Policy Committee Meeting Agenda
Clean Water Council
September 27, 2024
9:30 a.m. – 12:00 p.m.
WebEx Only

2024 *Policy Committee: John Barten, Rich Biske (Chair), Gail Cederberg, Kelly Gribauval-Hite, Peter Schwagerl, and Marcie Weinandt*

9:30 Regular Business
- Introductions
- Approve today's agenda
- Approve minutes of previous meeting(s)
- Chair update: **Call for Vice-Chair**
- Staff update: **Policy items from August 19th public input**

9:45 DNR Culvert Update
- Jason Moeckel, DNR

9:50 Water Storage Update
- Rita Weaver, BWSR

10:30 BREAK

10:45 Review of Latest Draft of Groundwater Protection Policy Statement

11:30 Transmit Drainage Policy Statement and Groundwater Protection Policy Statement to Full Council

11:45 Public Comment

12:00 Adjourn

Policy Committee Meeting Summary
Clean Water Council (Council)
August 23, 2024, 9:30 a.m. to 12:00 p.m.

Committee Members present: John Barten, Rich Biske (Chair), Gail Cederberg, Peter Schwagerl, Marcie Weinandt.
Members absent: Kelly Gribauval-Hite
Others present: Jen Kader (Met Council), Catherine Neuschler (EQB), Glenn Skuta (MPCA), Frieda VanQualen (MDH), Justin Hansen (BWSR), Trevor Russell (Friends of the Mississippi River), Margaret Wagner (MDA), Paul Gardner (CWC), Brianna Frisch (MPCA), Annie Felix-Gerth (BWSR), Jeff Forester (MN Lakes and Rivers Advocates), Judy Sventek (Met Council), Eleanor Trenary (Nature Conservancy), Brad Jordahl Redlin (MDA)

To watch the Webex video recording of this meeting, please go to https://www.pca.state.mn.us/clean-water-council/policy-ad-hoc-committee, or contact Brianna Frisch.

Regular Business

- Introductions
- Approval of the August 23rd agenda, and July 26th meeting summary, motion by Marcie Weinandt, seconded by Peter Schwagerl. Motion carries.
- Chair Update
- Staff Update:
  - Policy items from August 19th public input have been brought forward. There was not anything that hasn't been shown already.

Minnesota's Vanishing Natural Shorelines: A Loss that Contributes to Degraded Lake Quality, by Jeff Forester, Minnesota Lakes & Rivers Advocates *(Webex 00:009:30)*

- The Minnesota Natural Shoreline Partnership is a non-profit organization of leaders and local/state government natural resources professionals. They work to find solutions and implement effective changes to how Minnesotans view and care for healthy shorelines.
- We are looking at three zones. 1) Upland zone above ordinary high water (OHW); 2) Shoreline zone from the water's edge to the top of the bank; and 3) Aquatic zone covered by water up to fifty feet from the shore. The Minnesota Department of Natural Resources (DNR) has created "Score-the-Shore" as a periodic survey of the zones. It is a boat-based, rapid assessment. Most lakes take one day to survey, with 100 feet of shore assessed at each site. They monitor lakeshore habitat. About 50 percent of natural shoreline has been lost in the state.
- The loss of natural shorelines contributes to polluted waters, harmful algae blooms, and eroding shoreline. Over 50 percent of Minnesota's lakes and rivers are impaired. Increased runoff fuels algae blooms causing eutrophication (also known as "lake death"). The lack of deeply rooted plants and trees cause soil instability and sedimentation, fragmented habitat, and hindered wildlife movements, nesting, and foraging opportunities. It contributes to declining property value, with diminished water clarity and eroding soil.
- Natural shoreline goals include tree cover, groundcover, native vegetative buffers, aquatic plants. The tree cover stabilize soils, filters pollutants, provides habitat and share, enhances scenic beauty and property values, and stores carbon. Ground cover keeps native grasses long. By reducing paved areas, it helps create a diverse habitat, shoreline, and a natural filtration system. Native shrubs, wildflowers, and tall grasses absorb pollutants, provide habitat, and stabilize the shoreline. Aquatic plants provide vital habitats, offering shelter, breeding areas, and food for wildlife, while also providing resilience against waves. Some natural shoreline partnership goals:
  - Redefine "healthy" shorelines: shift public perceptions to support sustainable shoreline conditions.
  - Enhance ecological health: restoration to improve ecological conditions and biodiversity.
  - Leverage partnerships: collaboration and capacity to build resiliency and community engagement.
  - Revise polices to promote long-term sustainability and effective shoreline management.
- Social norms and development behaviors are barriers. Recommendations include: strengthening the relationship among interested organizations instead of having a coalition of the willing; coordination; and capacity. Capacity involves technical skill for restoration and continuing education resources for realtors.

- Minnesota has shoreline standards from the last century, and counties also have different standards. There is also different perceptions of beauty that will impact water quality.
- There are local success stories and innovative approaches through certain counties, Soil and Water Conservation Districts, Freshwater, Blue Thumb, Minnesota Native Landscapes. They have the phrase "It's Shore Important". They use the Survey123 evaluation tool and want to create that cultural shift.

Questions/Comments/Discussion:

- Gail Cederberg: My family is restoring a family cabin in central Minnesota that is sixty years old. There is tremendous growth there with changes in the tree canopy. The natural shoreline is beautiful, but others move in and do the lawn to the lake. We have a Facebook page now, and the lake association does presentations, but the neighbor-to-neighbor conversations are so important. There are grants available. Realtors, contractors, and renters (i.e., VBRO and AirB&B) need to work together. *Response:* The lake associations all together have such a high number of people, so we are continuing to work with those folks to really help get the word out.
- Gail Cederberg: Tighter regulation is okay, but there is not much enforcement and there is grandfathering. It takes multiple calls to get reviewed. *Response:* There is no silver bullet. We are looking a more of a shotgun approach around the lake shore folks, to get the biggest bang for our buck.
- Paul Gardner: The Council's recommendations are due January 15, 2025. The Council will need to finalize the recommendations at the December full Council meeting, along with any policy recommendations. That leaves September, October, and November. It often takes three meetings to wordsmith items to the final draft. Today might be the day to plant some seeds for a policy statement.
    - Rich Biske: Let's better understand how Clean Water Funds (CWFs) are used for natural shorelines. It would also be good to revisit enforcement, and if there are ways to improve that as well.
        - *Response from Annie Felix-Gerth (BWSR):* We can get back to you on CWFs.
    - Paul will start a broad policy statement for the Policy Committee to review.

