Policy Committee Meeting Agenda

Clean Water Council

October 28, 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(s)
- Chair update
- Staff update

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

- Second Draft on PFAS Policy Statement
- Living Cover: Looking at State Water Plan Goals
- Carp Removal Update
- Outline for Any Shoreland Development Policy Statement
- Data Privacy Follow-up on Private Wells

10:30 Break

11:00 Policy Elements of Public Input to Clean Water Fund Recommendations

12:00 Adjourn

Next Meeting: November 18th (moved up a week to avoid Thanksgiving)

Policy Committee Meeting Summary
Clean Water Council (Council)
August 26, 2022, 9:30 a.m. to 12:00 p.m.

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

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Regular Business

- Introductions
- Motion to approve August 26 meeting agenda moved by Victoria Reinhardt and seconded by Peter Schwagerl. Motion approved by vote unanimously.
- Chair update
  - Rich Biske: The Minnesota Office of Soil Health (MOSH) met for some soil health planning. There will be a few meetings happening this fall.
- Staff update
  - Check out the Eco Experience at the State Fair.
  - Paul Gardner, Clean Water Council Administrator, witnessed the first sampling of groundwater for microplastics at Lake Elmo Park Reserve, which has a well that is part of the Minnesota Pollution Control Agency (MPCA) ambient groundwater monitoring network. The sampling takes a long time (1,000 liters of water through filters). It takes 2.5 – 3 hours to collect one sample. They will sample about a dozen sites this year, to be sent to the University of Minnesota lab for chemical analysis. In addition, the MPCA will have USGS perform surface water sampling and is supporting instrumentation at the University of Minnesota Duluth.

Review of Policy Statements and/or Discussion on "Narrowing the Focus" on Several Topics *(WebEx 00:24:00)*

Carp Removal/Management: There is a two-page document on barriers to more carp removal for water quality from the MN Invasive Species Research Center in the meeting packet. At the last meeting, DNR indicated that they would have flexibility to streamline carp removal permits to address the barriers. What would the committee like cto do? The Council has a coordinating role, so this meets that need.

- DNR says that the statutory terminology is in numerous places, which would be hard to change. To remove the prohibition on traps and nets would make it open to all anglers, and therefore hard to track and may also impact other species. The comments on buying and selling fish could potentially change, and DNR is looking at it right now. Carp are not valuable in the food market but could be used for composting or fertilizer. The DNR can issue a special permit to collect fish, on an experimental basis, so they can track it.
  - Rich Biske: It would be ideal the DNR can meet with the fisheries staff on to address concerns without a statute change. We want to be mindful of unintended consequences.
  - John Barten: I can understand the concerns the DNR has if it is opened to more people, especially for folks who do not know what they are doing. There may need to be another conversation with the MAISRC folks to see the impacts on the permitting process. The permitting process could be done faster. It would be nice to have encouragement of this invasive carp removal. Perhaps there could be some specific language to adopt to meet the needs.
  - If there is a change in state rules, would it also require statutory change? *Answer:* Yes.
  - The Committee will hold off on any further movement today. They would like to hear back from the DNR staff, as well as connect with MAISRC on potential permit language changes.

First Draft on Advanced Drinking Water Protection (WebEx 01:08:00)

