Clean Water Council Meeting Agenda Monday, May 19, 2025 9:00 a.m. to 2 p.m.

IN PERSON at MPCA offices in St. Paul with Webex Available (Hybrid Meeting)

9:00 Regular Clean Water Council Business

- (INFORMATION ITEM) Introductions
- (ACTION ITEM) Agenda comments/additions and approve agenda
- (ACTION ITEM) Meeting Minutes comments/additions and approve meeting minutes
- (INFORMATION ITEM) Chair, Committee, and Council Staff update
 - Policy Committee Update
 - Budget and Outcomes Committee Update
 - Leveraged Funds Documents from BOC
 - o Staff update
 - New Administrator

"A conflict of interest, whether actual, potential, or perceived, occurs when someone in a position of trust has competing professional or personal interests, and these competing interests make it difficult to fulfill professional duties impartially. At this time, members are requested to declare conflicts of interest they may have regarding today's business. Any member who declares an actual conflict of interest must not vote on that agenda item. All actual, potential, and perceived conflicts of interest will be announced to the board by members or staff before any vote."

9:45 (INFORMATION ITEM) Legislative Update on Clean Water Fund Recommendations

10:00 (INFORMATION ITEM) Changes to Fish Consumption Advice

- Tannie Eshenaur & Frieda Von Qualen, Minnesota Department of Health
- 10:45 Break

11:00 (DISCUSSION ITEM) CWF Outcomes

12:00 Lunch

12:30 (DISCUSSION ITEM) Outcomes Discussion Continued

- 1:00 Public Comment
- 1:15 Farewell, Paul!
- 2:00 Adjourn

Steering Committee Meets Directly After Adjournment

Clean Water Council

April 21, 2025, Meeting Summary

Members present: John Barten (Chair), Steve Besser, Eunice Biel, Dick Brainerd, Gail Cederberg, Steve Christenson, Tannie Eshenaur, Warren Formo, Brad Gausman, Kelly Gribauval-Hite, Rep. Steve Jacob, Justin Hanson, Holly Hatlewick, Sen. John Hoffman, Annie Knight, Chris Meyer, Fran Miron, Jeff Peterson, Peter Schwagerl, Glenn Skuta, and Jessica Wilson.

Members absent: Rich Biske (Vice Chair), Jason Moeckel, Ole Olmanson, Rep. Kristi Pursell, Marcie Weinandt, and Sen. Nathan Wesenberg.

Others present: Paul Gardner (CWC), Brianna Frisch (MPCA), Margaret Wagner (MDA), Frieda VonQualen (MDA), Judy Sventek (Met Council), Jim Stark (SWMP), Sophia Walsh (MDH), Alycia Overbo (MDH), Tim Kelly (Coon Creek Watershed District), Jeremy Maul (BWSR), Annie Gunness (UMN), Chris O'Brien (Freshwater), Trevor Russell (Friends of the Mississippi River), Lucas Sjostrom (MN Milk Producers), Steve Robertson (MDH), Paul Schollmeier, Jennifer Berquam (Olmsted County), Caitlin Meyer (Olmsted County), Sheila Vanney (MASWCD), Brad Jordahl Redlin (MDA), Julie Westerlund (BWSR), Skip Langer (Olmsted County)

To watch the Webex video recording of this meeting, please go to <u>https://www.pca.state.mn.us/clean-water-council/meetings</u>, or contact <u>Brianna Frisch</u>.

Regular Clean Water Council Business

- Introductions
- Motion to approve the April 21st meeting agenda and March 17th meeting summary by Dick Brainerd, seconded by Chris Meyer. Motion carries unanimously.
- Chair, Committee, and Council Staff update:
 - Policy Committee Update: April 28th meeting canceled.
 - Budget and Outcomes Committee Update
 - o Staff Update:
 - Forever Green will have a two-day, invitation-only event. Watch for an email with details.
 - The Background Stories communications contract is complete. There are three new fact sheets in the meeting packet and on the Council's webpage. They complement the story map.
 - Senator John Hoffman has replaced Senator Nicole Mitchell on the Council.
 - The Attorney General Ellison's Office has put together a Task Force on the Future of Minnesota's Waters. Paul reached out to the policy staffer working on it to find out more.
 - Field Tour will be in September. The Council usually does a Monday-Tuesday versus Sunday-Monday two-day event, but it is up to the Council.
 - Voting Council members need to sign a Conflict of Interest form each year.
 - o The new Clean Water Council Administrator will be Jen Kader!

Legislative Update on Clean Water Fund Recommendations (Webex 00:38:00)

- There has not been a bonding bill passed for some time. This typically supports the Public Facilities Authority for drinking water and wastewater.
- The tax bill supports Soil and Water Conservation District (SWCD) aid. There has been a push to increase the amount they receive. Tax and bonding bills are passed near the end of session.
- There is a split House (67-67), so some of the finance bills might be a little more harmonious than previously.
- The Legacy bill in the Senate has been completed in committee and includes your recommendations.

Drinking Water Outcomes, Minnesota Department of Health (MDH), by Sophia Walsh and Alycia Overbo (*Webex* 00:44:30)

 MDH's drinking water programs employ a systems approach. They look at water from the drinking water source through the tap. The drinking water sources can involve delineating the recharge area for a public well, inventorying private wells, supporting drinking water testing, supporting communities with treatment and as necessary, providing technical assistance to public water system operators and private well users, ensuring that the drinking water is safe at the tap.

- Private well users do not have the same regulatory protections as public water consumers. They are on their own to know if their drinking water is safe after well construction.
- Drinking water measures reflect the Clean Water Council's Strategic Plan. CWFs enable their source water
 protection efforts. A lot of the Safe Drinking Water Act monitoring and treatment for public water systems is
 through federal and state dollars (not CWFs). However, the CWFs allow scanning the horizon for potential
 threats, like emerging contaminants (i.e., lead water pipes) or issues with water reuse (i.e., pathogens). The
 CWFs support private well testing, private well inventory, and private well outreach and education.
- Goals and Metrics:
 - Public water systems: Help develop source water protection plans for both groundwater and surface water systems. These efforts started before the CWFs began, but there was a steep increase after the CWFs began, and now it is tapering off.
 - Public water system goals: Eighty-seven percent of community groundwater systems have a DWSMA, 30 percent of community surface water systems have source water assessment. Forty percent of noncommunity water systems serving at-risk populations have a source water protection plan.
 - Public water systems: There are 117,600 acres protected out of a goal of 400,000 acres of vulnerable land in DWSMAs statewide by 2034.,
 - Public water systems: Provide financial assistance for 50 percent of proposals for source water implementation activities using source water protection competitive grants, source water protection plan implementation grants, and source water protection transient grants. Demand is high, and they leverage other program funds to help meet demand. These are small grants (up to \$10,000). Over 2,000 grants have been awarded totaling more than \$16 million dollars.
 - Drinking water (public and private): We established an ambient drinking water monitoring program in 2024. The Contaminants of Emerging Concern (CEC) initiative screens and develops guidance for contaminants in drinking water. They have screened 195 contaminants and developed 55 guidance values. They can detect PFAS analytes in drinking water.
 - Protect and restore groundwater: Local organizations use Groundwater Restoration and Protection Strategies (GRAPS) reports to develop water management plans. This involves maps and data to describe groundwater conditions in the watershed, identify local groundwater concerns, and outline strategies and programs to address concerns.
 - Protect and restore groundwater: All newly constructed private drinking water wells are tested for nitrate. Since 1992, there has been a general increase in the percentage of new wells that have nitrate levels above the drinking water standard.
 - In response to the EPA petition in southeastern Minnesota, they developed a pilot program to have people request kits, return kits, and provide remediation to their private wells.
 - Private wells: They think they only know locations of 79 percent of private wells, and they are in the Minnesota Well Inventory (MWI). Their target is 90 percent. Local efforts continue identifying more.
 - Private wells: Provide financial resources to private well owners for well testing. Twenty counties and one tribal nation have received grant dollars.
 - Private well mitigation. CWFs support the mitigation navigator (staff).
 - As of March 31, there are 1,425 tests requested, 523 completed water tests sent back to well users, and 164 mitigation systems have been installed in the eight-county SE MN area.
 - Next steps include getting staff trained on Data Viz and interpreting the data/information.
 - Private wells: Encourage local ordinances that require well testing and disclosure at the time property is transferred and in rental properties. The MDH has example ordinances local governments could look to as guidance. As of 2024, Dakota County is the only county that requires the seller test the well water and share the results with the buyer at property transfer. No counties have testing requirements.

Questions/Comments/Discussion:

- Dick Brainerd: That is a lot of technical information. I don't know what you are trying to tell me other than there are issues with wells and drinking water. I think about the emerging trends (nitrate, manganese). We do not know how many wells there are. There are many unsealed wells too.
- Chris Meyer: There might be some pieces of information missing to help me make sense of what I was hearing. It is important to understand that not all wells are in the well index, and why. The wells we don't know about are the old wells, and we need to locate them. There were also some things I did not understand

right away, such as CEC. I guessed as we went more on that topic. In some cases, you mentioned the numbers, but they were not on the slide! So, I couldn't absorb it as much. For example, the number of private well testing kits that were requested in the eight-county area in southeastern Minnesota.

- Steve Besser: The thing I am most concerned about are the sources of the contaminants. Forty-two percent of the wells tested had some level of lead! What was the distribution in the public systems? *Answer:* Those were the results from southeastern Minnesota private wells. That was forty-two percent of the 500 or so tests complete in the last few months. That was a huge surprise to us. Likely it is coming from the components in the well systems somewhere, or somewhere in the well pump. We did not anticipate that.
- John Barten: There is a lot of rebuilding of lakeshore properties, and they mostly have private wells. Are they using the old wells or building new wells? *Answer:* It would probably depend on where the well is.
- Glenn Skuta, Minnesota Pollution Control Agency (MPCA): When I look at the CEC slide, I think it is incredible. Prior to the CWFs the MDH looked at 13 CECs and developed guidance for 10, and now they are looking at 195 CECs with 55 with guidance! There is more work to do, but it is amazing so far. The more we show progress in time, it speaks more to people. *Answer from Tannie Eshenaur:* We may need to adjust the graph. Before CWFs the number was 0. It was hard to find those first CECs in people's water and talk to them, but not be able to tell them the guidance information. We could only tell them we are working on it, and we will come back to them when they know more. Part of public health is to protect and look ahead, and the CWFs are helping us with it.
- Brad Gausman: It is helpful to have messaging on the contaminant source to tell a story.