Principles for Sustainable Aviation Fuel (SAF) & Implications for Water Quality by Trevor Russell, Friends of the Mississippi River, as well as Eleanor Trenary with the Nature Conservancy (TNC) *(Webex 01:00:00)*

- SAF is a broad definition. It is an alternative aviation fuel, renewable, sustainably sourced, that is designed to replace, or blend with, conventional jet fuels. This would reduce the carbon footprint from air travel. SAF has a relationship to water quality. We will highlight our principles that guide our thinking on SAF in Minnesota.
- Transportation is our largest carbon emission source, followed closely by agriculture. Aviation is a big part.
- About 90 percent of aviation CO2 emissions are directly related to fuel. More aircraft efficiency resulted in less fuel per passenger over time, but emissions and air travel have still been growing. If flight demand increases as expected, emissions will double by 2050. Equipment investments will only slow the growth in emissions, but reductions will come from fuel. Electric options for commercial or freight is not realistic, because batteries are heavy.
- The Biden Administration created the SAF Grand Challenge with a near-term goal of 3 billion SAF gallons by 2030, and a long-term goal of 35 billion SAF gallons by 2050. The SAF must achieve at least a fifty percent reduction in life cycle greenhouse gas (GHG) emissions compared to conventional fuel. Last year, the United States produced 15 million gallons of SAF, so an increase would be exponential. If those gallons come from cropland biofuels, the SAF Grand Challenge becomes one of the most, if not the most, influential agricultural policy in the nation. If we do this well, it could be an environmental improvement. If we do this poorly, it could create some severe unintended consequences.
- SAF pathways: alcohol-to jet (the corn way), HEFA (the fats way), Power-to-liquid (the air way), and gasification (the garbage way). Each comes with its own challenges. The one that caught our attention is the alcohol-to-jet, or corn to ethanol. Right now, it is the cheapest, most technologically feasible, and readily accessible option. It comes with risks, like increasing demand for corn and soybean rotations that could results in conversion of marginal or conservation lands. We produce about 15 billion gallons of ethanol in the U.S. that consume about 36 million acres of croplands. It takes about 1.8 gallons of ethanol to produce one gallon of SAF. If you wanted to produce 35 billion gallons of alcohol-to-jet ethanol SAF, it would require something like 150 million acres of corn every year. We only grow 94 million acres of corn in the United States now. The alcohol-to-jet pathway could result in significant increased demand for annual row crop production. However, there is a lot of promising opportunity for Winter Annual Oilseeds (following the HEFA Pathway),

many of which are under development at the University of Minnesota Forever Green Initiative, which the Council has supported with CWFs. Key benefits of oilseed based SAF include very low carbon intensity, high productivity and scaling potential, as well as protection of soil and water.

- Medium adoption: Minnesota could produce one million acres of winter annual oilseeds, largely for this SAF market. Farmers are only going to produce these crops if there is a market for them, and this could really increase the oilseed production per acre.
- Additionally, the Greater MSP Partnership has Minnesota SAF Hub initiative. Minnesota is appealing because of large airline demand, university research capabilities, a clean power and green hydrogen pathway, regenerative agriculture, as well as the existing biofuels industry (including the talent base).
    - They are looking at a three-step process:
        - Initiate the market (2023-27): redirect existing SAF production to Minnesota with: establish blending facility in Minnesota to accept SAF, blend with conventional jet-alcohol fuel, and deliver to airport; secure agreements with SAF producers to build production in Minnesota; and accelerate regenerative agriculture inputs and power to liquid (PTL) options.
        - Establish in-state production (2027-35): construct and operate ATJ SAF production in Minnesota; test and scale regenerative crop inputs, and initiate production of second generation ATJ; link Heartland Hydrogen Hub to establish PTL production in state.
        - Scale production across multiple pathways (2035-50): scale in-state SAF production with ultra-low carbon inputs, e.g., power to liquid. The ATJ: ethanol-based with CI improvement levers to hit carbon reductions of 75-80 percent by 2035; HEFA: incorporate cover crop-based production contingent on seed evolution; PTL: scale PTL production.
- Fresh Energy, Friends of the Mississippi River, and The Nature Conservancy have created a guiding principles document for the SAF in Minnesota in the packet.
    - If it is done well, it could create significant change. If done poorly, it would also have a big impact on diversity and water quality in a negative way. This is why these groups are reaching out now.
    - This is a living document, and we expect it to change and adapt as items move forward.
    - Guidelines to point out to the Council:
        - Prevent land conversion: A SAF strategy should not result in the conversion of marginal lands, conservation lands, grasslands, wetlands, or forests to biofuel production, or the reduction of food production. Bio-based SAF should be limited to feedstocks produced on croplands with a demonstrated cropping history starting from a defined baseline year.
        - Define “sustainable” to include air, water, biodiversity, and clean energy: A SAF strategy must consider impacts on clean water, healthy ecosystems, clean air, and the economy-wide transition to clean energy. A carbon intensity score is not sufficient to fully evaluate these impacts. A SAF strategy must include an approach that holistically assesses its environmental impacts (such as an environmental integrity score).
        - Maximize winter oilseeds as a preferred feedstock: Winter annual oilseeds (e.g. winter camelina and pennycress) produce very low-carbon aviation fuels while also providing significant benefits for water quality, wildlife, and pollinators. A SAF strategy should include benchmarks for utilizing winter annual oilseeds feedstocks over time.
        - Invest in environmental justice and equity: SAF represents a unique opportunity to advance feedstock supply chains that help address persistent environmental, economic, and racial injustice and inequity in our agriculture and energy systems. We must embed equity, inclusion, and environmental justice values and clear metrics for success in a Minnesota SAF strategy.
        - Prioritize scaling the most sustainable fuel pathways: To avoid land conversion while scaling up SAF production, corn- and soybean-based SAF fuel pathways must be considered near-term bridge solutions to decarbonization as the Minnesota SAF market develops. A SAF strategy should include a commitment to invest in scaling fuel pathways that rely on regenerative cropping systems and carbon-free energy from day one.
        - Any hydrogen production strategy or any biofuel production strategy is going to use a lot of water during production. Ethanol is from four to ten gallons of water per gallon of ethanol. This is a limiting factor as we scale up. We will need to maintain our water quality and quantity needs in the state.

