Policy Committee Meeting Agenda

Clean Water Council

August 26, 2022

9:30 a.m. – 12:00 p.m.

WebEx Only

2022 *Policy Committee: John Barten, Rich Biske (Chair), Kelly Gribauval-Hite, Raj Rajan, Victoria Reinhardt (Vice Chair), Peter Schwagerl, Phil Sterner, Jordan Vandal, and Marcie Weinandt*

9:30 Regular Business

- Introductions
- Approve today's agenda
- Approve minutes of previous meeting
- Chair update
- Staff update

9:45 Review of Policy Statements and/or Discussion on "Narrowing the Focus" on Several Topics

- First Draft on Advanced Drinking Water Protection
- Carp Removal
- PFAS

11:00 Break

11:15 Framing Discussion for Future Meetings

- Living cover
- Shoreland development (discussion with Jeff Forrester)
- Water storage/drainage

12:00 Adjourn

Next Meeting: September 23rd

Policy Committee Meeting Summary
Clean Water Council (Council)
June 27, 2022, 9:30 a.m. to 12:00 p.m.

Committee Members present: John Barten, Rich Biske (Chair), Kelly Gribauval-Hite, Victoria Reinhardt (Vice Chair), Peter Schwagerl, Jordan Vandal, and Marcie Weinandt.
Members absent: Raj Rajan and Phil Sterner.

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
- Motion to approve June 27 meeting agenda and May 27 meeting summaries, moved by John Barten and seconded by Victoria Reinhardt. Motion approved by vote unanimously.
- Chair update
  - Rich Biske attended the Department of Natural Resources (DNR) Roundtable. There was a lot of good discussion. He also attended the Lessard-Sams Outdoor Heritage Council's (LSOHC) southeast Minnesota tour, which had a strong water connection.
- Staff update
  - The Legislative session has ended. The Legislature passed several water-related bills of interest. They agreed to the content of other spending and tax bills before eventually missing the deadline (see the Council's gov delivery email for more details). A special session is unlikely. The Legacy Finance bill passed and did not include the $47 million surplus Clean Water Funds (CWFs).
  - Regarding the Policy Committee's past stand on drainage policy, there was a policy statement revealing that water storage should be included in comprehensive watershed plans, and that is happening already.
  - Several Council members attended a meeting at the Minnesota Office of Soil Health (MOSH). There will be continuing dialog about how to align all the efforts going on regarding soil health in Minnesota. A soil health plan may be one of the outcomes, which would be funded in part by the Agriculture Finance bill.

Review of Priority Topics for Future or Revised Policy Statements

Microplastics Update by David Duffey, Environmental Analysis & Groundwater Services, Minnesota Pollution Control Agency (MPCA) *(WebEx 00:13:00)*

- In 2019, the Legislature allocated $800,000 towards microplastics, but Covid-19 happened. It was picked back up last year, with the funds re-allocated. However, the Minnesota Department of Health (MDH) was unable to manage it because staff was pulled elsewhere due to the pandemic. The funds were reinstated and passed through to the MPCA. They are now completing the contracting process. This involved the US. Geological Survey (USGS) and the University of Minnesota – Duluth (uses the lab).
- There will be two approaches, monitoring groundwater and drinking water sources for microplastics. The locations are unchanged from the original plan and scope. However, by contracting with USGS for field sampling, but they were able to do some matching funds that allowed the UMN to expand their sampling and have all the analysis completed within the state.

Questions:

- Paul Gardner: Is there something unique about how were going about this compared to the other monitoring samples?
  - *Answer:* This project is unique because of the state's monitoring network.
  - *Comment from Catherine Neuschler, MPCA:* There has been no methodology on microplastics unlike other contaminants, so it is a learning process. Sampling for microplastics takes a huge amount of water. They will have some pilot sampling while working on the methodology.

- Jim Stark: Will you be gathering the data on the age of the water when doing groundwater sampling work? *Answer:* They have some age data from some of the networks.
- Jordan Vandal: What is the timeframe? *Answer:* The drinking water and groundwater sampling will be this year. The surface water sampling will happen next year as soon as they can get out on the lakes.

Shoreland Management: Vanishing Natural Shorelines *(WebEx 00:28:30)*
Paul Radomski, DNR Lake Ecologist *(WebEx 00:31:00)*

- Minnesota has a diversity of natural shorelines. Usually there is robust vegetation. Natural features like beaches are common, especially along the larger lakes. When you mix in development of urban shorelands, the diversity is homogenized and reduced.
- "Lawn to lake" leads to erosion of banks and bluffs. Vegetation slows and traps pollutants.
- In 2015, the DNR completed a lakeshore assessment protocol. This revealed a loss of 40-50 percent of natural lakeshores. If we fail to protect these natural shorelands, we will lose lake water quality, and maybe even the ability to swim and recreate in our lakes. It points to the serious consequences of altered water shorelands.
- There has been considerable science done on phosphorus pollution onto lakes. For Minnesota lakes, phosphorus is the limiting nutrient. The cumulative effect is a lot of algae.
- Buffers can be beautiful and create habitat and water quality. The condition and stewardship of the shoreland is highly correlated with aquatic habitat.
- The Minnesota Buffer Law filters out phosphorus, nitrogen, and sediment. However, the issue has been controversial. It required an increase in LGU capacity and has been successful.
- Shorelands are exempt from the buffer law because they fall under the shoreland management law. For lakeshore (water access and recreation use) the regulation is not enough. The rules were last updated in 1989. Rules, education, and enforcement alone are not enough.
- Lakeshore norms have changed and must shift. There are the innovators and early adopters before the majority starts to adapt. Working together could help shift the social norm faster. There is social science on shifting the norm, working with the principles of persuasion (like the messenger, commitment, reciprocity, authority, and normalize the good behavior).

Greg Berg, Stearns County Soil and Water Conservation District (SWCD), Riparian Resources Specialist *(WebEx 00:44:00)*

- Landowners like to mow their lawn close to the shore and they like to keep things clean. There is also social pressure on how things should be kept.
- There are challenges to preserving and expanding natural shorelines: aesthetics, legacy of poor riparian alterations, historically sporadic education, and enforcement, "enabling" policies, and contractor reluctance.
    - For aesthetics, they want to be able to see the lake. They list that the green, mowed grass looks nice, they don't want weeds, and these all lead to issues at the shoreline.
        - Finding solutions: Provide pictures of alternatives.
    - A legacy of poor riparian alterations done pre-shoreland ordinance set a visual precedent. It can be something done over a weekend. Sometimes it is copying the neighbor.
        - Finding solutions: site visits with property owners (LGU and DNR).
    - Education has been sporadic. They focus on minimizing the impact and not mitigating what is non-compliant. They often only focus on the project area, and not the project site. For example, native vegetation removal over time, that is not being replaced.
        - Finding solutions: State statute replacement (when permitted) but identify other opportunities too.
    - They have enabling policies. For example, the 200-foot riprap below the ordinary high-water level does not need a permit, so folks struggle with determining it. If the DNR says they can do it, then it is allowed. Rock is not supplemented with vegetation, so vegetation is often removed to put in rock. The rock below the OHWL is seldom effective. They also think that the bank shaping is more important. If there is existing rock, often it is hard for the landowners to know what to plant instead.
        - Finding solutions: Change exemptions to allow for educational conversations rather than explanation of misunderstood exemptions. There is no need for more permits, as many are obtained already. Promote improvement rather than enabling bad practices.