Olmsted County Soil Health Program – Southeast Minnesota Regional Program Expansion, by Skip Langer, Olmstead County Soil and Water Conservation District (*Webex 01:48:30*)

- Background: There were rising nitrate trends in Olmsted County groundwater. Well drillers were digging deeper wells that cost more. In 2021, the county and SWCD met to discuss a groundwater protection program. A soil health practice implementation idea rose to the top. In 2023, they held their pilot program. This was funded through America Recovery Plan Act out (ARPA). In late 2023, the EPA petition came about for the eight-county area to identify nitrate as a public health threat.
- Southeastern Minnesota has vulnerable geology, shown by well testing results from MDA. There are areas where 25 percent of the wells test for nitrate at 5 mg/l, and some areas where it is 10 percent. The TAP In Collaborative works to get a safe drinking water source (targeting homes with pregnant women and young children) with reverse osmosis. We have now placed over 150 systems across the eight-county region.
- Now, they are addressing the long-term issues. Commercial fertilizer came in the 60s and 70s for agriculture, that was the timeframe that we saw nitrate leaching ramp up. The plants cannot absorb all the nitrate, and it leaches into the groundwater.
- The development of the Soil Health Program:
 - Goal: Improve soil quality and protect groundwater through adoption of sustainable practices. Another is to offer flexibility to farmers, and use farmer vetted options.
 - Provide a "menu" options approach:
 - Enhance existing cover crop program
 - Incentivize alternating crops and small grains
 - Incentivize haying and grazing activities
 - Payments are outcomes based:
 - Enrollment acreage limit = 150 acres
 - Multiple enhancement options
 - Max annual payment =\$15,750
 - Benefits: reduce nitrate leaching, improve nitrogen retention, limit soil erosion, and increase soil microbiology.
- Soil Health Program Summary:
 - Farmers were able to use a mobile app to fill out their survey for certification (they can do it from the tractor while on the field). The ease of use was simple for folks and kept the momentum.
 - They started it in 2023 as a pilot program. There were 66 producers who participated, with 87 contracts certified. Total program acres = 6,468 (with a total over acres of 13,820).

- In 2024 (year 2) they had 113 producers with 166 contracts certified. There were 60 new farmers enrolled in 2024! The total program acres = 12,665 (total overall acres of 19,095).
- In 2025 (year 3) they have 118 producers enrolled to date. There are 27 new farmers to the program. Nearly 10,000 acres of cover crops.
- Additionally, they were seeing a 2:1 ratio of planting cover crop acres for what the program was paying for, which was great for them to see.
- Data and science are important to prove the program is working. Therefore, in five years, they have 984 samples from tile lines showing a 27 percent reduction in tile drainage nitrate measurements from the cover crop areas. They are also able to estimate a direct program reduction (what they paid for in the program) of approximately 295,000 pounds of nitrogen, which is twelve semi-trailer loads of urea fertilizer. They were able to estimate an indirect program reduction (not paid for in the program) of 425,000 pounds of nitrogen, which is seventeen semi-trailer loads of urea fertilizer. This is through different sample sources.
- Key Take Aways:
 - Farmer engagement
 - The farmer must attend a continuing education program Peer-to-peer farmer discussions have been very impactful.
 - Outcome based and measurable results.
 - o Farmer and community members want the program

Questions/Comments/Discussion:

- John Barten: Are there farmers that are enrolled in this program and the Minnesota Ag Water Quality Certification Program (MAWQCP)? *Answer:* Yes, they can answer questions of farmers starting to adapt to the practices for the first time.
- Holly Hatlewick: Love the requirement of CEUs. You started out with the ARPA funds. How are you continuing to fund it as it evolves? *Answer:* We've discussed that a lot. We think we have about five more years. We know we need additional dollars. We need support from the state to roll forward into the future with this program. If we can teach people to be successful, they can move forward on their own without the incentive. There is a lot of education that goes into this, so we have work ahead of us, to help folks understand. We need to normalize this into agriculture.
- Fran Miron: First, I appreciate that this is a voluntary program. Second, I appreciate that there is a lot of education involved with this program. So, the funding is part of a levy that Olmsted County put in place to cover the cost. *Answer:* It is non-levied funding. When the pandemic hit, counties across the state had access to ARPA. That funding was available to pay for some things like water and infrastructure. The county shifted a lot of staff into the pandemic work (i.e., testing) so there was a large expense related to that. They took the ARPA funding to pay for those expenses, and that pot created a reserve fund. They allowed for additional development of programs, some used for homelessness. This program was also in development.
- Glenn Skuta, MPCA: Can you also say more about oats getting reestablished? *Answer:* Oats are considered an alternative crop or small grains crop. This was not designed for oats, but it was a low hanging fruit. Seed companies have been working on genetics and they have been a main alternative crop in SE Minnesota. Farmers are looking to grow something different. Oats worked out well with recent dry weather. They were a big money maker, so they have expanded. There is a new mill proposed there as well, which can help reduce the risk. Often, there is a need to grow oats for three years before you can have crop insurance risk coverage. It has not been easy, but it does seem to be a success. Some grain millers are taking oats now.
- Brad Gausman: I noticed an even geographic distribution of participants in the county. Was that part of the plan? *Answer:* It just fell that way. However, we wanted to make sure everyone was informed, so I think it reflects on that well. Farmers can call any day of the week and grab a staff person to get any information.
- Fran Miron: One of the frustrations I've had as a farmer is the lack of recognition for alfalfa and grass hay as cover crops. It has been an important part of water quality certification on our farm. It will often stay on the landscape for eight to ten years but receive no benefit for it as a cover crop. We cannot get over that hurdle of recognizing other crops as cover crops. I would say alfalfa is a better cover crop than oats. *Response:* I did not mean to leave out the fact that there are many other options. The hay and grazing side of the program is put in place purposefully to help keep livestock producers in the mix. We know livestock is an important part of the landscape. Also, the diversity is key too. It is wide open to grow for cover crops.

Contingency Plans for Potential Lower Revenue in the Clean Water Fund (Webex 02:58:00)

- The Council needs to plan next steps in the budget cycle. The Council has a partial commitment in the Council's Strategic Plan for watershed-based implementation funding (WBIF). Yet, we cut easement funding significantly in the budget and have also talked about restoring this funding. Many view it as critical. Additionally, Forever Green Initiative funding was cut, and folks would like to see that funding restored as well. We may need to plan for economic uncertainty and its effects on the CWF.
- The Budget and Outcomes Committee (BOC) has been working on a scoring rubric that could prioritize funding.
 - Steve Besser (BOC Chair): We tried to have a simple ten-point score. However, Annie Knight worked on a rubric as well. We are combining efforts. We would want to see presentations with the full Council and have each member complete and score the rubric. That could provide feedback on it for when the budget decisions need to happen, we have more data to help focus our thoughts.
 - o John Barten: We need to process and prioritize these well. We don't want to find ourselves struggling.
 - Annie Knight: We know all the programs are important. This allows us to rank and prioritize the programs. If we systematically score them, it makes our job easier. It is helpful to get agency input on structuring questions. We have a clause at the end of the rubric that gives us flexibility to prioritize a program even if it did not score as high.
 - Brad Gausman: It may make it more difficult. The information that we have is going to be critical as we go in the next budget cycle. Thinking about the application program part, perhaps we need more information included on it (i.e., when was the last time you looked for another source of funding). We may want to consider how we are presented with the programs too. It was months of PowerPoints that did not have the immediate questions/response part. We had questions provided to the BOC in writing, but the full Council did not get to hear them. Perhaps, those slides could be done in film for us to view, so we can come into the meeting with questions and answers (like make YouTube videos). It would be important to have those question/answer interactions because we are making tough decisions on budgets.
 - John Barten: We could review that before meetings as homework.
 - Brad Gausman: Yes, it would be like college, where you view the materials before attending the class, so you come prepared to ask questions, for better understanding and have a discussion.
 - Annie Knight: If we have it longer, we want to keep in mind we will want the Interagency Coordination Team (ICT), so they have enough time to respond.
 - John Barten: Unless we start the presentations earlier.
 - Holly Hatlewick: I've been struggling with the rubric at the BOC. I see value. But we will learn more as we go along, so now I can't change my rubric score if new information is presented to me. Now I know more. It is a combination of all things. Having the presentations earlier or being able to follow up helps me more. I am struggling with the extra time and effort.
 - Gail Cederberg: Perhaps, part of the rubric can include a few high-level questions. Like, is the funding need ongoing or is this program sunsetting sometime soon? Do you have another source of funding? We can push those questions out early to see the responses. It could help us make decisions on the program. It can be a combination of questions and rubric tided into it. Also, how cuts in the funding may affect staffing the program. We may want to combine these questions with the rubric. Presenters can be ready ahead of time to answer them too.
 - Steve Besser: Everyone on the Council is willing to speak up. No one sits quietly. I would expect a robust discussion at the end. Even if items scored well, we have the contingency. We would be able to pivot and bring the programs forward for further review. The rubric is a teaching moment, but not the be all end all.
 - \circ $\:$ John Barten: I think the rubric helps. We need to figure out what are the most critical things.
 - Brad Gausman: Thinking of keeping it simple, I think of the ICT process. They are parallel to go with our Council recommendations. How is the ICT going to modify itself because of our scoring rubric. Is this a way to modify how the ICT works alongside the Council? If we can open that communication, so we can hear what they are going through during our process? We can't hear them, but they can hear us.
 - Steve Besser: We talked about that. We want to ask the state agencies for review of the rubric too. I think it will help coordinate things more. We all have the same goal, and I hope it helps our relationship.