Questions/Comments/Discussion:

- John Barten: Do the current varieties from the UMN already exist, or do those still need to be achieved to make it a viable process? *Answer:* Right now, winter annual oilseeds have about a 35 percent oil content range, which is higher than other oilseed crops. That factor allows the relaying of winter annual oilseeds and soybean for more oilseed production than just one alone. There is a yield drag on the soybeans. We would anticipate that oil content increasing over time with additional plant genetic development.
- John Barten: If the UMN Forever Green's Initiative gets their budget cut, will it impact this? *Response from Peter Schwagerl:* For the investment in the FGI, even with the oil content, and continuing the investment on the oilseeds, is getting the maturity even earlier, to get that harvested earlier to give the soybean more time to maximize it. There are many little tweaks to maximize the potential. It will take time and trial. *Response from Trevor Russell:* They are already moving that timeline and have moved it about two weeks ahead already. They are also working on low shatter seeds.

Review of Latest Draft of Groundwater Protection Policy Statement *(Webex 01:45:00)*

- The first paragraph and bullet points include items the committee has seen before. The last four are new or different: This is about the development and adoption of county ordinance that require well testing and a disclosure to the testing at the time a property is transferred; financial support for regulation of feedlots and the land application of manure; evaluation of current programs to see what is working; and to consider designating acreage that drains to the most vulnerable private wells for protection similar to Drinking Water Supply Management Areas (DWSMAs).

Questions/Comments/Discussion:

- Peter Schwagerl: Looking at the DWSMAs and private wells approach, do we have the technical data to develop it? Is it a workable concept? How much of the land area will that take? *Answer*: We have over 920 DWSMAs and public water supplies, which took several years. The number of private wells is huge and narrowing that down would still be a huge number too. The Minnesota Department of Health (MDH) would need to tell us what is possible. *Response from Frieda Von Qualen (MDH):* This is thinking at an aquifer level scale not just at the private well level. We are exploring what it would look like and will come back with it.
- Gail Cederberg: On the first page, can we recommend disclosure of well testing to renters too? There are a lot of BIPOC communities who do not trust their water. Additionally, on page four, there could be a recommendation that Met Council could assist on county ordinances. It may be worth asking the Legislature to take up the ordinance issue.
- John Barten: I think this is an improvement, and is more comprehensive, but are we going to have the opportunity to make additional comments? *Answer:* Yes.
- John Barten: I think we need stronger language on the adoption of county ordinances to test at time of sale. It is an important item, especially considering the people in vulnerable communities have a distrust of their drinking water, from the presentation on Monday.
- Rich Biske: Let's strengthen the language about seeking a stable funding source to assist well owners with mitigation. It should be called out directly. We should identify a stable funding source that is not dependent on a special governor's line item (which happened this last session). It is likely not going to come from CWFs.
- Rich Biske: We could also seek more data on the evaluation of the CWFs. A greater analysis (modeling and projects) and those that are timebound; it is going to be needed to help know what the future looks like.

Adjournment *(Webex 02:11:01)*

Clean Water Council

23 August 2024

List of Policy Ideas in Public Input

High

Medium

Low

Agency	Current Program	Comment	Staff comments	Rich Biske comments
MPCA	Chloride Reduction	Chloride application liability protection for snow removal businesses with Smart Salting certification	Already in Council policy platform	
DNR MDH Met Council	N/A	Funding needed for water reuse, especially capital improvement funds. State also needs a statewide reuse policy and guidelines. Incentives are needed for better irrigation. Gail Comment – how do we start on a statewide reuse policy and guidelines – I feel this is a top priority to include as a single item in strategic plan and policy planning . add this as HIGH	• MDH received CWFs for looking at water reuse challenges; not sure of status. • Met Council does receive funding for residential irrigation efficiency but not necessarily harvesting for irrigation reuse. • We have probably funded some reuse projects for irrigation. • CWF does fund some stormwater capital projects but not many for reuse; usually left to bonding. • Describe incentives? Fees? Penalties? Tougher conservation rate structure?	• It would be good to learn from volumetric water benefits from MetCouncil's experience. Then to understand possible incentives or dis-incentive options for water use efficiency. • Are there barriers to using a portion of fees to re-invest in improved irrigation? Creating a dis-incentive for excessive use, while funding incentives to invest in capital improvements?
BWSR MDA DNR	N/A	MN River _____ group seeks to minimize/eliminate hydrologic changes in Minnesota River basin because BMPs are not keeping up with growth in TSS. Problem due to land use changes, more drainage, and more precipitation.	• Commenter is most concerned about regulating tile drainage in MN River basin. • CWF does fund some multi-purpose drainage management, a few water storage projects, and hundreds of WASCOBs but not much on reducing tile drainage.	• The Council is unlikely in a position to do anything with tile drainage. Even inventory of existing tile received strong opposition when included in draft drainage policy statement. • There may be value in identifying ways to utilize more technology in current drainage systems.