    - Many times, landowners lean on contractors for what should be done. Rock is easy and it makes money. Many have little familiarity with alternatives – but this is expanding. Requirements will push the industry; policies of the past will safeguard the status quo.
        - Finding solutions: Provide workshops and ongoing education to help drive change.
- The Stearns County SWCD has been trying to do restoration work on the shorelines and streambanks for decades. They are looking for resource concerns (erosion control and stabilization), habitat connections, water quality benefits, motivated landowners, and complete restoration instead of landscaping.
- Obstacles: The SWCD Buffer Restoration Policy involves having 75 percent of the shoreline to be native vegetation with nor more than a 25-foot traffic area. The buffer must extend at least 25 feet landward of the ordinary high-water level of the lake/stream or to the top of the nearest steep slope, whichever is greater. They have 84 projects with perpetual protection.
- Limitations: Funding is minimal for shoreline restoration. The DNR Aquatic Habitat Restoration program was terminated. They are not eligible for Lessard-Sams Outdoor Heritage funding or the Legislative-Citizen Commission on Minnesota Resources (LCCMR) without permanent easements. The shoreline projects also do not fit with the CWF criteria. In addition, there is a need for SWCD capacity. There is a need for incentives to encourage landowners to implement quality projects. The financial investment is minimal for the long-term benefits.

Anne Sawyer, University of MN - Extension, Extension Educator in Water Resources *(WebEx 00:56:30)*

- This is a summary of other approaches to solve the problems.
- Shifting roles of traditional statewide entities
    - DNR programs like "Score Your Shore" and Model Shoreland Ordinances are useful but lack widespread adoption. DNR capacity for engagement, outreach, education, and technical assistance has declined.
    - The Board of Water and Soil Resources (BWSR) is also involved, mainly via programs implemented by LGUs based on local priorities (i.e., the One Watershed, One Plan) and funding like the CWFs and cost share. They work with wetlands, easements, training, restoration, and native vegetation guidance.
    - The shoreland programing was a part of the UMN Extension but shifts in staff and priorities have all but eliminated this work. Now the Aquatic Invasive Species (AIS) programming is robust, so that is one way to engage with that existing network.
    - Tribal partners have not yet been involved with early discussions; we must work to include and learn from them. Tribal management incorporates local ecological knowledge, culture, and values to preserve resources for future generations. It is important to involve them in the conversation.
    - Non-profits and other initiatives are built around engagement, individual and community empowerment. Examples include Freshwater Society and Minnesota Water Stewards to certify and support community leaders. Minnesota Lakes and Rivers advocates is a great model program. Their initial focus was on advocacy, education, and project grants, but they wanted to do more. They have a Lake Steward program, which leverages existing networks, taps into local values, and fosters behavior change via shifting social norms. The Minnesota Coalition of Lake Associations (MN COLA) helps members preserve, protect, and improve lakes through advocacy, education, and sharing best practices. Their meetings focus on lake resiliency, including natural shorelines. Other groups are doing good work as well, and they are trusted messengers who care about their lakes and waters.
- What (and who) is missing from this work
    - Davenport et al. (2019) Minnesota Water Value project was a statewide survey on views about water. Minnesotans really care about water, but their behavior does not align with those values. It is not just the knowledge; it is local engagement and learning from trusted messengers and peers. Enforcement was supported, but the social norms don't align with the enforcement.
    - Another study, by Eckman et al., 2008 – 2012 investigated different LGU engagement models, to better understand motivations for behavior change. The key results revealed that the level of resource knowledge was high; financial incentives are not motivating, but stewardship values are, particularly for their lake. High touch contact (interactions with experts) had a greater impact, but knowledge of audience is essential; and the most trusted messengers are lake associations, followed by DNR, peers, LGUs, UMN Extension, and then others. Therefore, voluntary conservation requires more than facts and cost-share. However, every lake and audience is different, so effective engagement requires dedication, time, and

flexibility in the approach and options. It is hard, uncomfortable, and slow work. Resources could be more effective with professional staff interacting directly with property owners, rather than cost share.

- Examples from other states:
  - Michigan has a Natural Shoreline Partnership, started in 2008. They have a collaboration of state agencies, academia, non-profits, and private industry, all together on a comprehensive website. There is a native plant database and nursery directory, contractor training and certification, contractor directory, and a Shoreland Stewards program.
  - Burnett County in Wisconsin established a Shoreline Incentives Program (SIP), started in 2000. They established a reward for following a 35-foot vegetative buffer regulation in property covenant. They provide technical and financial assistance, shoreline incentives and signage, as well as education and outreach, especially to new landowners. They have preserved 53 miles of shoreline on 779 parcels.

Joe Schneider, MN Coalition of Lake Associations, President *(WebEx 01:18:30)*

- Where can we go from here? The problem is real, impactful, and worsening. Reclaiming shorelines is doable. There is a need to reset the property owner's mindset. Showcasing shoreline examples will help in this area. More coordination is required. Additionally, more staffing is needed to provide those high touch connections.
- Possible Solutions:
  - Create a Natural Shorelines Organization. This would have civic engagement to involve government and LGUs. There could be social marketing for behavior change. There could be specific goals set as well (i.e., statewide, watershed, and lake level).

Discussion:

- John Barten: How much of this might be due to the tribal elements of these engagement interactions. Are they hearing what they want to instead of what they need to? Answer: It isn't just the messenger that matters but the message that matters. Another resource: http://freshwater.org/wp-content/uploads/2020/01/InspiringAction.pdf . A 'must read' for those who want to implement water quality practices.
- Jim Stark: Why are lake associations stronger in Wisconsin than Minnesota? In general, what policy and legislation may be needed for this area? Answer: I do not think that lake associations are stronger in Wisconsin than Minnesota, but their lake association structure is stronger. MN COLA has only been in existence for about ten years. They are working on getting better, but Wisconsin has been organized better for longer. Regarding policy and legislation, there is not a lot of political will to change those shoreline rules. Policies related to this area could be beneficial.

Carp Follow-Up, by Meg Duhr & Przemyslaw Bajer, Minnesota Aquatic Invasive Species Research Center (MAISRC) *(WebEx 01:48:00)*

- This work started out trying to make carp removal more of a reality across Minnesota. The public and private sectors have taken interest in reducing barriers to removal. Barriers include funding, logistics, and research. We talked with different groups about what is working or not working.
- They have not provided recommendations on how they would change the policy yet. They would want to involve the DNR as well as the different stakeholders involved. It is about showing where problems have been identified and inconsistencies. This is a conversation starter.
- The definition is an issue. The Common carp are a non-native, invasive species with significant ecological impacts to Minnesota freshwater ecosystems. They should not share the same regulatory definition with native fish species, many of which have important roles within the freshwater ecosystems or serve as critical hosts for native mussel species. They are also listed as a regulated invasive species by the DNR. This classifying of carp as both a rough fish, with statutes intended to regulate a sustainable carp fishery, and as a regulated invasive species, is a contradictory regulatory approach.
- Carp removal is for ecosystem restoration, as it is an invasive species. However, carp removal is also for commercial harvest. So, it has different motivating objectives, but results in a lowered carp biomass, which should be a goal of the state. It would be important to rethink where carp fit into this regulatory structure.
- For harvesting carp, they are not allowed to use nets, traps, trot line, or snares. New removal technologies for carp removal are highly selective and viable. By prohibiting the use of traps and nets, it limits the application of research-based tools (i.e., baited box nets, electric barrier systems) that are efficient and low-impact to remove large volumes of carp. Perhaps, there could be a specific allowance for research tools.

- Buying and selling fish is confusing. There are only a few certain situations that you can sell fish. This includes being a licensed commercial fishing operation or taking rough fish (carp fall into this category). Clearly listing carp as a species that can be sold would help clarify the state's objective of supporting and streamlining carp control. It also prohibits selling carp removed by non-commercial fishers, which becomes an added cost. It is also a waste of nutrients, which has value to commercial entities such as compost producers, fertilizer companies, and fur farms. Allowing it to be sold or donated would be beneficial.
- There is an open season for commercial fishing in inland waters to fall, winter, and spring. This seasonal closure protects important native game species from this type of fishing during their spawning seasons as well as stress on the ecological biomass. However, this limits the application of new carp removal methods, which are nearly 100 percent selective and are most effective during the spring and summer months when carp are spawning.
- More commercial fishermen need to be brought into the discussion. There are probably other areas that should be reviewed to aid in these different stakeholders. It needs further analysis.
- Their carp removal work so far has been under Class B and Class C permits. It is on a case-by-case basis. It is a special project category. Given that many carp control projects are occurring at the local level are grant-funded, this poses a significant barrier.
- Changing the regulation to better reflect carp at a non-native, invasive species (and not a commercial fish) is an important initial step to support this as an implementation. It would help this work become mainstream.