- Annie Knight: Would the ICT use the scoring rubric? *Answer from Glenn Skuta, MPCA:* I think the agencies would fill it out following the format requested. The presentations would include the information requested, so it is clear.
- Tannie Eshenaur, MDH: The Council members that represent state agencies, are also on the ICT. So, we pass along the Council's discussions and interests. We recount what we hear and provide it to the assistant commissioners not at the meetings.
- Glenn Skuta, MPCA: We created the ICT once the Council was created, so we could collaborate. They are
 parallel processes. We have this process back-and-forth, but it has gotten us closer over time. It runs well.
 We are always open to a better way to communicate, to make improvements. We can use the rubric to
 help inform our decisions.
- Paul Gardner: I would also share that agencies are good about trial running a program idea in front of the Council to see what you think. There are several programs, if there were no CWFs, would never have seen the light of day, like the Minnesota Department of Natural Resources (DNR) culvert program. It was brought forth a few times before it was supported. The Council will express interest in things where there was no program before. When the Council expresses an interest for something, it tends to get a program request. Another example is the Council's interest in PFAS.
- Annie Knight: Our relationship with the ICT is not broken. I think the rubric will provide clarity. The things
 that can be improved is the public input process, which Jessica Wilson and her Ad Hoc Engagement
 committee is addressing. I think tapping into the full knowledge of the Council, because sometimes the
 loudest voices receive the funding in the room, and this process can make it more equal. Being able to
 provide this as a transparent process, and something tangible to provide to the ICT. There may be
 opportunity for discussion on the presentations later.
- John Barten: If we have less than the \$303 million budget projected, how will the Council respond? I wanted to bring it up as a discussion topic. Would this rubric be jointly as a group, or individual?
 - Answer from Steve Besser: Individually.
 - John Barten: We need to make some decisions as we move forward. I have a fear we may look at a significant budget reduction. We can have a robust discussion.
 - Annie Knight: We have had robust discussions with the BOC, perhaps the next meeting will solidify it.
 We may have a formal pitch to the full Council on it, if that is reasonable.

Public Comment (Webex 03:51:30)

- Paul Schollmeier: For Riverwatch, it is a young program that began during the pandemic. Education has been brought up a few times here. Riverwatch is an educational program but focused on younger people who will one day be sitting in your seat. It is still in its infancy, I would propose you continue to support it fully, so it can sprout roots and become more robust. Those programs in the Red River and Minnesota River that are part of the Riverwatch program, can continue to do the work encouraging young people to be interested in the environment. I want to encourage you to continue funding it.
- Trevor Russell, Friends of the Mississippi River (FMR): We would encourage you continue to invest in
 continuous living cover cropping systems. The on-farm conservation, technical assistance, traditional
 conservation best management practices, are an essential pillar of our clean water future. We have all come
 to recognize continuous living cover cropping systems and market-based strategies can allow farmers to
 prosper with living roots in the soil year-round, are an equally important part of the puzzle and another key
 pillar in our future. How we evaluate or score different proposals, as we can continue to invest in crop
 diversification with other tools and strategies to reduce the Ag share of water quality challenges, is something
 the Council will keep in mind.

Adjournment (Webex 04:03:32)

Clean Water Council Budget & Outcomes Committee

Sources of Funds Leveraged by the Clean Water Fund

May 2, 2025

Other funding sources leveraged by the CWF—either to assist a project or as direct payment to landowners— include the following:

Administered by the Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture

- Environmental Quality Incentives Program (EQIP)
- Conservation Stewardship Program (CSP)
- Regional Conservation Partnership Program (RCPP)
- Agricultural Conservation Easement Program (ACEP)
- Healthy Forests Reserve Program (HFRP)
- Conservation Innovation Grants (CIG)
- Climate Smart communities
- National Fish and Wildlife Foundation (NGO that is supported with federal funding)

Administered by the Farm Services Agency (FSA), U.S. Department of Agriculture

- Conservation Reserve Enhancement Program (CREP)
- Conservation Reserve Program (CRP)

Administered by the U.S. Environmental Protection Agency

- Federal Clean Water Act Section 319 Grants
- Great Lakes Restoration Initiative/ Area of Concern (AOC)
- Climate Pollution Reduction Grant (Minnesota Climate Smart Food Systems)
- Farmer to Farmer Grant Program

Administered by the U.S. Fish and Wildlife Service

• Fishers and farmers partnership grants

Administered by the U.S. Department of Energy, Biotechnlogies Office (BETO)

• \$10 million for Oilseed Crops to Sustain the Environment and Meet Energy Demand (OILSEED) at Forever Green Initiative

State funding sources

- General Fund
- General obligation bonds

- Environment and Natural Resources Trust Fund
- Outdoor Heritage Fund
- Ag Fertilizer Research and Education Council (AFREC; supported by fertilizer fee)
- Game & Fish Fund (administered by DNR)
- Water Management Account (administered by DNR)
- Clean Water Partnership Loan Program (administered by MPCA)

Local funding sources

- Watershed districts
- Water management organizations
- Soil and water conservation districts
- Counties, municipalities, and townships
- Landowners and property owners Our current estimate of leverage funds does not include landowner contributions. Most support for landowners, such as agricultural BMPs, require initial investment by the individual.

Foundations

- McKnight Foundation (for Forever Green Initiative)
- Builders Initiative (for Forever Green Initiative)

Corporate

- Minnesota Sustainable Aviation Fuel (SAF) Hub (for Forever Green Initiative)
- MBOLD Coalition (for Forever Green Initiative)
- MN Corn Research and Promotion Council

Amount of money leveraged by Clean Water Fund (CWF) implementation activities

Measure Background

Visual Depiction

The graphics depict the annual amount of leveraged dollars statewide by the various agencies receiving Clean Water funding for project implementation.



Measure Description

This measure communicates the dollars leveraged through CWF appropriations, from Fiscal Year (FY) 2010-2023. The Clean Water appropriations comprise funding from multiple state contract, grant and loan programs as well as the Minnesota Water Quality Agriculture Certification and individual on-farm demonstration projects (Discovery Farms Minnesota and Root River Field-to-Stream Partnership). It is a direct financial measure of dollars spent on implementation activities.

Associated Terms and Phrases

To better understand this measure, it is necessary to understand the following terms and phrases: Leveraged Funds: For this measure, leveraged funds means the amount paid from any source other than Clean Water Funds. The amount of leveraged funds is calculated by summing all non-Clean Water funding sources contributing funds towards the project as identified at the time of award.

- 1. **Clean Water Funding**: For this measure, the term Clean Water Funding refers to Clean Water grants and Agricultural Best Management Practices (AgBMP) loans distributed through local governments for BMP implementation through special CWF appropriations to various State grant and loan programs starting in FY10. This measure also includes dollars leveraged from on-farm demonstration projects that focus on implementing best management practices.
- Total Maximum Daily Loads (TMDL) Grant Program is designed to fund up to 50% for a maximum of \$3 million for mandates resulting from an United States Environmental Protection Agency (USEPA) approved TMDL and Agency approved implementation plan that requires capital improvements and are beyond their current Non-point source Discharge Elimination System (NPDES) permit.
- 3. **Phosphorus Reduction Grant program** is designed to fund up to 75% (until June 30, 2010), and after that 50% for a maximum of \$500,000 for more stringent treatment for phosphorus treatment to 1.0 mg/L or less due to a permit requirement.
- 4. **Point Source Implementation Grant program** is designed to fund up to 50% for a maximum of \$3 million for mandates resulting in 1) Wasteload reduction to meet an USEPA approved TMDL and Agency approved implementation plan that requires capital improvement that are beyond their current NPDES permit, 2) more stringent treatment for phosphorus treatment to 1.0 mg/L or less due to a permit requirement 3) Water Quality Based Effluent Limit (WQBEL, pronounced "Q-bell"), or 4) Land based discharging systems with a nitrogen limit greater than secondary standards. Starting in FY 2014, this program is replacing the TMDL and Phosphorus grant programs listed above.
- 5. **Ag BMP Loan Program**: This program provides low interest loans (typically 3%) with local financial institutions to farmers, agriculture supply businesses, and rural landowners. The loans are for proven pollution prevention practices that are recommended in an area's water and environmental plans. The program uses a perpetual revolving loan account structure where repayments from prior loans are continually reused to fund new loans. This program prioritizes the use of Clean Water funds to areas for implementation of practices recommended in approved TMDL Implementation Plans.
- Clean Water Fund Grant Program A grant program administered through Board of Water and Soil Resources (BWSR) with Clean Water Fund appropriations. More information regarding his program can be found at: <u>https://bwsr.state.mn.us/cwf_programs</u>.
- 7. Agencies Involved with this measure
 - a. **BWSR** Minnesota Board of Water and Soil Resources
 - b. DNR Minnesota Department of Natural Resources
 - c. MDA Minnesota Department of Agriculture
 - d. MDH Minnesota Department of Health
 - e. MPCA Minnesota Pollution Control Agency
 - f. **PFA** Minnesota Public Facilities Authority
 - g. MetC: Metropolitan Council

Target

There is no specific numeric target for this measure.

Baseline

FY 2010 serves as the baseline for this measure in which data collection began.

Geographical Coverage

Statewide

Data and Methodology

Methodology for Measure Calculation

For the purpose of this measure, any funds that are not Clean Water funds, including landowner contributions, local government unit aid, equity, and any loan, even if required as matching dollars, are included as part of the dollar amount leveraged. To calculate this measure, state agency staff collects financial information by each program and sum these figures to provide a single count for each watershed and the state.

Data Source

Component programs of the Clean	Responsible State	Funding	Data Source for Leveraged
Water Fund Grants	Agency	Availability*	Funds
TMDL Grant Program	PFA	FY2010-FY2013	PFA spreadsheet
			Project applications
			MPCA reviewed and
			approved accepted as-bid
Phosphorus Reduction Grant Program	PFA	FY2010-FY2013	PFA spreadsheet
			Project applications
			MPCA reviewed and
			approved accepted as-bid
Point Source Implementation Grant Program	PFA	FY2014-FY2023	PFA spreadsheet
(Note: this program was created when			Project applications
the TMDL and Describerus grant			MPCA reviewed and
the TWDL and Phosphorus grant			approved accepted as-bid
was expanded)			
Clean Water Fund Grants	BWSR	FY2010-FY2023	eLINK

Ag BMP Loans	MDA	FY2010-FY2023	AgBMP Loan Program database
On-Farm Demonstrations (Discovery Farms, Root River Field-to- Stream Partnership, Forever Green Initiative)	MDA	FY10-FY2023	Project work plans and progress reports
Clean Water Partnership Grants	МРСА	FY2010-FY2015	Project work plans and progress reports
St. Louis River Direct Appropriation	МРСА	FY2010-FY2023	Project work plans and progress reports
MDH Clean Water Fund Grants (Source Water Protection Grants, Well Sealing Grants, Contaminants of Emerging Concern Education and Outreach Grants)	MDH	FY2011-2023	Project work plans and progress reports
Metropolitan Council Drinking Water Efficiency Grants	MetC	FY 2017, 2020-2023	MetC project database

Data Collection Period

FY 2010 - FY 2023

Data Collection Methodology and Frequency

For programs administered by PFA, data collection involves reviewing accepted as-bid contract awards as compared to accepted grant award.