			• Policy Committee has discussed how to map all tile drainage but not much past that.	• Provide incentives, resources or direction for watersheds to develop capital improvement plans for water storage within drainage system. Gail Comment – do we think we'll have a different outcome with opposition? Change to Medium?
BWSR	Buffer Implementation	Environmental groups would like to see administrative penalty order (APO) authority used to enforce buffer law for those not in compliance, rather than only using CWFs to help them get in compliance. Fines could also help fund the work.	• $2M/year goes to SWCDs to help landowners get back to compliance. • CWFs considered cheaper and quicker than enforcement. • Not sure what ratio is of people who made honest mistakes (e.g., accidently plowing up buffer) vs. recalcitrant landowners.	• This is worth looking into. Lots of public funding sources can't be used for mitigation or compliance with the law. It seems like the days of providing incentives for compliance should be over. It's been about 6 years since compliance was required owners and operators should know better by now. • A council position on this will make next round of budget recommendations easier
BWSR	One Watershed One Plan and Watershed Based Implementation Funding	A metro county SWCD believes that 1W1P is redundant within metro area where conservation districts and watershed districts have done much of the planning already.	• Would be interested to know if this is just one county or if other metro counties feel the same. • Metro is a hodgepodge of WDs, conservation districts, and WMOs that have had a variety of plans over the years and have a head start on monitoring and planning	• This is something BWSR should be able to look into and elevate to the council if warranted.
BWSR	Targeted Wellhead/Drinking Water Protection Easements Gail comment – agree this is important, protection is more economical than remediation. J	Environmental group supports paying fair market value for easements within high risk DWSMAs. They feel it is cheaper than water plant de-nitrification.	• Council has brought up the topic, especially at BOC, no conclusion reached yet	• First we should determine if this requires council action. BWSR may be able to do this without further authorization. If it requires a change in the CWF/Legacy appropriation language then we should discuss. Or understand if BWSR needs political support for legislative authorization. Gail Comment – agree with Rich.

BWSR	Various grant programs	Bois de Sioux Watershed Districts asks that flood control be eligible since it impacts water quality since drainage management can reduce TSS and P at lower cost than cover crops. They ask the Council to evaluate grant portfolio by problem scale.	• Projects that support flood control as well as wastewater treatment, climate resilience, carbon sequestration, and habitat also have water quality benefits. This could set a precedent. • Projects that have flood control as the main objective may not be constitutional under the Legacy Amendment.	• This could be a black hole of CWF in the Red River Valley. It may be more appropriate for the CWC to learn from the good science, modeling, planning and design that has taken place in the Red River and see if it can be applied to the MN River or elsewhere to better leverage bonding or federal sources.
DNR	Culvert Replacement Incentives	Bois de Sioux asks Council to recognize conflict between connectivity and flood control in Red River basin.	• We should ask DNR and BWSR if there are connectivity projects with culverts in the Red River basin that can increase flooding risks.	•
DNR MDA	Nonpoint Source Implementation Technical Assistance	Red River projects experience permit delays with DNR. Please encourage state agencies to standardize and streamline process.	• Let's ask MDA, DNR, and watershed districts to understand the issue.	• Yes, lets ask, but focus on DNR and understand across different projects like water storage, stream restoration, multi-purpose drainage management. Gail Comment: don't see how this is high priority for a policy for the CWF – done by agencies for permitting and streamlining?
DNR	Water Storage	The Red River is not getting CWFs for water storage. Funding is going to less organized parts of the state. Make the distribution uniform.	• The Red River basin is ahead of the MN River basin on planning, use of geospatial data, and basin-wide collaboration. • However, the DNR water storage line item in FY24-25 was only for two projects on state owned land in SW MN. DNR is not asking for funding in FY26-27. • Water storage funding on a larger scale is being done via other funding sources than CWF.	• This doesn't seem to apply. See above comment about expanding planning and design elsewhere. • Like with other fund allocation and programs, I don't agree with equal or uniform distribution. Funds should be distributed based on priority and potential impact and defined success.
BWSR	Watershed Partners Legacy Grant Program	Nature Conservancy supports a significant increase and appreciates greater outreach to tribal government.	• This program started at $1M per biennium to $3M in FY25 due to a large one-time surplus. The current FY26-27 is $1M.	• This program is a good way to build support at the local level for CWF and allow for some innovation that doesn't come

				from agency programs. It would be good to hear from Tribes and community orgs about what they'd like to see in the program and how it could be used. • Not sure what the policy action is, but we could discuss if BWSR is the appropriate administrator and it could be better aligned with emerging communications plan and staff. Gail comment – agree with Rich
MDA	Agricultural Best Management Practices Loan Program	A lender suggests re-allocating unspent funds from some counties to counties with higher need and larger backlog.	• Let's ask MDA if there are any counties that have unspent funds to see if there is an issue. • MDA has usually indicated that these funds get committed pretty quickly statewide?	•
MDA	Conservation Equipment Assistance	Ag stakeholders support ownership rather than a rental model and support the idea of those producers being able to do custom work for other farms.	• The BOC has discussed this a little bit. There was some discomfort about free equipment that someone could use to set up a business. • Advocates say we should want a producer to use the equipment on as many acres as possible no matter who owns it for maximum water quality benefits.	• It shouldn't be free, and if it's being fully paid for without a requirement of performance, then a policy should be put in place. Cost-share should be for no more than 25% and there should be a minimum annual acreage performance requirement for the life of the equipment.
MDA	Forever Green Initiative Gail Comment – agree with concept; although I need to revisit the presentation and data, with tradeoffs and outcomes.	Advocates ask for support to ensure a water-quality friendly policy for sustainable aviation fuel (SAF).	• The Policy Committee heard a presentation on SAF on 8/23. • Happy to follow up on this in whatever form the committee prefers.	• Yes, to considering a water policy statement for SAF and the council should consider a statement regarding the use of CWF to subsidize basic requirements SAF
MDA	MN Agricultural Water Quality Certification Program	Use the program as a conduit for more soil health BMPs.	• MAWQCP does provide up to $5,000 grants to producers to support BMPs. • A discussion is warranted about synchronizing multiple CWF	• It would be good for MDA to quantify environmental outcomes at a watershed scale and to understand how the program is interacting with other