Questions:

- Rich Biske: The Policy Committee's original interest was for water quality benefits. So, this information is helpful. There is a need to understand the other risks and tradeoffs in place currently.
    - *Comment from Jason Moeckel, DNR:* There is some interest exploring this area. The fisheries folks have seen this work. I have shared this document with them. There is an opportunity to have a conversation. We will work to facilitate some conversations in this area.

Refining Spreadsheet of Policy Statement Options *(WebEx 02:15:00)*

- The meeting is running longer than anticipated. There are some other issues that should be covered in July, such as living cover. Other items may need to be reviewed. The recommendations are due in January now, so there is more time. If there are more items to review, or new topics to review, it would be good to figure out.
- Rich Biske: It would be good to refine these policies more, to help define more specific guidance for policy statements.

Adjournment *(WebEx 02:18:52)*

Clean Water Council Policy Implementation Progress

Policy	Adopted/ Proposed In	Key Policy Recommendations	Progress	Future Actions Needed
Riparian Buffers [Achieved; recommend removal from standing platform 7/2022]	FY 13-14	Require buffers along Public waters and ditches and private ditches that drains into Public waterways	Minnesota Buffer Law was signed into law in June 2015 and requires 50 foot buffer along Public waters and 16.5 foot buffer along Public drainage systems	All the policy goals are achieved. The State Agencies and Local governmental units are responsible for ensuring the buffers are maintained.
		Fund local implementation & enforcement	CWF provides funding for technical support for local units of government	
		One State Agency oversee Local activities	Board of Soil & Water Resources (BWSR) has overall implementation responsibility with technical support from other Agencies.	
Water Retention, Storage and Infiltration [Achieved; recommend removal from standing platform 7/2022]	FY 13-14	Require all major (HUC 8) watersheds outside 7-county metro area develop comprehensive watershed management plans.	All non-metro water planning and implementaiton is based on major watersheds. Water retention/storage goals have been incorporated in 1W1P requirements via statute (103B.801) and agency plan content requirements.	BWSR currently working on white paper looking at the technical issues, policy considerations, and potential costs necessary to scale up adoption of water storage and treatment. [This is from FY18-19]
Living Cover for Drinking Water Protection [Request update in 8/2022 to consider revisions]	FY16-17	Require the establishment of living cover in vulnerable areas such as wellhead & upstream of surface water intakes	These areas are targeted, but voluntary, the progress is limited.	
Advancing Drinking Water Protection [Recommend replacement with FY24-25 policy statement on Advanced Drinking Water	FY 16-17	**Property Transfers**: Notify the buyers the potential existance of lead-pipes between the water main and taps, and provide informational material to mitigate risks.	Recommend well owners have testing and mitigation in ten years (MDH will work on language); Change to urging county ordinances or at least encouraging time-of-sale requirement? Ten-year testing plan in FY24-25 recommendations helps	Legislation may be necessary to ensure the seller discloses the existence of lead piping. [New Lead & Copper Rule requires water utility notify property owner about possibility of lead pipes]
		Renters: Notify the renters the potential existance of lead-pipes between the water main and taps and provide informational material to mitigate risks.	use "well users" as audience; equity can be incorporated	Legislation may be necessary to ensure the landlord discloses the existence of lead piping. [Note above for Lead & Copper Rule revision in 2021]
		Establish a panel of subject matter expert from around the country to advise MN lawmakers and Agencies ways to protect and improve drinking water quality.	MDH has a contract with U of MN's Water Resources Center and Humphrey School of Public Affairs to convene an expert panel and their report is now in the review phase.	Policy Committee review the report and recommend policy actions [done 2020]; CWF recommended in FY22-23 to support implementation of report.

Clean Water Council Policy Implementation Progress

Protection below]		State mandate source water protection plans (SWPP) for surface water systems.	Minneapolis, St. Paul, and St. Cloud has them, but 21 others are yet to draft SWPPs. [This is from FY18-19]	CWC strategic plan: Complete revised source water assessments for all 23 surface water systems by 2025 & complete source water intake protection planning by 2027 .
De-icing Chloride Reduction [Awaiting any updates from MPCA staff]	FY 18-19 [revised FY22-23]	Fully fund the Smart Salting applicator training and certification program, and MPCA chloride reduction program aimed at reducing salt use.	The MPCA's Strategic Plan includes chloride reduction efforts. The MPCA has requested and CWC has recommended CWF monies to provide the training program statewide.	The CWC has recommended funding for the Chloride Reduction Program for FY22-23.
		Request that the Legislature give MPCA the authority to charge a fee for chloride training.		New recommendation FY22-23
		Provide liability protection for the Smart Salting program certificd private winter de-icing applicators to reduce salt use.	During 2018 and 2020 legislative sessions, bills were introduced in the both houses, but were not included in the Omnibus bills.	Re-introduce, pass and sign into law the liability protection Bill.
		Provide research funds to develop new technology, alternatives and best management practices		
		Encourage and support the adoption of the MPCA's Chloride Reduction Model Ordinance language by local government entities.		New recommendation FY22-23
		Have the MPCA convene and lead a stakeholder process to develop recommendations for new labelling requirements on bags of de-icing chemicals sold in Minnesota.		New recommendation FY22-23
Pharmaceutical Pollution Prevention	FY18-19 [revised for FY24-25]	Fund research on the pathways of pharmaceuticals into surface water and ground water, identify priority pharmaceuticals that pose the greatest risk to human health and aquatic life, identify and support practicable solutions to reduce their entry into Minnesota waters, and recoup reasonable costs through an industry-funded safe medication return program.		
		Require the words or symbols for “do not flush” be printed on all prescription pharmaceutical labels, and remove any existing instructions to flush unused portions.		
		Adopt a “Safe Medication Return Program” funded by the pharmaceutical producers.	Washington State and several other states have passed similar legislation and are going through rulemaking or are just starting their programs.	
		Require the words or symbols for “do not flush” be printed on all prescription pharmaceutical labels, and remove any existing instructions to flush unused portions.		

Clean Water Council Policy Implementation Progress

Increasing Continuous Productive Vegetative Cover [Requesting info in 8/2022 to consider revisions on living cover]	FY18-19	Establish a Minnesota Agricultural Diversification Steering Council	The Council recommended funding to establish the Minnesota Agricultural Diversification Steering Council at the University of Minnesota.	Legislature to approve the CWC's recommendation.
		Create a Minnesota Agricultural Diversification Network		
Chloride Reduction: Water Softening [Awaiting any feedback from MPCA staff]	FY22-23	Provide financial support and technical assistance to municipalities to reduce chloride discharges and allow flexibility for how municipalities achieve these reductions.		The CWC has recommended funding for the Chloride Reduction Program for FY22-23.
		Update the state plumbing code to effectively prohibit the installation of new water softeners in Minnesota that use timers rather than on-demand regeneration systems.	status?	New recommendation for FY22-23
		Fund a program for activities, training, and grants that reduce chloride pollution. Grants should support upgrading, optimizing, or replacing water softener units.		The CWC has recommended funding for the Chloride Reduction Program for FY22-23.
Disclosure of Well Water Quality at Time of Sale [Recommend replacement with FY24-25 Advanced Drinking Water Protection Policy Statement]	FY22-23	Require all sellers of real property to test drinking water from wells for bacteria, nitrate, arsenic, manganese, and lead		
		Inform buyers and renters of the test results		
		Direct buyers to mitigation guidance from the Minnesota Department of Health		
PFAS	FY24-25	The Clean Water Council recommends that the State of Minnesota implement the comprehensive PFAS Blueprint, which uses the following priorities to prevent, manage, and clean up PFAS pollution in Minnesota.	Approved by the Policy Committee but not yet by the full Council.	REVISE: Point to specific areas where the Clean Water Fund is supporting the Blueprint (Adding PFAS to DNR fish assessments, Contaminants of Emerging Concern, monitoring program) and distinguish these topics from what is funded from the 3M settlement.