For programs administered by BWSR, funding cycles are on an annual basis. Local grant recipients are required to enter financial information regarding leveraged funds in eLINK, BWSR's web-based reporting and tracking tool. More information on eLINK is available at: <u>https://bwsr.state.mn.us/elink</u>.

The AgBMP Loan program has a revolving loan structure with regular borrower repayments. It also received periodic infusion of capital into the corpus of the program revolving pool. Data is maintained by the program in an internal database system in coordination with the state's StateWide Integrated Financial Tools (SWIFT) accounting system (data prior to July 1, 2011 is stored in MAPS accounting system). Status updates can be recalculated for any period or geographical area as needed.

- The total amount leveraged for the AG BMP Loan program equals non-state financing for loanassisted projects. This money comes from the borrower, financing from private lenders, and other conservation financial assistance programs.
- The AgBMP loan program is supported by multiple funding sources. It is important to note that this program prioritizes the use of Clean Water funds to areas for implementation of practices recommended in approved TMDL Implementation Plans. All other funding sources, primarily federal

funds, are used to finance any priority or practice identified in local comprehensive water or environmental plans.

Supporting Data Sets

Clean Water Grants

Table 1. PFA Clean Water Grant Funds

Fiscal	PSIG Grants	PSIG	Small	Small Community
Year	(including TMDL	Leveraged	Community	WWT Grants and
	& Phosphorus)	Funds	WWT Grants	Loans Leveraged
			and Loans*	Funds
2010	\$7,524,235	\$9,059,201	\$131,450	\$0
2011	\$8,683,830	\$11,739,739	\$711,672	\$874,414
2012	\$7,782,087	\$8,391,951	\$81,000	\$0
2013	\$4,938,083	\$5,057,308	\$426,833	\$0
2014	\$7,805,174	\$7,821,322	\$363,678	\$0
2015	\$8,166,716	\$7,607,004	\$2,155,038	\$425,000
2016	\$7,810,973	\$14,528,564	\$2,373,718	\$216,600
2017	\$26,519,303	\$7,623,048	\$2,123,173	\$1,232,123
2018	\$15,479,412	\$50,004,455	\$167,700	\$0
2019	\$9,224,029	\$30,513,173	\$106,000	\$0
2020	\$8,521,471	\$32,422,661	\$60,000	\$0
2021	\$8,511,341	\$26,476,558	\$38,000	\$0
2022	\$11,399,148	\$26,188,538	\$0	\$0
2023	\$8,593,733	\$38,440,860	\$120,000	\$0

*The small community grant and loan program is statutorily designed to provide full funding of the projects, thus there is no required local match or leverage.

Table 2. BWSR Clean Water Competitive Grant Funds

Fiscal Year	BWSR Clean Water Funds	Leveraged Dollars
2010	\$11,807,597	\$21,901,021
2011	\$12,619,876	\$15,268,561
2012	\$16,874,452	\$9,204,587

2013	\$18,315,397	\$6,683,571
2014	\$21,153,418	\$6,840,988
2015	\$19,735,527	\$6,185,756
2016	\$21,703,695	\$9,159,790
2017	\$15,075,806	\$4,465,317
2018	\$11,271,820	\$3,654,492
2019	\$21,914,045	\$19,291,141
2020	\$30,098,579	\$7,205,693
2021	\$30,457,580	\$11,949,934
2022	\$49,981,374	\$10,697,436
2023	\$54,970,268	\$20,059,856

* Does not included CWF Reinvest In Minnesota (RIM) Easements

Table 3. MPCA Clean Water Partnership Grant Funds

Fiscal Year	MPCA Clean Water Partnership Funds	Leveraged Dollars
2010	\$619,970	\$1,799,510
2011	\$1,314,165	\$2,688,530
2012	\$802,792	\$442,392
2013	\$790,471	\$2,762,596
2014	\$1,063,755	\$1,070,098
2015	\$1,386,206	\$2,338,927

Table 4. MPCA St. Louis River Grant Funds

Fiscal Year	MPCA St. Louis River Grant Funds	Leveraged Dollars
2010/2011	\$950,000	\$2,692,400
2012/2013	\$1,495,020	\$2,903,100
2014/2015	\$1,500,000	\$3,144,305

2016/2017	\$1,500,000	\$3,144,305
2018/2019	\$1,500,000	\$3,144,305
2020	\$341,237	\$633,726
2021	\$93,909	\$174,402
2022	\$197,154	\$366,142
2023	\$401,635	\$735,895

Table 5. MPCA St. Croix River Association (SCRA) Grant Funds (implementation portion)

Fiscal Year	SCRA Grant Funds (implementation)	Leveraged Dollars
2010	\$216,717	\$224,416

Table 6. MDH Clean Water Fund Source Water Protection Grant Funds

Fiscal Year	MDH Clean Water Source Water Protection Funding	Leveraged Dollars
2011	\$374,895	\$608,835
2012/2013	\$2,383,655	\$1,031,814
2014/2015	\$3,167,162	\$1,900,885
2016/2017	\$1,854,654	\$2,246,749
2018/2019	\$2,423,209	\$2,597,899
2020/2021	\$3,085,479	\$2,787,257
2022/2023	\$2,599,861	\$3,944,031

Table 7. MDA Clean Water Fund supported AgBMP Loans

Fiscal Year	Total MDA AgBMP Loan Amount	Leveraged Funds
2010	\$241,962	\$0
2011	\$1,169,955	\$0

2012	\$2,923,893	\$0
2013	\$2,824,914	\$0
2014	\$1,936,073	\$2,574,544
2015	\$1,897,976	\$2,230,173
2016	\$2,242,160	\$2,781,643
2017	\$3,155,824	\$3,486,317
2018	\$2,868,255	\$5,162,755
2019	\$3,974,012	\$5,146,730
2020	\$3,149,316	\$3,816,056
2021	\$1,963,286	\$2,180,324
2022	\$2,013,314	\$2,492,138
2023	\$3,580,252	\$4,501,223

 Table 8. MDA On-farm Demonstration Projects

	Name of Project	Clean Water Fund	Leveraged
FISCAL TEARS	Name of Project	Investment	Dollars
2010/2011	Discovery Farms Minnesota	\$250,000	\$549,636
2012/2013	Discovery Farms Minnesota	\$ 388,838	\$ 648,507
2014/2015	Discovery Farms Minnesota	\$393,776	\$884,670
2016/2017	Discovery Farms Minnesota	\$397,712	\$760,720
2018/2019	Discovery Farms Minnesota	\$348,490	\$883,296
2020	Discovery Farms Minnesota	\$183,631	\$412,794
2010/2011	Root River Field-to-Stream Partnership	\$395,000	\$163,429
2012/2013	Root River Field-to-Stream Partnership	\$222,992	\$15,429
2014/2015	Root River Field-to-Stream Partnership	\$277,654	\$5,429
2016/2017	Root River Field-to-Stream Partnership	\$ \$410,929	\$860,048
2018/2019	Root River Field-to-Stream Partnership	\$398,173	\$1,748,166

2020/2021	Root River Field-to-Stream Partnership	\$401,691	\$477,275
2010-2013	Rosholt Farm	\$ 23,882	\$175,000
2013	Minnesota Agricultural Water Quality Certification Program	\$1,500,000	\$50,000
2014/2015	Minnesota Agricultural Water Quality Certification Program	\$3,000,000	\$3,002,512
2016/2017	Minnesota Agricultural Water Quality Certification Program	\$5,000,000	\$3,782,130
2018/2019	Minnesota Agricultural Water Quality Certification Program	\$5,000,000	\$4,311,465
2020/2021	Minnesota Agricultural Water Quality Certification Program	\$6,000,000	\$4,496,133
2013-2016	Conservation Innovation Grant Edge of Field Monitoring	\$89,937	\$100,402
2016/2017	Red River Valley Drainage Water Management	\$274,398	\$79,676
2018/2019	Red River Valley Drainage Water Management	\$34,280	\$9,887
2016	Forever Green Initiative	\$1,000,000	\$4,387,793
2018	Forever Green Initiative	\$750,000	\$7,135,195
2019	Forever Green Initiative	\$750,000	\$31,523,832
2020	Forever Green Initiative	\$2,000,000	\$21,830,579
2021	Forever Green Initiative	\$2,300,000	\$800,000
2022	Discovery Farms	\$178,039.00	\$474,458.00
2023	Discovery Farms	\$0.00	\$0.00
2022	Root River Field to Stream Partnership	\$165,382.00	\$25,267.00
2023	Root River Field to Stream Partnership	\$166,903.81	\$31,667.00
2022	Rosholt Farm	\$0.00	\$311,340.00
2023	Rosholt Farm	\$0.00	\$311,340.00
2022	Red River Valley Drainage Water Management	\$19,575.00	\$0.00
2023	Red River Valley Drainage Water Management	\$5,150.43	\$0.00
2022	Minnesota Agricultural Water Quality Certification Program	\$3,000,000.00	\$2,804,342.1 8

2023	Minnesota Agricultural Water Quality Certification Program	\$3,000,000.00	\$3,653,457.7 2
2022	CIG Edge of Field Monitoring	\$0.00	\$0.00
2023	CIG Edge of Field Monitoring	\$0.00	\$0.00

Table 9: Metropolitan Council Drinking Water Efficiency Grants

Fiscal Year	Metropolitan Council Drinking Water Efficiency Grants	Leverage
2017	\$500,000	\$198,281
2020	\$375,000	\$93,750
2021	\$375,000	\$93,750
2022	\$625,000	\$99,792
2023	\$625,000	\$99,792

Total Funds Spent and Leveraged

Table 10 and 11 below contains the source data for the graphic on the first page of the metadata report for this measure.

