morris Model is a collaborative group of community organizations and members in Morris, MN, focused on creating a shared vision for a sustainable community thriving. This organization has experience in rural community development and participatory decision-making.

Native Sun Community Power Development, an Ojibwe-owned organization, focuses on a just energy transition. It is committed to clean energy, which leads to clean water.

Niibi Center is a community organization that is a hub of knowledge on the traditions, values, and practices of Anishinaabe culture. One of the many program offerings includes a Water Protectors Support Network for the women leading the way in the fight to protect water.

Nine Mile Creek Watershed District serves part of the south metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The Discovery Point — an educational facility that includes walking trails, art, and programming — is the watershed district's home.

North Cannon River Watershed Management Organization serves part of the south metro along the Cannon River. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The area is dominated by agriculture, and the organization supports agriculture through programs that promote water stewardship.

Northern Waters Land Trust is a nonprofit organization that intends to protect wildlife, lakes, rivers, and natural landscapes for the benefit of people and the environment in North Central Minnesota — a lake-rich region. The organization's programs include fishery protection, protection for lakes of biological significance, and education and outreach programs, especially working with lake homeowners.

Pentair is a global water technology company that specializes in providing innovative solutions for water treatment, filtration, and sustainability. They work to deliver clean, safe water across the world, helping industries, communities, and households manage water efficiently and reduce waste.

Prior Lake-Spring Lake Watershed District serves part of the south metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. This includes volunteer carp monitoring and a Farmer Lead Council.

Ramsey-Washington Metro Watershed District serves the east portion of Ramsey County and West Washington County. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. It welcomes schools with learning opportunities.

Regional Council of Mayors is a consortium of mayors in and around the Twin Cities sharing ideas, working on challenges, and learning about best practices. The council was first founded because of a need to coordinate around water challenges.

Rice Creek Watershed District serves a portion of the north metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. It also includes collaboration with Rice Creek Water Trail, water stewardship programs, and more.

Richfield-Bloomington Watershed Management Organization serves a portion of the south metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Riley Purgatory Bluff Creek Watershed District serves part of the southwest metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The district engages youth with school and junior watershed explorer programming.

Sea Grant University of Minnesota is a university-based national network of 34 programs that promote citizen science and address issues related to Minnesota's water and associated economies. One program involves aquaculture to increase sustainable fishing practices.

Scott Watershed Management Organization serves Scott County. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. It was initially created to monitor carp across the area.

Shingle Creek Watershed and West Mississippi Watershed Management Commissions serve the east-central portion of Hennepin County. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

South Washington Watershed District serves the southern portion of Washington County waters. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The district takes part in the East Metro Water Resource Education Program.

Sunrise River Watershed Management Organization serves a portion of the north metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Sustainable Aviation Fuel Consortium is a partnership between Greater MSP, Bank of America, Delta Air Lines, EcoLab, and Xcel Energy to establish a Sustainable Aviation Fuel Hub in Minnesota, which has a profound impact on our water supply.

The Food Group is an organization that hosts the Big River Farm program that supports emerging farmers with sustainable agriculture practices and beginning land opportunities.

The Nature Conservancy is a national organization with a chapter in Minnesota working with partners to protect waters, forests, and grasslands. The Nature Conservancy focuses on nature as a solution to combat a changing climate. In Minnesota, the chapter works with farmers to promote sustainable agriculture practices for the health of our waterways.

The Science Museum of Minnesota; St. Croix Watershed Research Station provides a space for scientists to study water around the world, especially understanding clean water and human impacts.

Truterra is a Land O'Lakes subsidiary, headquartered in Minnesota, focused on sustainable agriculture. It partners with water stewardship organizations and farmers to sequester carbon, improve soil health, and improve water quality.

Upper Rum River Watershed Management Organization serves a portion of the north metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs.

Urban Land Institute is a national membership-based organization with a Minnesota chapter focused on creating thriving and sustainable communities.

U.S. Water Alliance is a membership-based national organization advancing a "one water" approach. Recently named a federal environmental finance center to provide technical assistance for grant applications, the U.S. Water Alliance hosts communities of practice to share best practices and address challenges.

Vadnais Lake Watershed Management Organization serves a portion of the northeast metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The organization also spotlights neighborhoods that demonstrate exceptional water stewardship.

Valley Branch Watershed District serves a portion of the east metro waters. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The district takes part in the East Metro Water Resource Education Program.

Vermillion River Watershed serves a portion of the south metro. It oversees permitting for projects that impact the watershed, water stewardship programs, land conservation, restoration efforts, and monitoring programs. The organization also promotes volunteering with the Wetland Health Evaluation Program and recreational opportunities in the area.