Clean Water Council Policy Implementation Progress

Underground Utilities	FY24-25	To create an accurate inventory of Minnesota's underground utility infrastructure, the Clean Water Council (CWC) recommends that the State of Minnesota develop an accurate map of all underground utilities installed in the state and require Minnesota's public and private sectors to support sharing of necessary data in a secure and confidential manner.	Approved by the Policy Committee and the full Council.		
Advancing Drinking Water Protection	FY24-25	Possible options: 1) Promote county ordinances to require well testing at time of sale rather than using state statute; 2) Add groundwater to intensive watershed monitoring approach on 10-year cycle; 3) Provide opportunity with CWF for every private well owner to test for five major contaminants and provide follow-up information on mitigation; 4) Consider what funding could be applied to mitigation for qualifying income households using the SSTS low-income grant program		Consolidate previous drinking water statements into this new one and update with new options	
Carp	FY24-25	Possible options: 1) Remove carp from list of "rough fish" in Minn. Stat. 97A and list as regulated invasive species; 2) Remove prohibition on traps and nets for capturing carp in 97C.325 to allow for effective removal; 3) Remove prohibition on selling of carp by non-commercial fishing operations in 97C.391 to reduce cost of carp management; 4) Remove carp from definition of commercial fish and allow commercial fishing operation to take fish with tools over than seine nets, and allow commercial fish licensees to take carp year-round when using corn-baited box nets and electric barriers along common carp migratory routes in 97C.811	Based on presentation and follow-up from MAISRC and related stakeholders.	Checking for input from DNR 7/29/22	
Shoreland Management	FY24-25	Possible statement on need to tighten variance/exemption process for shoreland development rules.	DNR presentation in June 2022	John Barten talking to MNLRA 7/2022	

Clean Water Council Policy Implementation Progress

Water Storage & Drainage	FY24-25	Options: 1) Ensure compatability between required water storage feasibility studies and One Watershed One Plan; 2) develop model applications for drainage projects to show benefits of water storage; 3) support local staff capacity to carry out modeling, design, and construction; 4) provide incentives for storage when drainage is improved under 103E; 4) develop stronger partnerships with drainage authorities to identify potential storage opportunities	Based in part on BWSR presentations and background information	Need more info: BWSR carrying out water quality and storage pilot program. Info requested: review Crow Wing drainage presentation; being specific about multi-purpose drainage management grants not promoting more tile; compile water storage acreage goals from 1W1P; how to encourage more water storage as part of drainage authority process; would capital improvement plans give more detail to broader storage goals; what tech support needed; put guard rails on what the Council is asking to avoid "slippery slope" argument
Manure	FY24-25	Options: 1) View manure not as a waste but as a resource; 2) Increase capacity at University of Minnesota to research and promote more precision manure application; 3) Promote more trial manure application plots and precision application field days; 4) Develop more precise N crediting method; 5) Provide more education to small producers who are not subject to large feedlot permit	based on discussions with MPCA feedlot staff	CWF appropriation by MDA is being proposed for #4 on N crediting method. Have a statement offering the rationale for #4 first.
Soil Health	FY24-25	Hold off a bit as efforts start to synchronize; focus on goals, focusing resources on DWSMAs, fit with NFMP, GPR, MAWQCP soil health endorsements		Need more info: MN Office of Soil Health has a stakeholder process going. MDA got 2022 funding to develop a Healthy Soils Plan. Does the Council want to express support for these efforts, and specifically ask for certain topics to be included? For certain stakeholders to be consulted? For there to be targets like number of acres?
Micro- and nano-plastics	FY24-25	Too early for specific policy recommendations 7/2022	2019 CWF appropriations used in 2022 for groundwater sampling by MPCA/UMD and in 2023 for surface waters by MPCA/USGS	We are likely to find microplastics wherever we look; what can Minnesota contribute to the global discussion that no one else is doing? Refine info on pathways into our water? Better identify resins to narrow down sources? Develop health-based guidance for drinking water? Develop aquatic toxicity values for fish?
Neonicitinoids	FY24-25		MDA has identified several neonics as Surface Water Pesticide of Concern; awaiting presentation in 7/2022 from MDA	

Clean Water Council

DRAFT FY24-25 Policy Statements as of 26 August 2022

Advanced Drinking Water Protection [DRAFT]

The State of Minnesota should take additional action to protect drinking water sources.

1. Promote county ordinances that require well testing and a disclosure of the testing at the time a property is sold.
2. Use the Clean Water Fund to provide opportunities for all Minnesota private well owners to test their water for five major contaminants (nitrates, lead, arsenic, manganese, and bacteria).
3. Develop cost-effective strategies for private well owners to help mitigate wells that do not meet federal drinking water standards for those five contaminants, with a particular focus on low-income households.

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

- 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 well water is generally treated as the responsibility of the property owner, and 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, 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.

Solutions

1. Promote county ordinances to require well testing at time of sale rather than using state statute

Example: Some lenders and loan programs already require testing

In a 2019 MDH survey of 243 real estate professionals, 46% of respondents said that the mortgage companies they work with always or usually require well water testing. Respondents explained that the

following loan programs require well testing, but the testing parameters varies on what is tested: Veterans Affairs Home Loan, Federal Housing Administration[1], and USDA Home Loans.

Example: Dakota County has required well testing at property transfer 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.

2. Provide opportunity with CWF for every private well owner to test for five major contaminants and provide follow-up information on mitigation
3. Consider what funding could be applied to mitigation for qualifying income households using the SSTS low-income grant program model

Testing Example: MDH Pilot Program in 2021

On average, it costs about $125 to test for all five recommended contaminants. This makes testing prohibitive or at least unappealing to many well owners.

MDH carried out a pilot program in 2021 with local partners in two area of the state to offer free testing as well as mitigation support for selected eligible households. MDH described the program this way:

> The University of Minnesota, the Minnesota Well Owners Organization (MN WOO) and Minnesota Groundwater Association (MGWA) conducted a pilot program, offering a series of well clinics around the state in 2021. The clinics provided free, voluntary screening for common drinking water contaminants in private well water in addition to educational outreach regarding well water safety. We believe that these organizations would like to continue this work, with a goal of offering up to 24 additional clinics in 2022 and beyond. Estimated expenditures include those to print and distribute educational materials, support travel expenses for clinic volunteers, establish a grant program to cover the cost of water testing and partially cover the cost of remediation, and support staff expenses at the university.

The Council proposes that in FY24-25, the Clean Water Fund be used to support free testing for 10% of Minnesota private well users, and that the program should continue for ten years.

In the 2021 private well testing pilot, selected households received financial assistance to install a water treatment system if certain income limits were met. This approach also exists in the Minnesota Pollution Control Agency's low-income grant program for subsurface sewage treatment systems (SSTS) and could serve as a model.

There are home water treatment options to address water quality issues. The price for treatment varies based on the type of treatment and who installs it. Point-of-use reverse osmosis is an effective way to treat for all five contaminants and costs about $300 if you install it yourself or $1500 to have a water treatment professional install it. Annual maintenance is about $100. There are additional treatment options that range in price and application.[2]

[1] The FHA requirements can be found at 24 CFR 200.926d.
[2] Minnesota Department of Health, https://www.health.state.mn.us/communities/environment/water/wells/waterquality/index.html.