- There are several drinking water source protection standing policy statements. A few have been fulfilled, a few are in progress, and a few could be updated. At the last meeting, there were a discussion about combining them into one standing policy recommendation.
- There are three main parts. Instead of asking for a statute requirement of well testing disclosed at time of sale, there is encouragement to county ordinances that require well testing. There was a lot of resistance at the Capitol and even pushing back on some good work that was being done. Second, there is a recommendation to expand on some pilot studies for well testing for five major well contaminants (lead, manganese, arsenic, nitrates, and bacteria) for ten percent of the state a year for ten years. The third statement is to 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 two previous drinking water statements included in previous Council recommendations (Disclosure of Well Water Quality at Time of Sale in FY22-23 and Advanced Drinking Water Protection in FY16-17).
- Comments from Frieda Von Qualen, Minnesota Department of Health (MDH) (01:16:30)
  - There is a clarification on page two that the description from MNWOO about their well screening clinics is not something the MDH has said they would do and have not budgeted for it with the current proposal.
  - In addition, the two pilots that MDH is doing are not the same thing as the screening clinics that MNWOO is doing. They see a need to continue the pilot studies to learn and have financial assistance for low-income households. Those screening clinics would be a collaboration.
- Discussion:
  - John Barten: Could you add in the results of the pilots? Additionally, for the county ordinances, there should be a statement to have the standardized list of parameters being tested in the water so there is less confusion on what counties should be doing. Answer: Yes, the MDH will provide the pilot study information so the Council can include it in the statement.
  - Rich Biske: Should there be some room for customization for local conditions? Dakota County is a good example, but do we know how many counties have something like this ordinance, or a variation of it? Answer: We are only aware of Dakota County. There is some private well information items with Washington County, but not sure the total impact.
  - Rich Biske: Are there other mechanisms that are Clean Water Fund (CWF) related that could be brought into this approach? If the Dakota County ordinance is considered a model ordinance, how could we promote those existing mechanisms? It would be more proactive. We could use the opportunity with testing to target the other activities done to protect drinking water.
  - Marcie Weinandt: A third of the state of Minnesota has had flood issues, and for over a decade. Talking about regional efforts, and differences in regions, there are severe threats to groundwater. Additionally, irrigation is a concern for groundwater. To the point of the highest priority is the water quantity issue, with quality being addressed later, what is happening with that? *Answer:* Looking at the ten-year plan moving forward, they have talked about incorporating climate change impacts, like flooding and adaptation approaches. They can connect with their partners with source water protection. It is a conversation they have had, but do not have a clear, straightforward plan to address these areas at this time. *Response:* In the statement, we need to be clear that the state is diverse and there are challenges.
- Updates will be done, and the policy statement can be reviewed at the next meeting.

- Per- and Polyfluoroalkyl Substances (PFAS) *(WebEx 01:43:30)*
  - The MPCA presented on the PFAS Blueprint last year. The Committee approved a statement of support for this document. It also lists the ten major priorities to prevent, manage, and clean up PFAS pollution in Minnesota.
  - Would the Council like to do more with PFAS? The Council could highlight areas that already receive CWFs for programs that deal with PFAS. Draft recommendations examples include: Adding PFAS to DNR's fish contamination assessment; Determining health based guidance for additional PFAS compounds through

the Contaminates of Emerging Concern (CEC) program; Including additional PFAS sampling through MPCA's River and Lake Monitoring program and Groundwater Monitoring program.

Discussion:

- Rich Biske: I agree that this needs an update. There have been good discussions on the topic. I think adding those elements would be helpful. Perhaps, more context setting with elements from the existing Blueprint.
- Victoria Reinhardt: There is an intense amount of interest in this topic. I think having a full discussion on this is greater than the time we have left today. I think it is incredibly important, and there is work to be done. I think the policy does need to be more robust.
- Updates will be done to the policy to review, along with a list of secondary updates for review.

Framing Discussion for Future Meetings *(WebEx 01:52:00)*

- There are three outstanding items: living cover, shoreland development (discussion with Jeff Forrester), and water storage/drainage. These were previously deferred, so it would be good to go over them now. This is to help organize the committee's thoughts on these topics. Looking at what key questions can be asked to help address these items in future meetings.
  - The existing living cover statement is to require the establishment of living cover in vulnerable areas such as wellhead and upstream of surface water intakes. The areas are targeted, but currently voluntary, and the progress is limited. There are no future actions identified. In addition, in FY18-19, there was a policy recommendation to establish a Minnesota Agriculture Diversification Steering Council, and this does now exist. In a sense, one is vague, and the other has been completed.
  - Peter Schwagerl: Speaking broadly from the agricultural industry, they are looking at two distinct tracks of establishing living cover on the landscape. One that is a commercial option of traditional cover crops that were historically relied on cost-share programs to get started. This relies on soil health benefits, or other subsequent benefits to the farmer, for consistent adoption. A separate track is more commercial living cover track like Kernza, and it is a new area. Landowners and land users are trying to figure these out on the landscape. At this point, I am not sure what the next steps would be to help this along.
  - John Barten: Would the focus be on the 400,000 acres of living cover goal in the Council's Strategic Plan, or would the intent be to go broader wherever the drinking water issues could be addressed? I think there could be an argument either way. It is more about which direction the committee would like to go. More could be done to push adoption of cover crops in those area.
    - Jeff Berg, Minnesota Department of Agriculture (MDA): This is a similar discussion the state agencies had with the state water plan. There was a different goal of protecting drinking water than the living cover part.
    - Paul Gardner: If it is in the plan, does the committee want a policy statement that reiterates that it is in the plan? Or is there something unique that the Council contributes that isn't already present.
    - Rich Biske: This exists in other statements. If it was to be updated, it would be to add specificity on what needs to be done. What needs to be supported and recommended as it relates to living cover (i.e., markets, landowners, etc.).
    - Paul Gardner: There could be a revised statement that includes where the CWFs contribute to the living cover. It would be a helpful thematic item in the recommendations.
    - John Barten: Cities across the state are using funds to update their facilities for drinking water. It would make some sense for us to address this issue. It would be beneficial for language to have those 400,000 acres area to require some kind of permanent living cover, rather than have the public pay the cost of these expensive treatments. For an economic reason, if anything.
    - Rich Biske: Focus on the targeted wellhead areas and permanent versus perpetual. I like using the term continuous to leave the door open for alternative cover crops in the future.
    - Paul Gardner: There are drinking water source protection plans for the 920 public water suppliers, and the vision has been that the CWFs will pay for half of what is in the source water protection plans. This can include engaging the landowners in the Drinking Water Supply Management Areas (DWSMAs). Although, they do not seem to be tracking individual plan implementation, as it is quite an effort. *Comment from Annie Felix-Gerth, BWSR:* There are comprehensive watershed management plans that are being developed. It is an item the local partners are tracking - -the implementation