Table 10. Cumulative Clean Water Funding of Spent Dollars from all State Agencies

Year	BWSR	МРСА	MDA	PFA	Met Council	MDH	Total Spent
2010	\$11,807,597	\$1,311,687	\$576,403	\$7,655,685	\$0	\$0	\$21,351,372
2011	\$12,619,876	\$1,789,165	\$1,504,396	\$9,395,502	\$0	\$374,895	\$25,683,834
2012	\$16,874,452	\$1,550,302	\$3,403,188	\$7,863,087	\$0	\$1,191,828	\$30,882,856
2013	\$18,315,397	\$1,537,981	\$3,296,580	\$5,364,916	\$0	\$1,191,828	\$29,706,702
2014	\$21,153,418	\$1,813,755	\$3,790,055	\$8,168,852	\$0	\$1,583,581	\$36,509,661
2015	\$19,735,527	\$2,136,206	\$3,770,162	\$10,321,754	\$0	\$1,583,581	\$37,547,230
2016	\$21,703,695	\$750,000	\$6,408,265	\$10,184,691	\$0	\$927,327	\$39,973,978
2017	\$15,075,806	\$750,000	\$6,094,708	\$28,642,476	\$500,000	\$927,327	\$51,990,317
2018	\$11,271,820	\$750,000	\$6,016,817	\$15,647,112	\$0	\$1,211,605	\$34,897,353

2019	\$21,914,045	\$750,000	\$8,106,393	\$9,330,029	\$0	\$1,211,605	\$41,312,071
2020	\$30,098,579	\$341,237	\$8,534,749	\$8,581,471	\$375,000	\$1,542,740	\$49,473,775
2021	\$30,457,580	\$93,909	\$7,463,175	\$8,549,341	\$375,000	\$1,542,740	\$48,481,744
2022	\$49,981,374	\$197,154	\$7,376,310	\$11,399,148	\$625,000	\$1,299,931	\$70,878,916
2023	\$54,970,268	\$401,635	\$8,752,306	\$8,713,733	\$625,000	\$1,299,931	\$74,762,873
Totals	\$231,027,792	\$13,574,242	\$59,143,350	\$129,704,916	\$1,250,000	\$13,289,054	\$447,989,354

Table 11. Cumulative Clean Water Funding of Leveraged Dollars from all State Agen	cies
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					Met		Total
Year	BWSR	МРСА	MDA	PFA	Council	MDH	Leveraged
2010	\$21,901,021	\$3,370,126	\$446,892	\$9,059,201	\$0	\$0	\$34,777,240
2011	\$15,268,561	\$4,034,730	\$391,172	\$12,614,153	\$0	\$608,835	\$32,917,451
2012	\$9,204,587	\$1,893,942	\$356,391	\$8,391,951	\$0	\$515,907	\$20,362,778
2013	\$6,683,571	\$4,214,146	\$430,976	\$5,057,308	\$0	\$515,907	\$16,901,908
2014	\$6,840,988	\$2,642,251	\$4,217,859	\$7,821,322	\$0	\$950,443	\$22,472,862
2015	\$6,185,756	\$3,911,080	\$4,755,588	\$8,032,004	\$0	\$950,443	\$23,834,871
2016	\$9,159,790	\$1,572,153	\$10,081,767	\$14,745,164	\$0	\$1,123,375	\$36,682,248
2017	\$4,465,317	\$1,572,153	\$8,445,620	\$8,855,171	\$198,281	\$1,123,375	\$24,659,916
2018	\$3,654,492	\$1,572,153	\$15,660,228	\$50,004,455	\$0	\$1,298,950	\$72,190,277
2019	\$19,291,141	\$1,572,153	\$38,914,401	\$30,513,173	\$0	\$1,298,950	\$91,589,817
2020	\$7,205,693	\$633,726	\$28,648,979	\$32,422,661	\$93,750	\$1,393,628	\$70,398,438
2021	\$11,949,934	\$174,402	\$5,147,143	\$26,476,558	\$93,750	\$1,393,628	\$45,235,416
2022	\$10,697,436	\$366,142	\$7,767,545	\$26,188,538	\$99,792	\$1,972,016	\$47,091,469
2023	\$20,059,856	\$735,895	\$29,694,867	\$38,440,860	\$99,792	\$1,972,016	\$91,003,285
Totals	\$121,810,851	\$27,163,015	\$118,226,412	\$213,993,121	\$385,781	\$11,173,439	\$492,752,618

Caveats and Limitations

For PFA, the above estimates account for only TMDL or Phosphorus eligible costs. Often other facility improvements are also pursued at the same time to utilize economies of scale and other fixed costs such as equipment mobilization.

For most Clean Water Fund programs, BWSR requires a 25% match requirement for all grant dollars. BWSR also has a \$30,000 grant minimum as well.

In FY11, up to \$300K from AgBMP loan program may be used for administrative purposes; any amount not used for that purpose by the end of the fiscal year will be added to the program's revolving loan funds.

For the 2018 report, past data was reconciled with updated database information from each respective agency to ensure reporting accuracy. For the 2022 report, MDA did a more extensive reconciliation of past data and updated the financial information regarding spent and leveraged funds accordingly.

Future Improvements

BWSR will explore adding in Easement Program funds into this measure.

Communication Strategy

Target Audience

Stakeholders with interest in this measure include the State legislature, the Clean Water Council, and state agency partners.

Associated Messages

This measure depicts how much non-state funds the Clean Water Fund is leveraging and is a direct measure of dollars being spent of implementation.

Measure Points of Contact

- BWSR contact: Annie Felix-Gerth, <u>annie.felix-gerth@state.mn.us</u>
- DNR contact: Barbara Weisman, <u>barbara.weisman@state.mn.us</u>
- MDA contact: Jen Schaust, jen.schaust@state.mn.us
- MDH contact: Alycia Overbo, <u>Alycia.Overbo@state.mn.us</u>
- MPCA contact:
 - Monitoring and assessment Kim Laing, <u>kimberly.laing@state.mn.us</u>
 - Watershed restoration and strategy development David Miller (TMDLs, CWP), <u>david.l.miller@state.mn.us</u>
 - o Bill Dunn (wastewater/storm water & PFA), <u>bill.dunn@state.mn.us</u>
- Metropolitan Council contact: Lanya Ross, lanya.ross@metc.state.mn.us





Addressing PFAS in Minnesota Water and Fish

MDH Fish Consumption Guidance Program

MPCA Water Assessment Section



MDH Health Risk Assessment Unit







Health Risk Limits Program Fish Consumption Guidance

Interagency Fish Contaminant Monitoring Program (FCMP)



Communication







Statewide & Waterbody-Specific Fish Consumption Guidelines

Collaboration with Tribes and Great Lakes Consortium







MINNESOTA POLLUTION CONTROL AGENCY

An overview of PFAS in Minnesota's waterways

Fawkes Char | Agency PFAS Coordinator

How do PFAS enter waterways?



Minnesota's PFAS journey



science

drinking water

Statewide strategic response

February 2021

Minnesota's PFAS Blueprint

PFAS planning document

A plan to protect our communities and our environment from per- and polyfluorinated alkyl substances



MINNESOTA

Minnesota's PFAS Blueprint supports a holistic and systematic approach to address PFAS.

https://www.pca.state.mn.us/air-water-landclimate/minnesotas-pfas-blueprint

Minnesota's PFAS Blueprint: Ten topic areas



Preventing PFAS pollution



Measuring PFAS effectively and consistently



Limiting PFAS exposure from food



Understanding risks from PFAS air emissions



Quantifying PFAS risks to human health



Limiting PFAS exposure from drinking water



Ensuring safe consumption of fish and game



Protecting ecosystem health



Remediating PFAScontaminated sites



Managing PFAS in waste

How MPCA selects waterbodies for sampling and monitoring

- Surface water (including water column and fish tissue samples)
 - Monitoring supports water quality standards assessments, restoration efforts
 - Internal and/or external requests may be fulfilled, depending on resource availability
- Ambient groundwater samples are collected across the state every year
- Both surface water and groundwater may be subject to additional monitoring in areas with known or suspected contamination
 - MPCA and MDH programs collaborate when drinking water from private wells is impacted

Reducing or removing PFAS from the environment

- PFAS are hard to remove from the environment, may be even harder to destroy
 - Pilot-scale studies have shown promise, but technology hasn't been proven at scale
 - Local example: SAFF[®] (surface activate foam fractionation) at Tablyn Park, Lake Elmo area
- Pollution prevention is crucial
 - Evidence that PFAS concentrations in fish decrease when source is removed
 - Amara's Law and other prohibitions will eventually lead to a decrease in new PFAS in the environment





April 2025 Updated Fish Consumption Guidance

Angela Preimesberger | Fish Consumption Guidance Program Lead

There are many benefits to eating fish

- Fish are an important part of a nutritious, well-balanced diet
- Fish are part of many Minnesotan traditions and cultures.
- Fish consumption guidance provides Minnesotans with the information they need to make informed choices



MDH, MPCA, MDNR work together to review contaminants in fish

- Collect and analyze fish for mercury, polychlorinated biphenyls (PCBs), and perand polyfluoroalkyl substances (PFAS)
- Test fish from many waterbodies with support from MPCA and DNR monitoring activities
- Analyze levels of contaminants through State and Contract Labs
- MDH develops methods to balance benefits of fish consumption with risks posed by contaminants
- Update guidelines on MDH's webpage and post with MDNR in LakeFinder

April 2025: MDH issues updated guidance for some waterbodies in 10 counties

- Certain waterbodies in Minnesota have been studied for PFAS
- Some fish show elevated concentrations in 10 counties
- MDH updated guidelines are more protective for people eating fish
- Counties include the Twin Cities metro area and Douglas, Martin, McLeod, and St. Louis



Exposures to PFAS have been associated with health effects







Immune suppression

Decreased antibody production

Developmental effects

Lower birth weight

Changes in liver function

Higher cholesterol and liver enzymes

MDH is working with MDNR to post Fish Advisory Signs at impacted waterbodies



MDH develops fish consumption guidance for Minnesotans







Some waterbodies have lower levels of PFAS and other contaminants follow Statewide Fish Consumption Guidelines.