The Council proposes that the State develop a cost-effective model that could assist well owners facing economic hardship so that they can access home water treatment. This approach could be supported by future Clean Water Fund recommendations or other State funding sources.

Minnesota Underground Utilities Mapping Project [Already approved by Council 28 July 2021]

Policy Statement

To create an accurate inventory of Minnesota's underground utility infrastructure, the Clean Water Council (CWC) recommends that the State of Minnesota develop an accurate map of all underground utilities installed in the state and require Minnesota's public and private sectors to support sharing of necessary data in a secure and confidential manner.

The underground utility infrastructure mapping project supports the Clean Water Council's efforts to reduce the risk to drinkable, fishable, and swimmable water.

Problem

Damage to Minnesota's underground utilities can disrupt critical water infrastructure (drinking water and wastewater) and contaminate groundwater and surface water. In addition, without accurate mapping, public safety is a concern, especially when work is being done near petroleum and hazardous materials pipelines.

Damage most often results from data that is incomplete, inaccurate, or only exists on paper. This limits the ability of public and private entities from sharing data and ensuring its accuracy over time.

Examples of utilities that require accurate mapping include, but are not limited to:

- Drinking water supply pipes
- Wastewater pipes
- Stormwater pipes and stormwater storage
- Petroleum pipelines
- Hazardous materials pipelines
- Telecom infrastructure, and
- Abandoned infrastructure that could transport aquatic invasive species.

Much of this data is held by the private sector, and therefore is not in the public sector's possession. It is imperative that the sharing of data can be accomplished in a secure and confidential manner.

Solution

Improving the accuracy of Minnesota's underground utility maps will reduce these risks. Gopher State One Call (GSOC) and the Minnesota Geospatial Advisory Council Emergency Preparedness Committee (EPC) have formed the Underground Utility Mapping Project Team (UUMPT) to address this issue.

The mapping project works to improve locate efficiencies and accuracy, reduce damage to the state's underground infrastructure, and improve operational and construction safety by leveraging current and emerging GIS technologies through cross-community collaboration that develops best practices and promotes technology solutions.

With security and confidentiality being critical, the efforts will include protection of data from competitive intrusion and security threats using appropriate procedures and advancements in geospatial technology that facilitate sharing of data via secure and limited access.

Pharmaceutical Policy Statement [Approved by Clean Water Council on 02/28/2022]

[This statement revised a previous statement from the FY18-19 recommendations.]

Policy Statement

The Clean Water Council recommends that the State establish the following to reduce the discharge of pharmaceuticals into the waters of Minnesota:

1. Fund research on the pathways of pharmaceuticals into surface water and ground water, identify priority pharmaceuticals that pose the greatest risk to human health and aquatic life, identify and support practicable solutions to reduce their entry into Minnesota waters, and recoup reasonable costs through an industry-funded safe medication return program.
2. Adopt a "Safe Medication Return Program."
    - This legislation should provide flexibility by:
        - Utilizing the current collection infrastructure;
        - Requiring manufacturers to support public education and outreach activities; and to cover all administrative and support costs including, but not limited to: collection, compensation to authorized collectors, transportation, secure receptacles, and environmentally sound disposal of covered pharmaceuticals;
        - Allowing residents to take unused medications to drop-off locations or use a mailing envelope, both for free
        - Providing drop-off locations that are "equitable and reasonably convenient"
3. Require the words or symbols for "do not flush" be printed on all prescription pharmaceutical labels, and remove any existing instructions to flush unused portions.

Problem

Pharmaceuticals are used to treat, cure, diagnose, and prevent disease and ailments in humans, agricultural animals, and companion animals. The use of pharmaceuticals is expected to increase in response to increasing demand. These chemicals are designed to be biologically active and potent at low doses. Pharmaceuticals enter the environment through many pathways including:

- Improper disposal of unused medications (both in home and at care facilities)
- Runoff from manure on agricultural fields or feedlots
- Effluent from health care facilities, medication manufacturing and other industrial sources
- Excretion from normal use in humans (e.g. not all of the drug is fully metabolized in the body)

Pharmaceuticals are commonly detected in Minnesota surface water, groundwater and sediment. The concentrations detected are low relative to other contaminants, but they can have negative impacts on the environment, especially aquatic species. It is extremely difficult and costly to remove these chemicals from wastewater and drinking water. Preventing entry to the environment, such as through improving prescription practices and minimizing input from waste streams is the best way to avoid potential impacts of pharmaceuticals.

In addition to the environmental impact of waste pharmaceuticals being discharged into the waters of Minnesota, there is also a public safety benefit to environmentally sound disposal. Prescription drugs

left unused by the intended recipient, which are not disposed of properly, can be misused by others and have serious or fatal consequences. Seven out of ten people who start abusing prescription drugs get them from the medicine cabinets of friends and family. Among children, the most common cause of accidental poisoning is from ingesting drugs. In addition, periodic cleaning of the medicine cabinet reduces the likelihood that adults, especially the elderly, will take the wrong medication, wrong dose or use expired medications.

Current Efforts by State Agencies with Clean Water Fund (CWF)

With funding from CWF, the Minnesota Department of Health (MDH) and the Minnesota Pollution Control Agency (MPCA) conduct research, public education, monitoring and collecting waste pharmaceuticals throughout the State, and environmental surveillance. Both agencies work closely with other State agencies, local entities such as local law enforcement, county & city public health departments, and local pharmacies to keep unwanted pharmaceuticals from reaching our waters.

Minnesota Department of Health:

Pharmaceutical Rapid Assessments: Using a novel method, MDH has established conservative screening values (above which the risk of negative human health affects increases) for 119 pharmaceuticals commonly prescribed in the U.S., and monitored for in the environment.

Outreach & education grants: Grants go to local governments, non-profits, watersheds districts, and academic institutions to raise awareness of pharmaceuticals and other contaminants of emerging concern (CEC), expand outreach on pharmaceutical take-back opportunities, and reduce the presence of CECs in the environment through behavior change.

Educational resources: The Department creates resources for local entities that facilitate outreach to communities and provide a consistent message throughout the State on the health and environmental risks of pharmaceuticals and other CECs.

One Health Antibiotic Collaborative: The MDH leads a team of experts from Minnesota Department of Agriculture, MPCA, Minnesota Department of Natural Resources, Board of Animal Health, Board of Veterinary Medicine, University of Minnesota, pharmacy and dentistry groups, physicians, agricultural representatives, and other experts to ensure that Minnesotans use antibiotics in a manner to reduce antibiotic resistance and protect the environment. http://www.health.state.mn.us/onehealthabx/

Unregulated Contaminants Monitoring Project (UCMP): In the Unregulated Contaminants Monitoring Project, MDH sampled approximately 70 community systems across Minnesota for a wide spectrum of unregulated contaminants, including pharmaceuticals. MDH tested for over 150 pharmaceuticals at participating systems supplied by surface water and systems potentially impacted by wastewater.

Drinking Water Ambient Monitoring: MDH is establishing a Drinking Water Ambient Monitoring program to operationalize surveillance of unregulated contaminants in drinking water sources, such as pharmaceuticals. Ambient monitoring data drives the identification, management, and elimination of high-risk sources of contamination to drinking water sources. This program will help MDH and public

water systems anticipate potential threats from unregulated contaminants and will inform future source water protection efforts.