being done in and around the DWSMA areas. So, we could collect some data from that impact. If this is something the Council would be interested in? We could frame it up to have a better understanding of what the Council would want to hear and learn. It is more work for the locals, so overtime it could be evolved. If it is a topic the agencies want the locals to be focusing on, it could be pushed a bit. It could be an evolution of change. I would be an ask of the local partners. It is something that can be done.

- Rich Biske: Some of this would be happening within the Nitrogen Rule. Tracking how many times the landowners and operators have been contacted, and offered mitigation efforts, would also be good to track.
- Paul Gardner: Perhaps, this is more on the topic of measuring outcomes than looking at a policy topic. It would be good to talk about this topic.
- Marcie Weinandt: I would support that request about the accomplishment of the CWFs. The need to know what the CWFs are accomplishing is important.
- Next step is to follow up on these items and see if there is change to the policy at future meetings.

Policy Committee Meeting Summary
Clean Water Council (Council)
September 23, 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, Marcie Weinandt, and Phil Sterner.
Members absent: Raj Rajan and Jordan Vandal.

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 September 23 meeting agenda, June 24, and July 22 meeting summaries, moved by John Barten and seconded by Phil Sterner. Motion approved by vote unanimously.
- Staff update
  - The 2021 general NPDES feedlot permit is now in effect. There are winter application restrictions for frozen or snow-covered fields, as well as cover crops required under certain circumstances.
  - Paul shared the draft communications plan with the Interagency Coordination Team (ICT) and received good feedback. They will meet again in mid-November to follow up on that item.
  - ICT members suggested that the Council seek public input on any CWF changes after the budget forecast.
  - Please be sure to attend the December 19 Council meeting for quorum on budget changes.

Shoreland Development Presentation, by Jeff Forester, Executive Director, Minnesota Lakes and Rivers Advocates *(WebEx 00:13:30)*
This is to talk more about potential policies to help meet water quality objectives, as well as provide general comments, and answer any questions the committee may have at this time.

- Minnesota lakes are in trouble. There are many stressors, but managing water is managing the land. Lakeshore homeowners have an interest in these waters, and an opportunity to take actions with water quality changes. The Minnesota Department of Natural Resources (DNR) reports about half of natural shorelands are developed. This impacts the animals, birds, amphibians, insects, etc. Near shore fish habitat is particularly important for fish survival. There would be significant financial loss if the trend is not reversed to the fishing and angling industry, boating industry, property values, and tax revenues.
- Engaged and informed lake associations can shift local culture toward a water quality preservation aesthetic. Local government resource managers need more technical guidance of shoreline restoration, and they also lack the time and often resources to meet the demand from shoreline property owners for shoreline restoration projects. Local groups can be effective in providing resources and shifting perceptions.
- There are over 500 lake associations in Minnesota. They are working to educate their members on education on good shoreline management and connect them to resources to prepare and replace failing septic systems, run aquatic invasive species programs, run fish stocking efforts, create water trails, shore fishing stations, camping sites, and other projects. It would be good to support them by building support and effective partnerships for these lake associations, providing support resources, offering incentives for owners, and increasing lake association capacity and expertise. There is great potential to reverse these issues to preserve pristine lakes and rivers of Minnesota.