Who you are

Some people are more sensitive to negative health effects, including: people who are or could become pregnant, people who are breastfeeding or plan to breastfeed, and children under age 15



Species of fish

maximum number of servings recommended per week or month varies by fish species caught in the same waterbody.

MDH recently issued updated guidance for Rainbow Smelt

MPCA completed an important study of PFAS in fish from the Lake Superior Basin

MDH now recommends rainbow smelt can be eaten up to one serving per week (formerly, one serving per month).

• Note: a serving size of fish is eight ounce for an average adult (150 pounds).



Check the Fish Consumption Guidance Website for the most updated guidance



Check DNR's LakeFinder website to find guidance for lakes





LakeFinder is an online tool that finds and displays detailed information abd Information available includes fishing regulations; location; water access sitt stocking, ice in/out and water quality; fish consumption; and aquatic plant s desktop and mobile devices.



LakeFinder is an online tool that finds and displays detailed information about most lakes in Minnesota.

PFAS accumulation in wildlife

- PFAS are detected in wildlife, including game animals like deer and waterfowl
- Nearby states (WI, MI) have issued consumption advisories for some game animals hunted in specific areas with (known) significant PFAS contamination
- MDH has not, to date, issued any consumption guidelines or advisories associated with game animals



PFAS is many things, not just in fish



You can take steps to reduce exposure to PFAS

- Limit use of consumer products that contain PFAS
 - 2025: Amara's law prohibits sale of products with PFAS
- Follow MDH Fish Consumption Guidance
- MDH updates guidance as we learn more about PFAS and Health



Questions





Thank You!

MPCA PFAS Coordinator

Fawkes.Char@state.mn.us

MDH Fish Consumption Guidance

HEALTH.fish@state.mn.us

Weblinks

- MDH Health Risk Assessment Unit: <u>https://www.health.state.mn.us/communities/environment/risk/index.html</u>.
- MPCA Minnesota's PFAS Blueprint: <u>https://www.pca.state.mn.us/air-water-land-climate/minnesotas-pfas-blueprint</u>.
- MDH Fish Consumption Guidance: <u>https://www.health.state.mn.us/communities/environment/fish/index.html</u>.
- DNR LakeFinder: <u>https://www.dnr.state.mn.us/lakefind/index.html</u>.
- MPCA 2025 PFAS Prohibitions: <u>https://www.pca.state.mn.us/air-water-land-climate/2025-pfas-prohibitions</u>.
- MDH PFAS and Health: <u>https://www.health.state.mn.us/communities/environment/hazardous/topics/pfashealth.html</u>.

Protecting surface water for aquatic life and recreation

- Clean Water Act provides more protective water quality standards for aquatic life, recreation, and wildlife
 - Colloquially, these are the "fishable/swimmable" standards
 - Protect for swimming, fishing, hunting, and boating
 - Not all pollutants have associated water quality standards
- Aquatic life and recreation protections fall under Minnesota's Class 2 water quality standards
 - If no statewide standard exists, site-specific criteria may apply
 - Wildlife standards are Class 4b

					Recommended	
Grant ID	Title of Proposal	Applicant	County	Request Amount	Amount	Abstract
C25-0270	Goodwin Ave Stormwater Wetland	Comfort Lake-Forest Lake WD	Chisago	\$225,800.00	\$225,800.00	The proposed project will restore approximately half an acre of wetland a adjacent to the Sunrise River. It will provide an estimated 56% total phosp suspended solids removal for the contributing 20-acre developed resident based on the Minimal Impact Design Standards (MIDS), the estimated rem TSS. The Comfort Lake-Forest Lake Watershed District is partnering with th landowner to implement this project. The District has the support of the C project, provided grant funding is secured.
C25-0280	Clean Water Legacy Partners - CLCLT Resident Rain Garden Installations	City of Lakes Community Land Trust	Hennepin	\$193,525.00	\$193,525.00	This project continues a collaboration with Metro Blooms and City of Lake coming together and working with environmental justice and BIPOC comm partnership projects, as a result, rain gardens are a high priority for CLCLT gardens and plant 15 - 20 trees and provide maintenance and education a soil for residents.
C25-0285	Improving Pike Lake's East Bay	Shakopee Mdewakanton Sioux Community Land and Natural Resources Department	Scott	\$85,000.00	\$85,000.00	The Shakopee Mdewakanton Sioux Community (SMSC) aims to protect an watershed perspective, including working with other stakeholders to addr in the Prior Lake Outlet Minor Watershed, which flows to the Mnisota Wa important watershed for many communities. The SMSC Natural Resources quality data within this watershed since 1999 as part of an overall goal to and provide a safe and healthy resource for tribal members, future generations 50.75-acre basin located north of County Hwy 42 and west of Pike Lake Ro nutrients since 2002. Pike Lake has two bays, Pike Lake West and Pike Lake narrow, shallow strait and a small island that hosts an active bald eagle ne forested SMSC land on the north, a City of Prior Lake park on the west, rest to the east. This lake has been monitored for water quality parameters by District (PLSLWD) since 2012 on both lake bays. Additional collaborative m completed on Pike Lake include surveys for fish, aquatic plants and waterf stocking and aeration. The current inlet and outlet of Pike Lake are both located on the west bay, primary inflow to the lake is the Prior Lake Outlet Channel which enters or outflows 700 feet to the north. This input includes stormwater and excess Prior Lake. Without an outlet on Pike Lake East, it is susceptible to winter f most recent occurrence was in February 2021, which resulted in a huge pc common carp. This project will investigate the feasibility of enhancing wat additional outlet on Pike Lake East to promote circulation across the entir on the west side only. This design aims to improve oxygenation and water chemical benefits. Increased water flow and oxygen levels are expected to levels, and limit the release of harmful nutrients like phosphorus from sec supports aquatic biodiversity by creating healthier habitats for fish and ot will likely suppress harmful algal blooms, diminish odors, and mitigate the promoting growth of native aquatic vegetation. Beyond ecological

and expand a stormwater pond located ohorus removal and 88% total tial drainage area. Calculating loads novals are 5.0 lb./yr TP and 1,424 lb./yr he City of Wyoming and a local private City and landowner to complete this

es Community Land Trust (CLCLT) munities in Minneapolis. From previous residents. Our focus is to install 25 rain around the health of clean water and

nd improve its water resources from a ress shared waters. The project area is akpa (Minnesota River) and is an es Department has collected water ensure that all tribal waters are clean rations and surrounding communities. ng for Ucí Maka, (Grandmother Earth), is ns. Pike Lake (MN DNR ID 70007600) is a oad and has been listed as impaired for est. Shoreline ownership is a mix of sidential on the south and a gravel road of the Prior Lake-Spring Lake Watershed monitoring and restoration efforts fowl, removal of common carp, fish

y, leaving the east bay to stagnate. The on the west shore of Pike Lake West and s water from the regulated outlet on fish kills due to lack of oxygen. The opulation loss of native fishes and ater quality in Pike Lake by installing an re lake rather than concentrating flow r mixing, with anticipated ecological and to reduce stratification, stabilize pH diments. Improved oxygenation ther organisms. Enhanced circulation e proliferation of bacteria while

C25-0288	Targeted chloride reduction through street sweeping at SMSC	Shakopee Mdewakanton Sioux Community Land and Natural Resources Department	Scott	\$183,150.00	\$183,150.00	The Shakopee Mdewakanton Sioux Community (SMSC) lands are perched a Wakpa) and at the top of three local watersheds, including the Prior Lake C and City of Shakopee Minor Watersheds. These watersheds have high road other vehicle pollutants have the potential to impact the surrounding water SMSC waters can directly enhance the quality of water flowing downstrear and the water flowing into the Mnisota Wakpa. These areas are known to o such as wild rice (Psin). In this critical area, the reduction of road contamin surrounding watersheds, groundwater and protection of culturally significat to directly remove salt and sediment from parking lots and roadways mana sweeping, particularly during winter months. This would be achieved throu designed to tolerate corrosive road salt and sized to enable access to low o current street sweeper that would be replaced is 20 years old, requires rep used during the winter. A direct benefit would be the proactive removal of would otherwise end up in stormwater and wetlands around SMSC. Another benefit would be better implementation of the SMSC Winter Nonpoint Source Pollution Management Plan, SMSC Watershed Based Plan Chloride Management Plan.
C25-0300	Newport Elementary Filtration BMP	South Washington WD	Washington	\$250,000.00	\$250,000.00	The South Washington Watershed District has identified a series of priority aging storm sewer networks in the underserved cities of Newport and St. P and phosphorus loads to the impaired Mississippi River. SWWD is working treatment where there has historically been none due to the age of develo bedrock. Prioritization of this work has been driven by two recently comple assessments, targeting specific storm sewer networks in the two cities. Sha the elevation of existing storm sewer networks limit the feasibility of tradit management and/or volume control BMPs such as wet ponds and raingard will continue a coordinated effort among the partners to reduce sediment Mississippi River through installation of one structural stormwater BMP dir in the City of Newport. Located just west of Newport Elementary School, th sediment delivery to the Mississippi River by up to 65 tons/yr and reduce p according to a BMP analysis completed by HR Green, Inc. on behalf of SWV

above the Minnesota River (Mnisota Outlet Minor, Lower Sand Creek Minor Id density, so road salt, tire particles and the resources. Protecting and improving in through neighboring communities contain culturally significant resources, mants will have an immediate benefit to cant resources. The goal of this grant is naged by SMSC by increasing street ough purchasing a new street sweeper clearance and high traffic areas. The pairs frequently and is unable to be of salt and sediment from roadways that

ter Salt Management Plan, SMSC n and Twin Cities Metropolitan Area

y sites to install filtration systems on Paul Park aimed at reducing sediment with the cities to add stormwater opment and prevalence of shallow eted subwatershed retrofit allow bedrock (0-12" below grade) and tional passive stormwater dens. Implementation of this project and phosphorus loading to the rectly benefitting the Mississippi River his practice is expected to reduce ohosphorus loading by up to 88 lbs./yr WD in 2022.