			programs that support soil health to make sure we are maximizing acreage and not leaving funds on the table in any one program.	programs for cumulative impact at a watershed scale
	MN Agricultural Water Quality Certification Program	Environmental groups support two policy changes: 1) Certified farms inside a DWSMA should not be exempted from Level 3 & 4 Groundwater Protection Rule mitigation requirements under the 10-year regulatory certainty period; 2) The certification period for farms inside DWSMAs with elevated nitrate levels should be reduced from 10 years to 5 years	• Hastings DWSMA is very large and is among the first three DWSMAs that could reach Level 3 and 4 mitigation. With enough lead time, is it possible for a certified farm to be exempted for ten years from any new requirements like the GPR? • Certified farms must have nitrogen application levels well below what is in the U of M recommended rates, but advocates suggest that that still may be too high in some cases. • Is the GPR considered "new" regulation? If not, is this question moot?	• This may be resolved with a statement from MDA
MPCA (pass through)	National Park Water Quality Protection Program	Several organizations oppose earmarking funds in the CWF recommendations to avoid precedent. They also are concerned about this funding supporting additional development in a unique environment.	• The policy at work here is whether we earmark specific projects.	We should ask PFA and PCA how this would rank within other programs that also fund this work. And receive in writing how much of the funding is going to private businesses. Gail Comment: we need to dig into this program in more detail; what's being done, what does the future look like, should we be earmarking specific projects, etc. Larger issue for us?
MDH MDA	Private well initiative Irrigation Water Quality Protection Monitoring for Pesticides in Surface Water and Groundwater Nitrate in Groundwater	Several environmental groups want these programs to be supported by the responsible parties through fees. These activities previously relied on other funding sources.	• It is always a good time to discuss what funding sources would be needed if the Legacy Amendment expires and isn't renewed in its current form. • DNR charges groundwater fees but MDA runs the irrigation WQ protection program—would an	• Identifying users, fee structures and the extent CWF supplements would be interesting and help inform potential rate increases. • I have a similar emerging concern with CWF paying for the carbon and environmental benefits of renewable energy

			additional fee be charged on the water and sent to MDA? • A modest fertilizer fee increase was proposed ($0.99 per ton and then $0.40 per ton) in the Legislature in 2024 but failed. It would have funded a limited amount of mitigation ($5M?). • It would be good to model what the cost would be to carry these programs out and what it would cost per unit of product.	like SAF when there's a market or potential market that pays a premium Gail – agree with both bullets above.

Clean Water Council

DRAFT FY24-25 Policy Statements as of 27 September 2024

Advanced Drinking Water Protection [NEW DRAFT]

The State of Minnesota should ensure that private well users have safe, sufficient, and equitable access to drinking water. Priority contaminants are nitrate, bacteria, arsenic, manganese, lead, and pesticides. The Clean Water Fund combined with other funding sources (including fees), and appropriate policy should be used to support the following:

- completion of a private well inventory, starting in southeastern Minnesota, as well as timely updates to the Minnesota well index
- information to well users to reduce their risk, including well testing
- local and state capacity to manage testing, mapping, and education
- Stable, reliable funding of cost-effective strategies for private well users to mitigate wells that do not meet Minnesota health-based guidance for five contaminants, with a particular focus on low-income households
- publication of aggregate and anonymized well data
- land use compatible with private well protection (e.g., forage, continuous living cover, working lands easements, etc.), including the prioritization of areas draining to vulnerable private wells
- adequate technical and financial assistance for fertilizer and pesticide management, irrigation education, and manure storage and use
- development and adoption of county ordinances that require well testing and a disclosure of the testing at the time a property is transferred
- financial support for regulation of feedlots and the land application of manure
- evaluation of current programs for efficacy in meeting drinking water source protection goals
- consider designating acreage that drains to the most vulnerable private wells for protective practices like Drinking Water Supply Management Areas (DWSMAs)

This policy statement supersedes the following policy statements included in previous biennial Council recommendations:

- Advanced Drinking Water Protection [FY24-25]
- Disclosure of Well Water Quality at Time of Sale [FY22-23]
- Advanced Drinking Water Protection [FY16-17]

Problem

Currently, about 1.2 million Minnesotans get their drinking water from groundwater through a private well. While the State plays a role in protecting drinking water sources, testing and mitigating well water is generally treated as the responsibility of the property owner. The Minnesota Department of Health (MDH) recommends that it be done regularly (annually for **bacteria**; bi-annually for **nitrate**; at least once for **arsenic** and **lead**; and before a baby drinks the water for **manganese**). In limited cases, such as the Township Testing program of the Minnesota Department of Agriculture and a new initiative in southeastern Minnesota, the State provides the funding. However, many private well owners do not test their water. A 2016 Minnesota Department of Health (MDH) survey of private well owners found less than 20% of respondents had tested their well water at the frequency MDH recommends.

Once a well owner tests their water and gets the results, they are better able to know what steps they may need to take to ensure safe drinking water. However, currently owners are under no obligation to

inform buyers of their property of any high contaminant levels in private drinking water supply system. Education is useful, but some mandates are necessary to increase testing, reporting, and protect the health of private well users. Minnesota Statutes 103I.235 requires sellers of real property to disclosure the existence of a well but not water quality results.

Among the most widespread human-caused contaminants in water supply wells is nitrate. Its major source is commercial fertilizer followed by manure spread on farm fields as fertilizer. The state currently uses the Groundwater Protection Rule to protect drinking water supplies in dozens of communities that have high nitrate levels in public water supply wells. In addition, MDH has delineated areas around more than 920 public water supplies that use groundwater. These Drinking Water Supply Management Areas (DWSMAs) are the basis for Drinking Water Protection Plans that help those communities identify and avoid threats to drinking water, often with Clean Water Fund support. The Council's strategic plan requests that approximately 400,000 acres in vulnerable DWSMAs be protected by 2034. There is no equivalent regulation or designation for private wells.