Discussion:

- John Barten: Regarding enforcement of the zoning requirements. How common is that sort of thing? I assume they had to get a variance; how do we deal with that? What is the best way to restrict this? *Answer:* Well, the variance boards are thinking more development means more taxes. So, there is a disincentive in their perception. I don't know how you do it with the variance process in place. Going after folks creates backlash, and they probably have the resources to respond. In addition, architects are catering to their clients and not to the land. Unless an owner is well informed, the infrastructure cannot be created. Enforcement is hard.
- Rich Biske: How much education is provided to people at individual county boards, planning commissions, on the importance of water quality and long-term viability and local elected officials? *Answer:* I wish it was more.

Hubbard and Cass Counties were doing well. Otter Tail and Crow Wing have some. St. Louis County almost none. Politics does play into this, but educating elected officials and sharing the issues, does go a long way, especially before there is a crisis. It is slow work.

- Rich Biske: What could be some next steps this committee can pursue? To re-elevate the purpose of local controls, looking at technical assistance, education awareness, local governments, as well as governance of lake improvement districts? Of those elements, perhaps there is something this committee could advance.
  - *Comment from Jeff Forester:* First, I would say preventing the development of undeveloped lots. Anyone who still owns a large (more then 500 ft) of undeveloped shoreline. Sometimes those properties are sold off to aging owners to help pay for medical bills. Then, the support and civic encouragement to those who have the lots to restore them.
  - Marcie Weinandt: Why has there been resistance to have development easements along lakeshore?
    - *Answer:* It seems like the fear was lakeshore makes up a large portion of property tax base, that counties would push back because they were afraid of losing tax base.
    - *Comment from Rich Biske:* It is also expensive. The assessment can also change every year, so there is no guarantee. It is complicated.
- Annie Felix-Gerth, BWSR: Some landscape stewardship plans involve land cover analysis to impact certain water values and priorities. Federal, state, local, county, and Soil and Water Conservation District (SWCD) folks are all involved. Can you share landscape stewardship plans? *Answer:* Yes. In terms of affordability, there are ways to help such as the sustainable forest act. There need to be some qualifications since it doesn't work for everyone. There are many different pieces that are happening at the different agency levels versus the on-the-ground efforts. Having people working together locally with the folks working at the state level really helps. There is a lot of potential there!

Review of Policy Statements and/or Discussion on "Narrowing the Focus" on Several Topics *(WebEx 01:09:00)*
This is the second draft on Advanced Drinking Water Protection policy statement. Some previous statements have been completed, and some need to be modified, so we are consolidating. Previous feedback was about pilot study numbers.

- Advanced Drinking Water Protection
  - Some people may transfer land instead of selling it. So, the language for testing at time of sale has been updated to include that change, using the term "transfer."
  - John Barten: Could the statement include the Minnesota Department of Health (MDH) to promote the well testing and testing at time of transfer"? It would be more specific. Could the MDH promote adoption of ordinance by counties for the well testing and notification at time of transfer? *Answer from Frieda VonQualen, MDH:* Both make sense, and they should not be an issue. The MDH are working on draft language already for consideration.
  - There is no federal standard for manganese, so this language was updated to be the Minnesota health-based guidance. The treatment would be practical and feasible for Minnesotan families.
  - With all the data privacy controls, is there a way to utilize this data in some way to inform more than just the individual (such as healthcare workers). Proactively getting that information back to local communities. The Minnesota Department of Agriculture (MDA) does something with township testing.
    - Paul will follow up with the MDA on their township testing process.
- Suggested path forward on carp removal (WebEx 01:28:00)
  - Przemek Bajer, of the Minnesota Aquatic Invasive Species Research Center (MAISRC) talked about the research obstacles and carp removal. They would like to see carp stopped being treated as a common fish and be treated more as an invasive species, which would make it easier to harvest. The DNR provided comments on this topic as well. It sounds as if the DNR is open to some flexibility for research permits.
  - It makes more sense for the committee to use the Council's platform to help in this area, rather than establish a policy statement. The committee is working to bring these two groups together. They may already be connecting outside of the committee as well.
  - Phil Sterner comment: At the One Water Conference last week, he connected with a few artists, and one was making belts from carp. The artist is not a fisherman, so they would like to get the carp to continue their work. This may be another outlet. Phil will connect with Paul to bring the artist and work forward at the next meeting.

- John Barten comment: Encouraging these groups to work together would be good. Having the DNR streamline the permit process would be a big step in the right direction.
- Rich Biske: Perhaps this is just a check-in item. Something for the committee to keep track of.