Minnesota Pollution Control Agency

Monitoring of pharmaceuticals and other contaminants of emerging concern (CECs) in surface and groundwater: The MPCA monitors pharmaceuticals and other CECs in surface water and groundwater to determine their presence and prevalence in the environment. Currently, the MPCA monitors about 140 chemicals comprised of pharmaceuticals, hormones, anti-corrosives, and other industrial or commercial chemicals in surface and groundwater. Among those, most frequently detected pharmaceuticals in surface water are: antidepressants (amitriptyline, fluoxetine, and sertraline), and iopamidol (an x-ray contrast agent). The January 2021 study, "Pharmaceuticals and Chemicals of Concern in Minnesota Lakes, shares the results of sampling in 50 randomly selected lakes. The study shows that contaminants of emerging concern are widespread in the state.

Investigation of sources of pharmaceuticals and other CECs to the environment and evaluate their potential effects on aquatic life: MPCA conducts focused investigations to determine sources of pharmaceuticals to the environment and understand potential actions to reduce them: pollution prevention, best management practices, rules. Often MPCA collaborates with university and federal researchers in these studies to use genomics and other new techniques to assess potential effects on fish and other aquatic life. MPCA has also developed a semi-automated approach for summarizing known information about the behavior and potential impacts of specific pharmaceuticals and CECs on aquatic life, resulting in an Aquatic Toxicity Profile (ATP). The ATPs provide a basis for comparing one chemical versus another.

Outreach & education materials: The agency provides support to local governments, pharmacies, law enforcement and other agencies to raise awareness on the impacts of pharmaceuticals in the home and in the environment, and to support proper disposal of unneeded pharmaceuticals.

Registration and tracking of waste pharmaceutical collection locations in the state: The MPCA works with local law enforcement, pharmacies, Native American Tribes and other state and federal agencies to encourage the installment of secure bins to dispose of unwanted pharmaceuticals. The MPCA oversees over 350 collection sites and collects data from them annually. Since 2010, these programs have voluntarily collected over 550,000 pounds of waste pharmaceuticals. The MPCA is working with the Department of Human Services on a federal grant to place approximately 25 collection boxes in underserved areas of the state in 2018.

PFAS [Approved by Policy Committee in 2021 but not yet forwarded to full Council]

Policy Statement

The Clean Water Council recommends that the State of Minnesota implement the comprehensive PFAS Blueprint, which uses the following priorities to prevent, manage, and clean up PFAS pollution in Minnesota:

- Measuring PFAS effectively and consistently
- Understanding risks from PFAS air emissions
- Quantifying PFAS risk to human health
- Preventing PFAS pollution
- Limiting PFAS exposure from drinking water
- Limiting PFAS exposure from food
- Reducing PFAS exposure from fish and game consumption
- Protecting ecosystem health
- Remediating PFAS contaminated sites
- Managing PFAS in waste

[Potential additions: Have the Clean Water Fund focus on topics in the Blueprint that complement current Clean Water Fund-supported activities.]

[Examples now in the draft recommendations:

- Adding PFAS to DNR's fish contamination assessment
- Determining health-based guidance for additional PFAS compounds through Contaminants of Emerging Concern (CEC) program
- Including additional PFAS sampling through MPCA's River and Lake Monitoring program and Groundwater Monitoring program]

Chloride Reduction: De-Icer [approved by Council for FY22-23]

Revised Policy Statement

The Clean Water Council recommends that the State of Minnesota implement the following actions to reduce chloride in Minnesota surface and groundwater:

- Fund the **Smart Salting applicator training and certification** program, and the MPCA's **chloride reduction budget** to support the development and maintenance of tools, resources, policies, trainings and assistance programs to reduce chloride pollution.
- Request that the Legislature give the MPCA the **authority to charge a fee** for chloride training.
- Provide **liability protection** for the Smart Salting program certified private winter de-icing applicators for reduced salt applications.
- Provide **research funds to develop new technology and alternatives** to chloride-containing de-icing chemicals, and best management practices.
- Encourage and support the **adoption of the MPCA's Chloride Reduction Model Ordinance Language** by local governmental entities.
- Have the MPCA convene and lead a stakeholder process to develop recommendations for **new labelling requirements** on bags of de-icing chemicals sold in Minnesota.

Problem

Chloride is a naturally occurring ion found in low levels in Minnesota surface and groundwater. Salt used for winter de-icing and water softening contain chloride. Chloride is not toxic in small concentrations. However, above 230 mg per liter (about one teaspoon in 5 gallons of water), chloride becomes toxic to freshwater fish and other aquatic life under long-term exposure. Once chloride enters our surface water (lakes, streams, and wetlands) and groundwater, it is not feasible and extremely expensive to remove it.

Winter de-icing salts are among the primary sources of chloride in Minnesota waters.

In the Twin Cities Metro Area (TCMA) winter maintenance activities use approximately 365,000 tons of chloride de-icer per year. The de-icing salts eventually wash into nearby lakes, streams and wetlands. Recent monitoring shows increasing chloride concentrations in surface water and shallow groundwater. Since it is very difficult and expensive to remove chloride from our surface and groundwater once it gets into water, reducing chloride at the source is necessary.

- **Inconsistent labeling** for de-icers creates confusion for consumers. De-icers can be labeled as "eco-friendly" or as an alternative to salt, but they may pose other problems for water quality. Currently there is not a standard for labeling de-icers for their potential threats to water quality.

Solution

1. **Training and Certification**. Continue the Smart Salting applicator training and certification program: The MPCA has a training program for private and public salt applicators, such as snow removal contractors and snowplow drivers. This has been a very successful program and has assisted winter maintenance programs in reducing salt application rates by 30% to 70%, without compromising public safety. The TCMA Chloride Management Plan and Statewide Chloride Management Plan include the Smart Salting training program as the top implementation strategy to reduce salt use in the winter. In the past, MPCA conducted this training with federal

funds, but those funds are temporary. The estimated operating cost for the training program in FY22 is $350,000/year. To qualify for the liability protection to private salt applicators, the applicator must complete Smart Salting training program to be certified. The State should continue to provide adequate funding to the MPCA's **Chloride Reduction Program** budget to support the development and maintenance of tools, resources, policies, trainings and assistance programs like MnTAP to assist communities in their effort to reduce chloride pollution.

2. **Allow the MPCA to Charge a Fee**. Currently the MPCA does not have the authority to charge a fee for the training that would defray some of the cost. Legislative authority will be required. There is more demand for these chloride reduction training than the MPCA can meet. By charging a fee to willing customers, the agency can meet the demand.
3. **Liability Protection**. Provide liability protection to certified private salt applicators against slip and fall lawsuits: The notion here is that private applicators certified through the Smart Salting program would be able to apply for liability protection. The private applicator industry and local stakeholders strongly support this proposal. Various groups introduced bills to this effect in the last three legislative sessions and it has passed several committees and one house; however, none was enacted into law.
4. **Research Funding for Alternatives**. Make research funds available to develop new technology and alternatives to chloride-containing de-icing chemicals. Research on new technologies and alternative de-icing solutions may allow for a shift in snow and ice management that protect water resources while maintaining public safety. A full list of needed research areas can be found in Section 5 of the TCMA Chloride Management Plan.
5. **Adopt Local Chloride Reduction Ordinances**. Encourage and support the adoption of the MPCA's Chloride Reduction Model Ordinance Language by local governmental entities. The model ordinances provide guidance for creating and implementing ordinances that will assist with reducing chloride pollution. The proposed new municipal stormwater general permit for the State (also known as the MS4 general permit) would require adoption of several of these ideas. The four focus areas in the guidance include:
    a. Occupational Licensure for Winter Maintenance Professionals
    b. Deicer Bulk Storage Facility Regulations
    c. Land Disturbance Activities
    d. Parking Lot, Sidewalk and Private Road Sweeping Requirements
6. **De-icing product labeling requirements**. The MPCA should convene and lead a stakeholder process to develop recommendations for new labeling requirements on bags of de-icing chemicals sold in Minnesota. The goal of this effort will be to convene a knowledgeable group of stakeholders from a variety of sectors to create language that will ensure that consumers are provided accurate and necessary information about the de-icing products they are purchasing and applying to Minnesota's environment. Some key areas that should be evaluated include, but would not be limited to:
    - Require complete ingredients list with percentages provided
    - Third party certification requirements for any statements about the products' environmental, pet and human safety
    - Provide "practical' temperature ranges (not temperature ranges that can only be achieved in a lab setting or over a time period of weeks for melting to occur)