C25-0303	More than Monarchs for Minnesota	Monarch Joint Venture	Blue Earth,Brown,Carver,Co ttonwood,Faribault ,Freeborn,Jackson,Le Sueur,Lyon,Martin,McL eod,Murray,Nicoll et,Redwood,Renville,Ri ce,Scott,Sibley,Ste ele,Waseca,Watonwan	\$121,500.00	\$121,500.00	This project will enhance riparian buffers and upland grassed waterways in Cottonwood, and Blue Earth River watersheds by adding native, pollinator- other wildlife, and water quality outcomes. Through technical assistance at at least 20 agricultural landowners in implementing a minimum of 40 acress two education and outreach events will also be held to recruit and engage priority areas identified in the existing watershed management plans, the p connectivity and quality, and support water quality outcomes, aligning with beneficial approach will enhance biodiversity, support filtration of agricultur recreation and hunting opportunities by providing brood cover for upland Additionally, the project will support long-term conservation efforts and st region.
C25-0305	Building Conservation Agriculture Clusters in Cannon River Subwatersheds	Clean River Partners	Rice	\$250,000.00	\$250,000.00	This project will focus on building clusters of farmers practicing conservation the Cannon River. Clean River Partners (CRP) will be working with a cluster Township area of Rice County (along Rice, Heath, and Wolf Creeks) to share cluster of farmers along the Little Cannon River subwatershed in Goodhue Bridgewater cluster's protection of the Rice, Heath, and Wolf Creeks and to conservation in the Little Cannon River area. CRP is an environmental orgat been protecting and improving the land and water in the Cannon River Wa Wolf Creeks and the Little Cannon River were chosen because there is loca for improving the water quality of these resources and there has been stro each of these areas to practice conservation agriculture. We will build on e interest in two Tier 1 conservation areas of our watershed, as identified by Powers Organization (CRWJPO) in the Cannon River Watershed Comprehen The first area is the combined subwatersheds of Rice, Heath, and Wolf Cre- is a self-sustaining brook trout stream with a DNR fishing access easement recreational and subsistence fishing. Soil and water quality improvements as well as fishers and ecologists who observe improved trout population he The second area is the Little Cannon River subwatershed, located in Goodh cold-water resource and a designated trout stream impaired for excess sec the Little Cannon River was acquired and conveyed to the Minnesota DNR. River Aquatic Management Area (AMA). For this project, CRP wants to foc Little Cannon River AMA and upstream of the AMA. Through this project, y farmers practicing conservation agriculture, increasing the number of acres practices are implemented, increasing the number of conservation agricult and building area farmers' capacity for peer leadership on conservation agricult and building area farmers' capacity for peer leadership on conservation agricult and building area farmers' capacity for peer leadership on conservation agricult

n the Lower Minnesota, Le Sueur, r-friendly plants to support monarchs, and cost-share, the project will support s of habitat enhancements. At least e local landowners. By targeting highproject will improve terrestrial habitat th the goals of these plans. This multitural field runoff, and support wildlife nesting gamebirds and songbirds. trengthen partnerships across the

on agriculture in four subwatersheds of of farmers in the Bridgewater re their experiences with an emerging County in order to continue the to build upon an emerging cluster of nization located in Northfield that has atershed since 1990. Rice, Heath, and al community interest in and support ong commitment from select farmers in existing partnerships and community the Cannon River Watershed Joint nsive Management Plan (CRWCMP). eks, located in Rice County. Rice Creek that members of the public use for in Rice Creek will be visible to farmers ealth.

hue County. The Little Cannon River is a diment. In 2020, a parcel of land along . That parcel became the Little Cannon cus our efforts on the area near the we anticipate increasing the number of es on which conservation agriculture ture practices implemented per acre, griculture, leading to water quality

public art education series brownfield site in South Minneapolis. EPNI is redeveloping the production facility with a focus on renewable energy produc addition, we will deepen the public knowledge of urban stor education events and 10 public art projects. EPNI is a commu- neighborhood of South Minneapolis, an area less than 1.5 m designated "disadvantaged community" as defined by the EF Environmental Justice community, and part of the Minneapol residents live in poverty, and over 80% of the population ide The neighborhood is at the epicenter of a former Superfund the 1930s and was finally remediated in the 2010s. This cont 7.6-acre site which has compromised the groundwater. It is i management system which caps the surface of the site, and the Mississippi River.
--

C25-0307	Shoreline Restoration and Bank Stabilization on Leech Lake	Leech Lake Band of Ojibwe	Cass	\$50,000	\$50,000	LLBO has identified a site on Leech Lake where there is bank failure due to this funding to restore and protect this site. Leech Lake is an important wat quality and supports a variety of important species. Restoration and protec runoff and sedimentation to Leech Lake as well as protect cultural resource private to protect the integrity of the site and any potential cultural resource
C25-0308	Lake Lida Comprehensive Lakeshed Assessment	Lake Lida Comprehensive Lakeshed Assessment	Otter Tail	\$57,000.00	\$57,000.00	We will develop a comprehensive lakeshed assessment that will provide a model, and targeted sites for project implementation. This assessment will water quality in Lake Lida in Otter Tail County. The majority of the Lake Lida cabins, and resorts. The entire eastern shore of the southern bay is in Map important lake regionally due to its excellent fishing and recreational oppo Lake Lida was prioritized as a focus lake in the Otter Tail Comprehensive W (OTCWMP) based upon its outstanding biological significance and general The South Bay of Lake Lida was chosen in particular because there are grow and harmful algae blooms that have been occurring over the past decade. South Lida Lake will benefit the public that use the swimming beach at Map

Total \$1,633,975.00 \$1,63

\$1,633,975.00

partnerships with the Mississippi opt-a-Drain program (A-a-D), the r partners at the nexus of civil this grant will result in build-ready rotect the Mississippi watershed from at further arsenic contamination on a te (the "EPNI Urban Farm") into a green nics farming, and rainwater recycling. In he watershed through 4 public rganization that serves the East Phillips Mississippi River. East Phillips is an IRA-D community, an MPCA-designated d Southside Green Zone. 30% of DC.

as caused by pesticide manufacturing in t a toxic arsenic plume underneath the at EPNI create a stormwater

migration of the arsenic plume towards

shoreline erosion. LLBO plans to use terbody with near-pristine water ction of this site will reduce nutrient res. The location of the site is being kept rces.

phosphorus budget, lake response I allow us to measurably improve the la shoreline is developed with homes, olewood State Park. Lake Lida is an ortunities both in summer and winter. Vatershed Management Plan development shoreline classification. wing concerns about eutrophication Improvements to water quality in oplewood State Park.

Annual Report



Minnesota Stormwater Research Council

Minnesota Stormwater Research Program

Advancing science, technology and management of stormwater in Minnesota by investing in and facilitating research to prevent, minimize and mitigate the impacts of runoff from the built environment.

ADMINISTRATOR'S MESSAGE



Facilitating research is a primary mission

As I reflect on the Minnesota Stormwater Research Program, I want to share the many accomplishments and milestones we achieved in advancing stormwater research. Over the past year, five projects in our research portfolio resulted in significant breakthroughs, from innovative new technologies to solutions that will improve practices. There are sixteen active projects including seven studies focused on understanding and improving the functions of stormwater ponds These projects, fueled by dedicated researchers and partners, will provide valuable insights into managing stormwater more effectively, efficiently, and with new innovations.

Funding makes great work possible

Equally exciting, we experienced remarkable success in program funding in 2024. We secured the highest level of financial support in the program's history including more than \$185,000 from watersheds, cities, and private businesses and the program was appropriated an additional \$1 million from the Clean Water, Land and Legacy Amendment. On behalf of the Program and Council, I want to extend deep appreciation to the cities, watersheds, private businesses, and to the Clean Water Council for their financial support that empowers us to continue pushing the boundaries of stormwater research, education, and outreach.

Guidance by an exceptional advisory board

Our success is also due to the guidance and expertise provided by our diverse and talented advisory board which includes representatives from cities, watersheds, agencies and private engineering. Their insights have been invaluable in shaping our research programs and in advancing our technology transfer efforts.

Transfer the knowledge and science we generate

A key highlight of this year was hiring a second Stormwater Extension Educator, pivotal in expanding the reach of our work. The Clean Sweep Program featured webinars and workshops establishing a path for communities to adopt street sweeping programs that will help them meet their water quality goals. The Minnesota Stormwater Seminar Series continues to serve as a valuable platform for knowledge exchange. In 2024, more than 1,900 participants joined us for 11 seminar sessions.

We will continue our mission with determination, advancing science, technology, and the management of urban stormwater in Minnesota by investing in and facilitating research to prevent, minimize, and mitigate the impacts of runoff. I welcome you to join us in these efforts.

- John Bilotta

Administrator for the Minnesota Stormwater Research Program

ADVISORY BOARD

The Minnesota Stormwater Research Council (MSRC) is an organization of stormwater professionals, practitioners, managers, engineers, researchers and others who work together to facilitate and complete research on urban stormwater management. This knowledge is then shared with professionals across Minnesota empowering them to prevent, minimize and mitigate the impacts of runoff. The MSRC is administered by the University of Minnesota Water Resources Center (WRC) and works in tandem with the WRC's Minnesota Stormwater Research Program (MSRP).



UNIVERSITY OF MINNESOTA

Meet our Advisory Board Members

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Recently completed projects

Assessment of urban stormwater chloride and its impact on surface water trends

How is chloride from winter road deicers impacting surface water?

Project highlights

- Chloride levels continue to rise in Minnesota's surface waters; concentrations are highest in the most urbanized watersheds.
- Watershed inputs, flow paths, water body type, morphology, and seasons are all factors that impact chloride concentration in surface waters.

• The project developed a method to identify and prioritize high-risk water bodies more susceptible to pollution from chloride, which will help managers know where to focus monitoring efforts.

Evaluation of media effectiveness for removal of phosphorus and other pollutants in high-volume stormwater filtration BMPs

Can high-volume stormwater filtration systems be effective in removing large amounts of phosphorus (P)?

Project highlights

- The active, high volume Rosland Park Filtration System had lower total P removal efficiencies compared to traditional passive iron enhanced filters.
 - Monitoring in 2023 showed a total of 11.1 lbs of P was removed at a cost of about \$9,638/lb.
 - When tested, the filter media tested withstood continuous inundation while maintaining aerobic conditions.
- System testing, reconfiguration, operation and monitoring will continue.