West Central Initiative is a regional economic development and community organization in northwest Minnesota. It utilizes the United Nations' Sustainable Development Goals to organize and advance goals for surrounding communities.

On Our Radar

We are inspired by the following mandates, rulings, and proposed bills concerning water in Minnesota. As we advance our efforts to foster narrative change and activate a Water First movement, staying informed about ongoing policy discussions at the local, state, and national levels is crucial. These developments signal a proactive approach to water governance, reflecting our collective commitment to prioritize water conservation and sustainability initiatives that will benefit our communities and environment alike. The following list is not exhaustive.

EPA Ruling on Karst Region: The EPA has mandated that the Minnesota Pollution Control Agency (MPCA) address the growing problem of nitrates contaminating water in southeastern Minnesota. The Department of Agriculture, Department of Health, and MPCA responded to the mandate with a work plan that begins with providing alternate water sources and aspires toward passing bills for nitrate reduction.

SF 1416/HF 1618 - Prove It First for Mining in Minnesota: Introduced in the Senate, Bill 4316 states that prior to new mining in Minnesota, it must be proven that a similar operation exists and has not caused harm to the environment for at least 10 years.

SF 3541/HF 3345 - Repeal of the Prohibition of Bag Bans by Municipalities: A proposal to repeal a 2017 bill has reached the House and the Senate. The previous bill banned municipalities from restricting plastic bag use in their city. This repeal will allow for plastic bag fees and bans to exist.

SF 4311/HF 4135 - Establishment of Drinking Water Fee to Nitrogen Fertilizer: This proposed bill would establish a fee on the purchase of nitrogen fertilizer to be used to monitor and remove nitrates from drinking water. The bill intends to address the EPA mandate on addressing nitrate pollution in the Karst region.

SF 4316/HF 4231 - Amortization Authorization of Certain Property: This proposed bill allows cities to require polluting facilities to close operations and/or move locations after a certain period of time in noncompliance with regulations.

SF 4510/HF 4436 - Flood Mitigation Funding in the Red River Valley: A request from northwestern Minnesota lawmakers for over $57 million in bonding bill dollars to be used for flood control around the Red River area.

Sustainable Aviation Fuel Credit: The Minnesota Department of Agriculture offers a tax credit for any producer of Sustainable Aviation Fuel or blend. The credit is equal to $1.50 per gallon that is produced or blended in Minnesota and sold to a Minnesota purchaser using the fuel for aviation flights from Minnesota.

White Earth Nation Permitting: In 2023, the White Earth Nation, located in the northwest region of Minnesota, announced it would require permits for any water use within 5 miles of reservation land. This announcement came with criticism and logistical challenges. For now, White Earth Nation will only enforce permitting within reservation boundaries but will work with the Minnesota Department of Natural Resources and the EPA to assess the situation and propose solutions.

The Water Conversation: Key Takeaways from the Minnesota Meeting

On October 7, 2024 the Minneapolis Foundation hosted the Minnesota Meeting at Nicollet Island Pavilion in Minneapolis. More than 200 leaders from science, government, business, and communities across Minnesota gathered to learn, share ideas, and get inspired to act on issues affecting the environment.

One session at the event was dedicated to safeguarding Minnesota's water, where an abbreviated version of this blueprint to drive collective action on water quality was unveiled. The session created a space for attendees to share perspectives, identify opportunities for action, and emphasize the critical need to address water challenges through equity-driven solutions.

We collected responses from 146 individuals, representing themselves or their organizations across 102 affiliations, offering a diverse array of perspectives on water issues in Minnesota.

Of the 146 respondents, 116 chose to answer a question about their involvement in water issues. While 40 respondents identified as leaders in water initiatives and 25 reported regular involvement, many others are either occasionally engaged (34) or rarely involved in water issues (17). On a scale from 1 (no involvement at all) to 5 (leading water initiatives), the average engagement level was 3.54, highlighting a strong foundation of leadership while revealing significant opportunities to mobilize and engage a broader spectrum of stakeholders in water-related efforts.

When asked which narrative change tools they felt best positioned to leverage in supporting water initiatives, respondents could select up to five options. Raising awareness by educating the public and highlighting the urgency of water issues emerged as the most popular choice, with 100 respondents identifying this as a key strength. Influencing policy through engagement with policymakers (78) and empowering communities by amplifying voices and building local capacity (72) also ranked highly, reflecting strong alignment around advocacy and grassroots action.

Mobilizing support through collaborations and grassroots efforts was selected by 61 respondents, while 43 indicated they could fund water initiatives. Of the 43 respondents who indicated they could fund water initiatives, this number reduces to 26 when accounting for those belonging to the same organization. These respondents represent a mix of organizations, individual donors, and prospective donors, highlighting a more concentrated yet diverse pool of financial contributors within the broader network. It is worth noting that four organizations chose all five options.