The state also regulates feedlots and the use of their manure to reduce the risk of nitrate entering groundwater, but the time between feedlot inspections is long.

In addition, the University of Minnesota establishes optimal rates for fertilizer and manure application for different geographies, crops, and soil types, with some support from the Clean Water Fund. The Minnesota Agricultural Water Quality Certification Program (MAWQCP)—fully funded by the Clean Water Fund—also has requirements for nitrogen application that exceed the University's guidelines on more than 1 million acres. The Council would like a monitoring strategy to confirm MAWQCP's modeling for these reductions.

In response to high nitrate levels in southeastern Minnesota, numerous environmental and community advocates petitioned the U.S. Environmental Protection Agency for stronger action. The EPA instructed MDH, the Minnesota Pollution Control Agency, and the Minnesota Department of Agriculture to take action in eight counties to address the situation. Several steps in that response are included below among other proposed solutions from the Council.

Solutions

- Private well inventory and Minnesota Well Index

In eight counties of southeast Minnesota, MDH has begun inventorying private wells constructed before the 1974 Minnesota Well Code. MDH estimates these wells comprise 40 percent or 12,000 private wells. By incorporating this information into the Minnesota Well Index, MDH will be able to provide information to residents who likely have a poorly constructed well that is more vulnerable to contamination, especially for nitrate. The Council requests that this approach be expanded to the rest of the state by a date certain. In addition, the Council asks that MDH update its software for the Minnesota Well Index to ensure timely updates.

- Information to well users including well testing

MDH is also educating private well users in the southeast with information about the well inventory, how to get private well water tested for free, and how to get mitigation assistance.

The Council's strategic plan requests that the state provide free well testing over ten years starting in FY24-25 for all private well users. MDH is on track to meet this goal and is focusing on the southeast first. When sending water analysis results, laboratories also include information about how the household can access mitigation if necessary**.**

- Local capacity

Two MDH pilot programs supported by the CWF built partnerships with local public health agencies in recent years. These partnerships administered grants to provide well testing in Stevens, Grant, and Traverse Counties (Horizon Public Health) and in Olmsted, Fillmore, Winona, Wabasha, and Goodhue Counties (Olmsted Soil and Water Conservation District). Having this local capacity for testing and education is critical for success and should be expanded statewide.

- Strategies for mitigation

Nonpartisan legislative staff have asserted that using the Clean Water Fund for private well mitigation is not consistent with the Legacy Amendment of the State Constitution. The Council argues that repair of pre-code wells should be eligible. In the meantime, state general funds have been made available in FY25 to support private well mitigation such as reverse osmosis systems and the drilling of new wells for low-income households. The Clean Water Fund can be used to educate residents on their options, however, once well testing results are available. The Clean Water Council requests the Legislature provide a stable long-term funding source administered by the Minnesota Department of Health to support private well mitigation. The Minnesota House passed legislation (which did not make it through conference committee) to increase the fee on fertilizer to support private well mitigation. The Council believes this is one option for long-term funding.

- Publication of data

The Council believes that public aggregate data on well testing results will assist in drinking water source protection efforts. An example has been the Township Testing program at the Minnesota Department of Agriculture that has identified townships most vulnerable to nitrate and pesticide contamination. Continued testing will indicate whether prevention efforts are succeeding. In addition to nitrate and pesticides, publication of township level data for other contaminants (bacteria, arsenic, manganese) would also be useful.

- Land use

Policies and incentives are in place to ensure landowners have options available to convert land use away from nitrogen-intensive crops in Drinking Water Supply Management Areas (DWSMAs) or acreage that drains to vulnerable private wells. The Clean Water Fund and other sources can support working lands easements, wellhead protection easements, continuous living cover, and forage such as hay. The Council suggests that the Board of Water and Soil Resources consider paying up to fair market value for wellhead protection easements since commitments for this program are low, or otherwise accelerate enrollments in the program.

- Technical and financial assistance

The Department of Agriculture and the Board of Water and Soil Resources provide many opportunities to farmers to reduce runoff or infiltration of nitrates. They include an irrigation extension staffer, field days, nitrogen application education, conservation equipment assistance, low-interest equipment loans, soil health grants and education, manure storage grants, administration of the Groundwater Protection Rule, and updated crediting ratios for manure application. This work would not be possible without the Clean Water Fund and should continue.

- Development and adoption of county ordinances

The Council has advocated for the requirement that private wells should be tested for five contaminants and the results disclosed at the time a property is transferred. This proposal has not been successful at the Legislature. In the meantime, the Council asks that MDH develop model ordinances with contributions by the Metropolitan Council and promote adoption by counties.

For example, since 1998, Dakota County Ordinance number 114 requires testing a private well for bacteria, nitrate, arsenic, and manganese (added in 2019) within in 12 months prior to a real estate transfer. The ordinance updates in 2019 also require that water quality issues are addressed through treatment or well replacement prior to sale.

Ordinances should require property owners to inform any renters of their property of test results.

- Financial support of regulation of feedlots and the land application of manure

The MPCA issues State Disposal System (SDS) and National Pollution Discharge Elimination System (NPDES) permits for feedlots with more than 1,000 animal units. The Clean Water Council supports the MPCA's revisions proposed in late 2024 to these permits. Requirements include seasonal restrictions of manure on row crops and for cover crops for manure application (among others). The Council has asked the MPCA for information on how often these feedlots are inspected, either by counties with delegated authority to enforce permits with county feedlot officers or the state in other counties. The average inspection interval appears to be about ten years, but the MPCA inspects more frequently for feedlots in areas with higher risk to vulnerable groundwater. The Council supports additional general funds or fee revenue to increase inspection frequency.

- Evaluation

The Council seeks data from agencies on the efficacy on all the programs listed above that describe actual and modeled nitrate and contaminant reduction, durability of reductions, and cost. As the Legacy Amendment expiration date of June 2034 looms, the Council would like to focus investments where they will provide the most rapid progress. Program dashboards would be the most useful in the next biennial Clean Water Fund biennial report.