- First Draft on Per-and Polyfluoroalkyl Substances (PFAS) Policy Statement *(WebEx 01:35:30)*
  - The Minnesota Pollution Control Agency's (MPCA) PFAS Blueprint is a great read and recommended. There are ten different key issue areas, with three that intersects with the Clean Water Legacy Act. The state agencies are currently using some Clean Water Funds (CWFs) to investigate PFAS:
    - Contaminants of Emerging Concern (CECs) Program: Each year the CEC initiative seeks nominations of contaminants to evaluate. Last year, 14 of 24 nominations were for PFAS compounds. They also developed a quicker screening method.
    - Fish Contamination Assessment: They have done some PFAS work already, but the proposal would make it more routine.
    - Ambient Groundwater Well Network: This has been on an ad hoc basis as well since 2013.
    - River and Lake Monitoring: The PFAS Blueprint describes this process well. It has also been an ad hoc basis. However, for 2024 and 2025 would be more routine testing.
  - The proposed solution in the draft policy statement is to support funding for the CEC program for more capacity, routine testing with the Fish Contaminant Assessment, and routine groundwater, river, and lake monitoring. The goal would be to detect Class 1 waters as meeting their designated use. PFAS monitoring costs are about $300-400 per sample and takes a long time to collect the sample.
  - Victoria Reinhardt comment: This is refreshing and important. The PFAS Blueprint ties well with federal efforts and puts us in a good position to access federal funds in the future. It is not our focus here but would be of interest to legislators if there are other potential funding sources.
  - Rich Biske comment: Thinking about the awareness, is there a place to increase the level of awareness and risk as monitoring occurs and information is revealed? *Answer:* This is not only from past items, but in items being used today in other compounds. Industry has not shared any of the formulation information with health experts. So federal and government researchers are left to figure out things on their own. Products are not labeled, because there is no labeling standard for these compounds, and are probably in products in our own homes right now.
- Outline for Living Cover Policy Statement *(WebEx 01:53:30)*
  - There are a lot of people meeting up to discuss this topic and synchronize the work. There are some strategizes on this topic in the Council's Strategic Plan; an acreage goal for cover crops as well as a 6.5 million acres goal for the Ag Water Quality Certification Program (AWQCP) by 2030. Since there are items in the Strategic Plan, so moving forward, what would the committee like to do? There is a lot the Council is doing to promote living cover, so these could be collected and put together, along with some metrics.

  Discussion:
  - Peter Schwagerl: I'm not sure that is a useful exercise. A lot of work has been done with this topic, so consolidating this into one document would be good, including pointing to the different resources, the work that has been done, and the goals stated. It can be an effective communication piece. As the various plans come together, we can tweak items or potentially add in whole new pieces, as the state and other groups move forward on this topic. The Council is doing a lot of things in this space, so we should highlight what we are doing, making big steps forward in those projects.
  - Rich Biske: We are at an important time right now. There are two plans moving forward with the MDA and the Minnesota Office for Soil Health (MOSH), with a new statute and pilot program. If these recommendations were approved on Monday move forward, it is a significant infusion of funding. That is in addition to what the federal government will be implementing though the Inflation Reduction Act and climate smart priorities. It is a good time to set some expectations on how we are going to evaluate and perhaps how to adapt. There are some good data points to track the adoption. It may also be summarizing what we have right now from these different areas. Being clear on the terminology would be of interest moving forward as well. *Response from Paul Gardner:* In statute, the Clean Water Council serves as a coordinating role. There are other items like Environmental Quality Board (EQB) and State Water Plan, the Council overseas the CWFs that I will consult.

Timeline *(WebEx 02:03:00)*

- Regarding the timeline, the CWFs have the go through a process with the Governor's Office, whereas the policy statements do not. So, there is a little more time available for this area. It would be good to have a draft ready around December. Therefore, October and November would be the meetings to finalize policies.
- Victoria Reinhardt comment: I think that is reasonable. All of the draft policies with no change would move forward. Looking back at the previous policy statements each year is a good idea, and potentially tweaking them. It positions us well and keeps us up to date. Especially using the most recent statistics to reinforce them. We are in a good position to make this timeline.
- Rick Biske: As we approach the legislative session, saving some time to dive into some of the other conversations happening at the Capitol would be good. There is a lot of good comments that happen during session, that may be dropped afterwards. It would be good to follow and track those to see what may be coming up next.
    - *John Barten comment*: I agree with Rich, I think that would be a good idea. Especially around the Subcommittee on Minnesota Water Policy folks. Monitoring those topics would be important. We may need to pivot a little, and this would give us the opportunity to do it.
    - *Jim Stark comment:* There are many topics that are in parallel between these two groups. Letting the Council's process and funding drive that is good.