- Report possible negative impacts of the product on surfaces, vegetation, water quality, and other
- Safety protocols for handling the products
- Guidance for proper application that includes:
    - Snow and Ice removal prior to application
    - Application rates that are based on research
    - Suggested equipment for proper application and proper spread patterns
    - Conditions in which product will not be effective or may create unsafe surfaces

Chloride Reduction: Water Softening [already approved by Council for FY22-23]

Policy Statement

The Clean Water Council recommends that the State do the following to reduce chloride in Minnesota surface and groundwater:

- **Provide financial support and technical assistance to municipalities to reduce chloride discharges** and allow flexibility for how municipalities achieve these reductions.
- **Update the state plumbing code** to effectively prohibit the installation of new water softeners in Minnesota that use timers rather than on-demand regeneration systems.
- **Fund a program** for activities, training, and grants that reduce chloride pollution. Grants should support upgrading, optimizing, or replacing water softener units.

Problem

Chloride is a naturally occurring ion found in low levels in Minnesota surface and groundwater. Salt used for winter de-icing and water softening contain chloride. Chloride is not toxic in small concentrations. However, above 230 mg per liter (about one teaspoon in 5 gallons of water), chloride becomes toxic to freshwater fish and other aquatic life under long-term exposure. Once chloride enters our surface water (lakes, streams, and wetlands) and groundwater, it is not feasible and extremely expensive to remove it.

Residential water softeners among the primary sources of chloride in Minnesota waters.

The discharge of chloride from residential water softeners can end up in surface waters even after wastewater treatment. Reducing the need for chlorides in water treatment is a priority in Minnesota. However, there are obstacles to achieving chloride reduction.

- **Timer water softeners** are still available. Newer on-demand water softeners are more efficient than older models because they add salt when water demand requires it. However, water softeners are still on the market in Minnesota with a timer that will use salt at regular intervals whether the water requires it or not to remove hardness.
- If public water suppliers upgrade to central softening of water, excessive wastewater discharges of chloride may persist due to continued use of residential water softeners when they are no longer necessary to reduce hardness.

Solution

1. **Support municipal efforts to reduce chloride**. The State should provide adequate funding to provide municipalities financial resources to reduce chloride discharges. This includes funding programs offered through the Minnesota Public Facilities Authority and the Minnesota Pollution Control Agency's water softening grant program.
2. **Update the Plumbing Code**. The plumbing code would effectively prohibit the installation of new water softeners that use a timer using one of two options.
    a. Ion Exchange water softeners used primarily for water hardness reduction that, during regeneration, discharge a brine solution shall be of a demand initiated regeneration type equipped with a water meter or a sensor [based on a Wisconsin model]; or

   b. All water softening or conditioning appliances installed must meet the following criteria [based on a California model]:
      i. The appliance activates regeneration by demand control.
   c. An appliance installed on or after January 1, [insert desired year], shall be certified by a third party rating organization using industry standards to have a salt efficiency rating of no less than 4,000 grains of hardness removed per pound of salt used in regeneration. (This is the recommendation that MPCA suggests in Property Management training and in the Statewide Chloride Management Plan.)
3. **Fund activities, training, and grants that reduce chloride pollution**. The MPCA has several tools available to help municipalities reduce chloride pollution. Grants can be used to support rebates that homeowners and businesses can use to upgrade, optimize, or replace their water softening equipment.

Selected Commercial Fishing Regulations with a nexus to common carp management or commercial harvest. Notable sections are highlighted with my comments below in italics.

97A.015 DEFINITIONS.

Subd. 43.**Rough fish.** "Rough fish" means carp, buffalo, sucker, sheepshead, bowfin, gar, goldeye, and bullhead, except for any fish species listed as endangered, threatened, or of special concern in Minnesota Rules, chapter 6134.

MAISRC Comments: Common carp, a non-native, invasive species with significant ecological impacts to Minnesota freshwater ecosystems, should not share a regulatory definition with native fish species, many of which have important roles in aquatic food webs and/or serve as critical hosts for native mussel species. Common carp are also listed as a Regulated invasive species by DNR. Classifying carp as both a rough fish, with statutes intended to regulate a sustainable carp fishery, and a Regulated invasive species is a contradictory regulatory approach.

Carp removal for ecosystem restoration and carp removal for commercial harvest have different motivating objectives, but each result in lowered carp biomass, which should be the goal of state agencies entrusted with maintaining clean water and healthy lakes. Re-thinking where common carp fit into the entire regulatory structure should be considered in this process: are they a commercial fish or are they an invasive species that happens to have some monetary value?

97C.325 RESTRICTIONS ON TAKING FISH.

(a) Except as specifically authorized, a person may not take fish with:
(1) explosives, chemicals, drugs, poisons, lime, medicated bait, fish berries, or other similar substances;
(2) substances or devices that kill, stun, or affect the nervous system of fish;
(3) nets, traps, trot lines, or snares; or
(4) spring devices that impale, hook, or capture fish.
(b) If a person possesses a substance or device listed in paragraph (a) on waters, shores, or islands, it is presumptive evidence that the person is in violation of this section.
(c) The commissioner may, by rule, allow the use of a nonmotorized device with a recoil mechanism to take fish through the ice.
(d) To protect water quality or improve habitat for fish or wildlife, the commissioner may prescribe restrictions on fishing seasons, limits, or methods on specific bodies of water.

MAISRC Comments: Research indicates that new removal technologies for common carp removal are viable and highly selective for common carp only. The prohibition on use of traps and nets limits the application of research-based tools such as baited box nets and electric barrier systems which are efficient and low-impact ways to remove large volumes of common carp.

97C.391 BUYING AND SELLING FISH.

Subdivision 1.**General restrictions.** A person may not buy or sell fish taken from the waters of this state, except:
(1) minnows;
(2) rough fish;
(3) smelt taken from Lake Superior and rivers and streams that flow into Lake Superior;
(4) fish taken under licensed commercial fishing operations;

(5) fish that are private aquatic life; and
(6) fish lawfully taken and subject to sale from other states and countries.
Subd. 2.**Restrictions on certain game fish.** Largemouth bass, smallmouth bass, rock bass, muskellunge, and sunfish may be bought or sold by a private hatchery or aquatic farm, or as prescribed by the commissioner.
Subd. 3.**Rules.**The commissioner may by rule establish reasonable conditions on the buying and selling of fish that would prevent or slow the spread of certifiable diseases and invasive species.

MAISRC Comments: Add a specific exception here for common carp removed by any entity to include commercial fishers, management agencies, private business for managing carp and other invasive fish, researchers, and civic organizations such as lake associations. While Subd. 3 does state that the commissioner can make exceptions for selling fish to slow the spread of invasive species, clearly listing carp as a species that can be sold would help clarify the state's objectives of supporting and streamlining common carp control. The current prohibition on selling common carp removed by non-commercial fishers (i.e. managers or researchers) means that carp disposal is an added cost of carp management and results in waste of high nutrient/high protein biomass that has value to commercial entities such as compost producers, fertilizer companies, and fur farms.

While the seafood market (human consumption) has historically been the highest value market for common carp, the handling, timing, removal, and transport methods required for bringing carp to these markets mean that there are highly limited applications for this. Carp biomass reuse for fertilizer or compost is unlikely to be a significant source of revenue, but it could, at minimum, help defray the costs of carp management and provide an added incentive for carp removal. Additionally, the lack of a steady supply of carp biomass is currently a limiting factor for initiation and growth of local fertilizer businesses who wish to meet the growing demand for locally sourced, organic fertilizer. New removal methods, in combination with winter seining, could allow for a more steady biomass supply year-round.