• This design has the potential to serve as a viable stormwater BMP alternative where available land is limited or maintaining recreational greenspace is a paramount objective.

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Recently completed projects

Iron enhanced sand filters (IESF) performance and maintenance meta-analysis

How effective are IESFs in Minnesota reducing phosphorus (P) from urban runoff?

Project highlights

- Most IESF achieve less than 50% soluble reactive P retention after reaching 10,000 to 13,000 ft of treated depth (volume of water through the filter divided by the area of the filter).
- Batch tests of remaining capacity will provide the best assessment of an IESF's soluble reactive P retention.
- An IESF's effective operational lifespan is a function of age and the ratio of watershed area to filter area.
- The project resulted in maintenance recommendations including,
 - Inspect IESFs after every major storm during the first year of operation.
 - Perform annual visual inspections at least once per growing season.
 - Remove organic material (leaves, seeds, grass) that has settled on the media and rake the media.
 - Remove plants growing in the media in the fall before seed drop.
 - Inspect for and breaking up clumps of iron if present.



Recently completed pond projects

Fate and transport of phosphorus and HABs from stormwater ponds

Are stormwater ponds exporting phosphorus and harmful algal toxins downstream?

Project highlights

 In all storm events, total phosphorus (TP) concentrations were detected in the outlets of all three ponds in the study, indicating some export to downstream water bodies.

• 70% of the variability of TP export concentrations were explained by the watershed area to pond surface area ratio. Pond depth was also a factor.

• The algal community (Microcystis) at the outlet and downstream of all three ponds were dominated by blue-green algae species that can produce toxins. Their presence does not indicate the persistence of toxins but rather indicates the potential for toxin production.

• Algal toxin concentration varied; samples were below and above the detection limit. However, all measured concentrations were below the World Health Organization's limit of 10 μ g/L, posing a relatively low probability of acute health risks.

• Site specific retrofit options (e.g. increasing permanent pool volume, decreasing depth to mitigate anoxic conditions) were identified that would improve pond performance.

Enhancement and validation of a stormwater pond assessment tool (PAT)

How well can a diagnostic tool assess the functionality of stormwater ponds and how can the tool be improved?

Project highlights

- The PAT was updated to improve its utility, incorporating better regression statistics and prediction models. The influence of floating and emergent vegetation was added.
- Components of the tool were tested on more than 18 ponds.
- New features include a scoring and ranking system for pond risk indicators and adding increased flexibility to refine the tool as new data and information becomes available.

• User guidance was developed and a pilot workshop was held laying a path for future training and adoption by practitioners.

Click on any research question for a link directly to that project's website.

Photo credit MPCA

Ongoing projects 1 Can stormwater treatment trains be more effective with augmented biofilters? Which contaminants of emerging concern (CECs) are present in urban 2 stormwater runoff and can biofiltration remove them? To what extent do urban trees intercept precipitation and reduce 3 stormwater runoff and are tree leaves adding to nutrients in runoff? What type of soil and media in bioretention practices support the 4 most effective plant growth and limit nutrient export? Can iron enhanced sand filters be enhanced with alternative agents 5 that are effective and readily available? Are there patterns in the design and installation of roads, parking lots, 6 and pavement areas that prevent the efficient use of deicing materials? Can we design snow storage areas to prevent melt and refreeze and reduce the repeated use of deicers? How many and what kind of distributed BMPs are needed to see 8 meaningful impact to water quality and quantity at a watershed scale? Can the addition of fungi to biofilters, swales and other stormwater 9 practices increase the removal of pollutants from runoff?

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1.3

14

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16

Ongoing pond-related projects

Click on any research question for a link directly to that project's website.

How do stormwater pond design, maintenance, and physical characteristics influence pond vegetation and how does vegetation impact water quality?

What are the most effective methods to reduce and remediate phosphorus release rates from urban stormwater ponds?

Can real-time pond adaptive level control systems be used to enhance stormwater pond management for water quality and flood control benefits?

Can a redesign and proper maintenance of a forebay pretreatment practice enhance the function of a stormwater pond?

What are the design and management factors that determine the long-term performance of stormwater ponds?

How effective are pond aeration and mixing systems at reducing water quality problems and nutrient export?

Can earthworms (vermiremediation) reduce PAH contaminants in pond sediment?

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2024/2025 RESEARCH PRIORITIES

Click anywhere on the page for a link to the research priorities PDF.

1



Structural practices including their design, construction, operation and maintenance

- Urban stormwater ponds
- Stormwater capture and reuse
- **Bioretention practices**
- Iron-enhanced sand filters & other filler amendments
- Treatment trains of practices
- **Pollution prevention and** 2 source reduction practices and approaches, including street sweeping



Delivering research results to practitioners, professionals and policymakers.

In 2024, the Technology Transfer Program continued to grow, ensuring the effective transfer of research results. A dynamic Technology Transfer Plan was developed, with input from the MSRC Technology Transfer Committee, to advance three key goals:

- 1. Ensure that research results are accessible and widely shared
- 2. Create a system that identifies and engages with the target audiences for the research
- 3. Connect research projects to the stormwater community.



Clean Sweep Program

In 2024, four Clean Sweep workshops were held, providing participants with valuable insights and new tools and supporting the implementation of enhanced street sweeping strategies.

In addition, the first-ever Sweeping and Salting Showdown workshop was launched, in collaboration with the Minnesota Pollution Control Agency and Hamline University. Attendees were offered a handson look at available equipment and technologies for both street sweeping and smart salting.

Minnesota Stormwater Seminar Series

These monthly seminars continued to serve as a valuable platform for knowledge exchange. Eleven seminars were held in 2024. Seminars featured both national and Minnesota experts, coupled with discussion panels composed of practitioners and professionals. Participation was easy, with options for hybrid and in-person attendance at every session. All seminars were recorded and available online.



TECHNOLOGY TRANSFER

Reaching new audiences

HOA Mini-Conference

Informed by the results of a MSRP research project, a mini conference led by Washington Conservation District provided stormwater practice maintenance information to members of homeowners associations (HOAs). Feedback gathered here identified the need for a HOA Stormwater Leaders Course which was piloted in 2025.

Conference Presentations

Researchers presented results from several MSRP completed projects at many national level conferences, including the MN Water Resources Conference.

Erosion and Stormwater Management Certification Program

Research results were incorporated into the Inspection and Maintenance of Permanent Stormwater Treatment Practices certification course.



Meet the technology transfer team



Welcome, Jessy Carlson!

Our technology transfer work got a serious boost in 2024 with the addition of Jessy, our newest stormwater extension educator.

Jessy brings fresh energy, new ideas, and a passion for connecting research with real-world impact.



Maggie Karschnia Extension Educator

Lenna Johnsen GreenCorps Member

> Zainab Ahmed Student Worker

MSRC ANNUAL REPORT

PROGRAM FUNDING

Sources The program is funded by pooling and leveraging funds from diverse sources.



Watersheds, cities and private industry

2024 Contributors

- Ramsey-Washington Metro Watershed District, \$50,000
- Capitol Region Watershed District, \$35,000
- Mississippi Watershed Management Organization, \$25,000
- South Washington Watershed District, \$25,000
- Nine Mile Creek Watershed District, \$15,000
- Barr Engineering Company, \$3,000
- Coon Creek Watershed District, \$10,000
- Rice Creek Watershed District, \$10,000
- Valley Branch Watershed District, \$4,000
- City of Edina, \$3,500
- Bolton and Menk, \$3,000
- Emmons & Olivier Resources, Inc., \$3,000
- Stantec, \$3,000
- WSB Engineering, \$3,000





2025



Join us as a financial partner today!

Join the growing list of watersheds, cities, private businesses, and organizations as financial partners in the Minnesota Stormwater Research Council.



Make your organization's commitment to be a financial partner using the QR code or by visiting z.umn.edu/fundmsrc.

Minnesota Agricultural Water Quality Certification Program

Topic Selection Background Information

Program Overview	Agricultural runoff can harm lakes, rivers, streams, and groundwater. The Minnesota Agricultural Water Quality Certification Program (WQCP) is a voluntary program that provides incentives to agricultural landowners to implement conservation practices that protect water quality. The Minnesota Department of Agriculture (MDA) partners with other agencies and local governments to certify program participants and support their implementation of techniques tailored to address their farms' unique water-quality risks.					
Evaluation Questions	How well has MDA managed WQCP? How long does certification take? To what extent has MDA measured water quality improvements as a result of the program? To what extent has water quality improved? To what extent has MDA established and achieved sustainability and environmental outcomes for WQCP? How well has MDA complied with applicable requirements?					
State Resources Low	Since its inception, WQCP's annual appropriation (from the state's Clean Water Fund) has increased from \$1.5 million for Fiscal Year 2014 to \$3.5 million for Fiscal Year 2025. MDA directs most of this funding to local government partners that provide technical support to agricultural landowners who are certified or seeking certification.					
State Control <i>High</i>	WQCP is established in state law and MDA developed the process for assessing an agricultural producer's water-quality risks. MDA also approves the local government partners and other individuals who work directly with landowners seeking certification.					
Impact Medium	Agricultural runoff can threaten water quality throughout the state. According to an MDA report, farms certified through WQCP have implemented new conservation practices that have prevented thousands of tons of runoff from entering Minnesota lakes, rivers, and streams every year. However, as of February 2025, fewer than 1,600 of Minnesota's more than 60,000 farms were certified through WQCP.					
Timeliness <i>Medium</i>	While Minnesota's water quality is of perennial interest to legislators and the public, there is no urgent reason to evaluate WQCP this year.					
Feasibility High	The questions posed are fairly broad; OLA may need to narrow their scope. Then, OLA could evaluate WQCP using standard evaluation techniques, including data analysis, document reviews, interviews, and surveys.					
Balance <i>Medium</i>	OLA has never evaluated WQCP. OLA's most recent program evaluation related to MDA or water quality was <i>Pesticide Regulation</i> , released in 2020.					
Discussion	Since MDA began administering WQCP in 2014, enrollment and interest has continued to expand. MDA reports that the program has been successful in terms of water-quality outcomes and the financial health of the participants. An OLA evaluation could help determine the value of the program and provide suggestions for the future.					

OLA

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