- Designation of private well areas

The Council suggests a dialogue with state agencies on the feasibility of creating a DWSMA-like tool for townships with high nitrate levels. The purpose would be to explore a regulatory approach like the Groundwater Protection Rule but for private wells.

Drainage Policy Statement [approved by Policy Committee, awaiting full Council approval]

The State of Minnesota should:

1. **Identify more opportunities** for multi-purpose drainage management (MDH) and water storage that improve water quality and complement Watershed Restoration and Protection Strategies (WRAPS) and One Watershed One Plan (1W1P).
2. Request data to **quantify the effectiveness of Multi-Purpose Drainage Management** relative to nutrient transport and hydrologic changes compared to traditional drainage systems, and an **estimate of the hydrologic impact** of drainage projects on downstream rivers and streams.
3. **Support opportunities for training of drainage engineers, drainage commissioners, and other relevant professionals** on the benefits of MDM and resources available, to encourage line-item estimates for conservation practices, and to encourage cost-benefit analysis of water storage and its resulting impact on drainage system and maintenance costs.
4. Develop a **drainage endorsement** for the Minnesota Agricultural Water Quality Certification Program (MAWQCP) with the input of the Drainage Work Group and other stakeholders.

Background

There are almost 20,000 miles of open agricultural drainage ditches and countless miles of subsurface agricultural drain tile in Minnesota. These drainage systems have benefits to landowners, and in many circumstances can improve water quality compared to using conventional farming practices without drainage.

Drainage systems—especially older systems than can be more than 100 years old—can also alter downstream hydrology considerably. This altered hydrology is among the factors resulting in higher peak flows in rivers and streams, leading to higher erosion and channel destabilization. Channel destabilization in the Minnesota River basin, for example, is responsible for the majority of sediment and nutrient transport downstream into Lake Pepin. In addition, drain tile can transport nitrogen/nitrate and dissolved phosphorus directly to ditches, lakes, rivers, and streams without the benefit of treatment. Improving water quality from drainage systems must be part of our water management framework to meet water quality goals.

New drainage and drainage improvements represent an opportunity to design and install systems in ways that help reduce nutrient losses to surface water and positively affect the timing and flows of drainage water into surface waters. These efforts combined with wetland restoration and water retention can have positive impacts upon water quality in agricultural landscapes.

For reference, several statutes govern drainage in Minnesota:

- Minnesota Drainage Law in Minn. Stat. 103E
    - Changes in 2014 to the statute require drainage authorities to consider a proposed project's impacts on water quality, peak flows, sedimentation, etc., explore different funding and technical assistance sources that could address these impacts, and use early coordination among stakeholders to bring about these changes.
- Minnesota Watershed Law in Minn. Stat. 103D.

There are several entities that discuss drainage regularly and provide oversight and technical assistance.

- **Board of Water and Soil Resources (BWSR):** According to Minn. Stat. 103D, engineer reports must be filed with the board for examination and for an advisory report.
- **Drainage Work Group** (DWG): The Drainage Work Group's purpose is to: 1) to foster science-based mutual understanding about drainage topics and issues and 2) to develop consensus recommendations for drainage system management and related water management, including recommendations for updating Minn. Stat. Chapter 103E drainage and related provisions.
- **Drainage Authorities**: Drainage Authorities (counties or watershed districts) "act as the drainage system's governing body – administer proceedings and procedures; approve petitions; hold hearings; make findings; issue orders; appoint engineer(s), viewers, and inspector(s); engage or retain attorney(s); apportion costs; etc."
- The **Local Government Water Roundtable** is an affiliation of three local government associations, the Association of Minnesota Counties, Minnesota Association of Soil and Water Conservation Districts, and Minnesota Watersheds. The roundtable helped develop the 1W1P program and advises state agencies on other watershed funding and related management issues.
- **Minnesota Department of Natural Resources (DNR):** The DNR must receive the following from drainage authorities: 1) repair and maintenance-related documents that affect public waters; 2) redetermination of benefits affecting DNR lands; 3) reestablishment of records; 4) technical guidance documents; 5) project and improvement-related documents; and 5) assessments. According to Minn. Stat. 103D and 103E, engineer's reports must be filed with the commissioner for examination and for an advisory report.
- **Minnesota Department of Agriculture (MDA):** The MDA implements the Minnesota Agricultural Water Quality Certification Program (MAWQCP), a comprehensive partnership that includes federal, state, and local public sector entities, as well as private sector collaborations, providing certification services to Minnesota's farms.
- **Drainage Management Team (DMT):** According to BWSR, the DMT is an interagency team comprised of staff members from state and federal agencies as well as academic institutions that meet regularly to coordinate and network regarding agricultural drainage topics.

Finally, drainage authorities report that they also seek guidance from several other resources.

- **Minnesota Public Drainage Manual** (MPDM): According to BWSR, "The MPDM is a detailed reference document about Minnesota Statutes, Chapter 103E Drainage, for drainage authorities, their advisors (attorneys, engineers, county auditors, watershed district secretaries, viewers, drainage inspectors), and others involved with state drainage law."
- University of Minnesota **Guide to Agricultural Drainage**
- **Iowa Drainage Guide**
- **Impacts of Subsurface Agricultural Drainage on Watershed Peak Flows – Briefing Paper #1**
- **Water Management Options for Subsurface Drainage – Briefing Paper #2**
- **Water Management Options for Surface Drainage – Briefing Paper #3**
    - **Briefing Paper #3 PowerPoint Presentation**

In addition, the Legislature makes appropriations for conservation drainage management and assistance from the General Fund, as shown in this 2023 appropriation:

> *Conservation Drainage Management and Assistance ($2 million).* BWSR will provide funding for Minnesota drainage authorities under M.S. 103E to plan and construct drainage water quality management practices into drainage system projects. This program is a continuation from FY2022-2023 and provides for financial and technical assistance to Minnesota's Public Drainage Authorities and Soil and Water Conservation Districts to facilitate planning, design, and installation of conservation practices on drainage systems that will result in water quality improvements.