97C.811 COMMERCIAL FISHING IN INLAND WATERS.
Subdivision 1. **Inland waters defined.** For the purposes of this section and section 97A.475, subdivision 30, "inland waters" means all waters entirely located within the boundaries of the state and the border waters between Minnesota and North Dakota, South Dakota and Iowa, excluding those waters described in section 97C.801.
Subd. 2.**Commercial fish defined.** For purposes of this section and section 97A.475, subdivision 30, "commercial fish" are carp; bowfin; burbot; cisco; goldeye; rainbow smelt; black bullhead, brown bullhead, and yellow bullhead; lake whitefish; members of the sucker family, Catostomidae, including white sucker, redhorse, bigmouth buffalo, and smallmouth buffalo; members of the drum family, Sciaenidae, including sheepshead; and members of the gar family, Lepisosteidae.

MAISRC Comments: Commercial fishing regulations and definitions of commercial fish are intended to manage populations to allow for sustainable harvest over time. In most settings where common carp have invaded, the management objective is to have as few carp as possible. Common carp should not be listed with ecologically important native fish species.

Subd. 3.**Regulation.** The commissioner shall, by rule, regulate the taking, possession, transportation, and sale of commercial fish, and the licensing of commercial fishing operators in inland waters.

Subd. 4.**Licenses required.** A person may not commercially fish inland waters without a commercial fishing license. Nonresidents may only be licensed to fish waters not previously assigned to residents. In the license application the applicant must list the number of feet of seine of each depth to be licensed.

MAISRC Comments: This section also suggests that seines are the only acceptable type of net for common carp removal in commercial fishing operations. As we understand the current statutory and permitting climate, only researchers and management agencies are allowed to use new and species-specific tools like baited box nets and electric barriers and only after applying for a specialized permit. If these methods and equipment were an option for commercials fishers (not just through a special permit granted on a case-by-case basis), managers would have significantly more choices for contracting out carp removal projects and carp commercial fishers would have more tools for harvesting carp. If these and other changes were implemented, it may be possible for commercial carp fishers to remain in their line of work in a time of diminishing markets for common carp but be compensated for the action of removing carp and improving ecosystems, rather than dependent on a highly unstable market that requires carp of a certain size, condition, and harvested at the right time of year.

Subd. 5.**Season.**Licenses to net commercial fish in inland waters are issued to residents and nonresidents annually subject to this section and shall be valid for commercial fishing during the open season for commercial fishing in inland waters from the day after Labor Day to the day before the open season for walleye.

Subd. 6.**License invalidation.**(a) A license to take commercial fish is void upon:

(1) the licensee's death;

(2) cessation of commercial fishing operations within an assigned area, except as provided by paragraph (c);

MAISRC Comments: This timeline prevents greater implementation and investment into common carp removal by constraining the options for partnerships between managers and commercial fishers. The seasonal closure reflects the imperative to protect important native game species such as walleye, perch, and pike from commercial carp fishing bycatch impacts during their spawning seasons and avoid higher rates of native fish mortality that would result from their capture and release from seines during warm seasons Unfortunately, the seasonal restriction limits the application of new carp removal methods that are nearly 100% selective (i.e. very low to zero non-target impacts) and are most effective during spring and summer months when carp are also spawning.

We recommend that the season limits for methods such as seining or hoop nets remain unchanged, but that an exception be written into this section for the use of corn-baited box nets and electric barriers along common carp migratory routes. These methods are research-based and have been used for years by researchers and watershed managers with no negative impacts to native fish. This equipment and approach should be available to any operator who wishes to support lake restoration by removing carp during the most optimal time of year.

97C.815 COMMERCIAL FISHING AREAS.

Subdivision 1.**Designation.**The commissioner shall specify inland commercial fishing areas, taking into account the amount, size, and proximity of waters specified, the species to be removed, and the type and quantity of fishing gear and equipment necessary to provide an adequate removal effort. The commissioner may change inland commercial fishing area boundaries by rule prior to a new licensing period.

Subd. 2.**Assignment.**(a) The commissioner shall assign licensed inland commercial fishing operators to commercial fishing areas and each operator is obligated to fish in the area that the commissioner has assigned to them. The commissioner's assignment is valid as long as the assigned operator continues to purchase a license, continues to provide an adequate removal effort in a good and professional manner, and is not convicted of two or more violations of laws or rules governing inland commercial fishing operations during any one license period. In the operator assignment, the commissioner shall consider the proximity of the operator to the area, the type and quantity of fish gear and equipment possessed, knowledge of the affected waters, and general ability to perform the work well.

(b) Area assignments must not restrict permits and contracts that the commissioner issues to governmental subdivisions and their subcontractors for invasive species control.

Subd. 3.**Unused areas.**If an area is not assigned, or the operator licensed for the area is not fishing that area, the commissioner may issue a special inland commercial fishing permit for the area. The permit may be issued to an individual holding a valid inland commercial fishing license. The permit must describe the specific waters involved, the county, the species to be removed, the equipment to be used, and the time period of the total operation.

Subd. 4.**Inland Commercial Fishing Trade Association; license problems.**The commissioner shall consult with representatives of the Inland Commercial Fishing Trade Association when disagreements arise in the areas of license issuance, problems with performance pursuant to the license, transfers of licenses, area assignments, and the entry of new commercial fishing operators into the inland commercial fishery.

MAISRC Comments: Evaluation of the Commercial Fishing Area system was outside the scope of the current review, however, we suspect that there are sections that both commercial fishers and managers would like to see updated. We have initiated dialogue with the MN Inland Commercial Fishing Association will be gathering insights from active permit holders on this section of the regulations later this summer.

6260.0300 COMMERCIAL FISHING PERMIT ISSUANCE.

Subpart 1. **Issuance of permits for listed species.** The commissioner may issue the permits listed in subparts 2 to 4 for the taking of listed species of fish by means and conditions and in such waters and times as may be necessary for the removal of the listed species.

Subp. 2. **Class A permits.** Class A permits may be issued for the use of a hand-held implement or device used by a single operator.

Subp. 3. **Class B permits.** Class B permits may be issued for:

A. permanently or temporarily installed traps in waters of the state with fish migrations;

C. licensed inland commercial operators to fish waters other than the core waters of their assigned area;

D. licensed inland commercial operators to fish unassigned waters; or

E. licensed inland commercial operators to crib fish in waters other than where taken.
Subp. 4. **Class C permits.** Class C permits may be issued for:
A. licensed inland commercial operators to fish waters assigned to other inland commercial operators;
B. licensed inland commercial operators to use gear other than seines or hoopnets; or
C. experimental, research, or special projects.

MAISRC Comments: While the Class B and Class C permits have been relied on to provide flexibility for managers, researchers, and carp commercial fishers to carry out their work in the past, we believe this regulatory approach limits the potential for scaling up common carp management and hinders collaboration between local government managers and commercial fishers. If all future use of new removal technologies, strategically timed implementation, or collaborations between managers and inland commercial operators outside of assigned areas relies on special permits that are considered on a case-by-case basis by DNR staff, this adds significant uncertainty to project planning, budgeting, and implementation. Uncertainty about whether a carp control project would be permitted or not can also reduce the competitiveness of grant applications. Given that many carp control projects occurring at the local level are grant-funded, this poses a significant barrier.

Changing the regulations to better reflect the reality that carp are a non-native, invasive species (not a commercial fish) is an important initial step to support greater, cross-sector implementation of strategic, selective carp removal. It would send a signal to funding agencies, other regulatory units, and managers that the DNR supports research-based approaches to carp integrated pest management and would help this work become more mainstream.