We also asked respondents to share their ideas for addressing Minnesota's water challenges, and their responses reflect a deep well of creativity and commitment to safeguarding this vital resource. Recurring themes emerged around community-driven solutions, equitable policy advocacy, and sustainable land use practices, underscoring a shared understanding that water challenges are interconnected with access, agriculture, and climate resilience.

Attendees further highlighted innovative approaches, such as rainwater recycling for urban farming, micro hydropower from rainfall, solar panels over reservoirs, and reimagining the Upper Harbor Terminal as an environmental impact center.

This is what we heard:

Land Use and Conservation Initiatives

- **Expanding Protected Areas:** Advocacy for expanding the Boundary Waters Canoe Area Wilderness and monitoring the water quality in waters flowing into it.
- **Shoreline and Wetland Restoration:** Projects like shoreline restoration, promotion of shoreland buffers, wetland restoration, and initiatives to plant for clean water.
- **Rights of Nature:** Legal recognition of water bodies like the Mississippi River and Wild Rice areas to safeguard ecological balance.
- **Community Engagement in Land Stewardship:** Programs like the Lake Steward initiative and the Minnesota Lakes and Rivers organization bringing together shoreline communities for citizen-led solutions.

As a foundation, we take seriously our role as a convener and incubator for new initiatives, like this work on Water First. At the Minnesota Meeting, we were pleased to announce the next phase of this water work would be handed off to an incredible organization, Conservation Minnesota.

Sustainable Agriculture and Green Infrastructure

- **Regenerative Agriculture:** Continuous living cover crops, crop diversification, winter camelina for sustainable aviation fuel, and reforms in federal crop insurance to support regenerative farming.
- **Reducing Agricultural Runoff:** Targeting agricultural pollutants through partnerships like the Midwest Row Crop Collaborative, and advocating for reduced agricultural pollution.
- **Green Infrastructure with Equity:** Initiatives that support urban watershed districts to prioritize green infrastructure projects with environmental justice as a guiding principle.

Urban and Community Solutions

- **Stormwater Management:** Rain gardens, adopt-a-drain programs, and rainwater recycling for aquaculture and urban farming.
- **Community Resilience Hubs:** Creating networks of community-based resilience hubs to address water and climate challenges.
- **Volunteerism:** Initiatives encouraging community participation, such as lake clean-ups and adopt-a-drain programs.

Policy Advocacy and Awareness

- **State and National Policy:** Calls for state and federal water cabinet positions, comprehensive national water and aquifer policies, and legal reforms to protect water resources.
- **Public Awareness Campaigns:** Weekly media reporting on environmental justice and climate issues, and film series to inspire water conservation action.
- **Source Water Protection Advocacy:** Building on initiatives like the Source Water Protection Collaborative to leverage efforts to support local community partnership and trust-building between community members and individuals with expertise in source water and public health.

Innovative Technology and Energy Solutions

- **Water-Energy Nexus:** Concepts like micro hydroelectric power from residential rainfall, solar panels over reservoirs, and sustainable water re-use systems.
- **Technological Interventions:** PFAS removal systems in city water and projects to reduce particulate pollution into water bodies.

Education and Youth Engagement

- **Youth Programs:** Mississippi River Exploration for youth and raising awareness about urban runoff.
- **Educational Resources:** Free resources from H2O for Life and initiatives connecting students with global water challenges.

Equity and Justice

- Supporting underprivileged and under-resourced neighborhoods with clean water and fostering community-driven grants programs.
- Supporting efforts to reclaim water rights for Indigenous communities and advocate for laws that protect these rights.

Securing Minnesota's Water Future Together

Minnesota stands at a crossroads, where collective action and shared responsibility are essential to safeguarding its most vital resource—water. This blueprint underscores the importance of addressing water quality, access, and jobs as interconnected priorities that demand innovative solutions and bold collaboration. By engaging communities, advancing equitable policies, and fostering economic resilience, we can transform how Minnesotans think, feel, and act about water. Together, we have the power to secure clean, abundant water for all, ensuring a sustainable future and cementing Minnesota's leadership in water stewardship.

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About Imagine Deliver

Imagine Deliver is an award-winning, woman-owned B-Corp based in Minneapolis, dedicated to transforming civic and social systems toward bold, inclusive futures for everyone. As a national leader in engagement, insights, and inclusive design, we partner with clients across community development, philanthropy, government, healthcare, and financial services to take bold action together and create systems where everyone thrives.

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