Specifics on Policy Recommendations

Identify more opportunities for multi-purpose drainage management (MDH) and water storage

The Council recommends a systematic approach in identifying drainage system reaches and drained parcels that would provide the greatest water quality improvement opportunities. State statute has recommended "early coordination" in the past, but this was before the creation of the One Watershed One Plan approach.

In 2014, the Legislature made changes (Minn. Stat. 103E.015 Subd. 1a.) in the drainage law to encourage more collaboration that would result in more conservation drainage projects.

> When planning a drainage project or a repair under section 103E.715, and prior to making an order on the engineer's preliminary survey report for a drainage project or the engineer's report for a repair, the drainage authority shall investigate the potential use of **external sources of funding** to facilitate the purposes indicated in section 103E.011, subdivision 5, and alternative measures in subdivision 1, clause (2). This investigation shall include **early coordination** with applicable soil and water conservation district and county and watershed district water planning authorities about potential external sources of funding and technical assistance for these purposes and alternative measures. The drainage authority may request additional information about potential funding or technical assistance for these purposes and alternative measures from the executive director of the Board of Water and Soil Resources.

Since that time, there have been many examples of collaboration among soil and water conservation districts (SWCDs), watershed districts (WDs), the state, drainage authorities, and landowners. The Red River Basin appears to be further ahead than other parts of the state in this area, with plans for 100,000 acre feet of storage including more than 11,000 wetland restorations. The Board of Water and Soil Resources (BWSR) makes regular grants through the Multi-Purpose Drainage Management (MDM) program, competitive grant opportunities, and Watershed Based Implementation Funding (WBIF) that improve water quality in drainage systems. The DNR is adding a Drainage Coordinator position in FY24 to better assist with early coordination work.

The Clean Water Fund has also supported MDM and water storage. Examples include:

- BWSR Wetland restoration easements ($10 million appropriated for FY24-25)
- BWSR Watershed Based Implementation Funding ($79 million) with some funds for restoration

- DNR Nonpoint Source Restoration and Protection Activities ($3.2 million)
- DNR Water Storage ($1 million)

It should be noted that several Clean Water Fund appropriations support improved water quality from drained parcels that are working lands. For example, several of these programs support on-farm practices such as alternative tile intakes.

- MDA Minnesota Agricultural Water Quality Certification Program ($7 million and see below)
- BWSR Watershed Based Implementation Funding ($79 million) for on-field practices
- MDA Conservation Drainage Management and Assistance ($2 million)
- BWSR Working Land and Floodplain Easements ($5 million)
- MDA Agricultural Best Management Practices Loan Program ($9.598 million)

After noting that landowners could not wait for its annual MDM grant opportunities, BWSR is now making quarterly grants to increase the number of applications. The RFP for MDM also explicitly states that eligible activities in grant proposals must include improvement of downstream water quality. Both developments are welcome.

Despite all these positive developments and projects, the Council believes that many more opportunities exist for conservation drainage.

BWSR and watershed managers have quantified water storage goals in comprehensive watershed management plans (One Watershed One Plan). Drainage systems could provide opportunities for temporarily storing water to reduce peak flows or installing BMPs for water quality. With some exceptions, the plans usually do not identify specific segments of those drainage systems that collectively add up to the volume needed to meet a watershed's water storage or water quality goals.

The Clean Water Fund could be used to fund soil and water conservation districts, counties, and watershed districts to identify specific opportunities for drainage authorities, who could then apply for follow-up funding for MDM, water storage, restoration, Watershed Based Implementation Funding, etc. This effort would look at a drainage system as a whole and would in effect serve as a sub-watershed analysis but for the system's ditches.

Quantify Effectiveness of Multi-Purpose Drainage Management

The Council would like BWSR to provide evidence of MDM's effectiveness for water quality compared to traditional drainage systems, especially regarding nutrient transport and hydrologic changes. This would allow for an evaluation of MDM compared to other water quality appropriations from the Clean Water Fund.

The Clean Water Fund also supports the DNR's streamflow monitoring network. As part of comprehensive planning, the network could confirm and update hydrological models used for drainage improvement projects.

Train Drainage Engineers and Drainage Authorities

Undoubtedly, there are skilled professionals and drainage authorities with the right experience, but there does not appear to be any dedicated training available for drainage engineers focused solely on improvement of water quality in drainage systems. Since engineers are the ones who suggest designs to landowners—and drainage commissioners approve them—having these professionals aware of opportunities for technical assistance and funding as well as the watershed-based approach to improving water quality would be useful. The MPCA Smart Salting certification program would be a possible model.

Drainage Endorsement at MAWQCP

The Minnesota Agricultural Water Quality Certification Program (MAWQCP) is completely funded by the Clean Water Fund. More than 1200 farms and more than 900,000 acres are certified as of July 2023. The MAWQCP appropriation also includes grants to producers for specific practices.

There are already certain drainage practices that must be used to receive certification. For example, a farm with drain tile cannot be certified without installing alternative tile intakes that reduce the flow of nutrients and sediment into surface waters. MAWQCP has documented 504 cases of improved drain tile practices in the process of certification, and 41 farms received MAWQCP grant funding to install them for a total of $101,507. The Council supports this and future water storage criteria that would resolve any downstream channel destabilization before receiving certification.

Overall, the program includes farms with saturated buffers and wetlands that receive and filter tile water. In addition, some farms (but not many) have drainage water management systems with gates to open and close at different heights to hold water in the field.

MAWQCP also includes endorsements for several categories where farmers are going beyond certification requirements in a certain area: integrated pest management; climate smart farm; soil health; irrigation management, and wildlife. The Council recommends the development of a conservation drainage endorsement.

A drainage endorsement would reward farmers that go beyond the drainage requirements for certification, including restoration of drained lands. MAWQCP staff indicate that they are open to the idea but require cooperation from all stakeholders involved to develop the criteria. Drainage-endorsed farms could qualify for 90 percent cost-share grants from the program instead of the current 75 percent maximum.