Adjournment *(WebEx 02:11:11)*

Clean Water Council

DRAFT FY24-25 Policy Statements as of 28 October 2022

Advanced Drinking Water Protection [DRAFT]

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

1. Direct the Minnesota Department of Health to promote adoption of county ordinances that require well testing and a disclosure of the testing at the time a property is transferred, and develop model ordinances. Ordinances should reflect the contaminants of particular interest to the geology of a given county.
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 Minnesota health-based guidance 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. The State should promote county ordinances to require well testing at time of transfer rather than using state statute. Not all five major contaminants are present in all geologies of the state (manganese, arsenic), so counties should have the flexibility to require testing for only those contaminants likely to be found in the county.

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 $150 to test for all five recommended contaminants. This makes testing prohibitive or at least unappealing to many well owners.

MDH is carrying out a pilot program with local partners in west central and southeast Minnesota to offer free testing as well as financial assistance for mitigation for eligible households. Household eligibility is determined by water quality results and socioeconomic factors the local partners defined. 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.

In Stevens, Grant, and Traverse Counties, Horizon Public Health received a grant for the program. Horizon distributed 114 test kits. Fifty-seventests (or 50 percent) exceeded 10 micrograms per liter for arsenic. As of August 2022, 18 applicants have had reverse osmosis treatment installed as part of this program. Ten units were 100 percent covered by the grant, and eight were 75 percent covered. Twelve more households are interested in the 75% cost-share and are waiting on a quote from the vendor.

In Olmsted, Fillmore, Winona, Wabasha, and Goodhue Counties, Olmsted Soil and Water Conservation District took the lead. In this region, 50 percent of contacted households had never tested their water, are unsure when it was last tested, or haven't had it tested for at least 10 years. Fifty-five percent of those households had a well that was drilled before the well construction code came into being or did not know the age of the well. As of August 2022, 164 wells have been tested for nitrate, arsenic, and manganese. Twenty percent of the samples have been above 10 ppm for nitrate.

The grant has helped cover the cost to install 3 reverse osmosis systems, construct 5 new wells, and conduct repairs on another well to address nitrate.

[1] The FHA requirements can be found at 24 CFR 200.926d.

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

There are home water treatment and other mitigation options (such as well repair and construction) 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]

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.

[2] Minnesota Department of Health, https://www.health.state.mn.us/communities/environment/water/wells/waterquality/index.html.

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

Policy Statement

The Clean Water Council recommends that the Clean Water Fund be a partial source of funding to implement the Minnesota's comprehensive PFAS Blueprint. Of the ten key issue areas prioritized in the Blueprint, there are three in which the Clean Water Fund would both fulfill both the Clean Water Legacy Act and the Blueprint.

- **Quantifying PFAS risk to human health**
- **Limiting PFAS exposure from drinking water**
- **Reducing PFAS exposure from fish and game consumption**

Problem

The PFAS Blueprint sizes up the problem this way.

> Per- and polyfluoroalkyl substances, commonly known as PFAS, are an enormous family of chemicals and now pervasive in the environment. Called "forever chemicals", they do n3333ot breakdown and can bioaccumulate in both humans and other living organisms, with some known to be toxic. Minnesota requires a strategic, coordinated approach to protecting families and communities.

A substantial financial settlement with 3M provides $850 million in funding for resource damage from PFAS in the state[3], including $700 million in providing safe drinking water in the east Twin Cities metro area. However, the Blueprint identifies significant knowledge gaps about additional problems:

> A key challenge in understanding and regulating PFAS is identifying their uses, presence in the environment, and impacts on health and ecosystems. Available sampling techniques and established analytical methods characterize less than one percent of all PFAS in the environment. There are gaps in our understanding of the effects of PFAS on human and environmental health including a lack of toxicity studies available. Without toxicity studies, it is not possible to complete health risk assessments used to determine safe levels of human exposure. The breadth and diversity of PFAS pollution, coupled with a lack of research on health impacts, complicates the development of regulatory and non-regulatory approaches to managing PFAS.

Other State Efforts

In addition to the 3M settlement, the State of Minnesota has worked on PFAS issues on several fronts.

- Minnesota Department of Health (MDH): Using toxicity assessments, the department has developed health-based guidance values for drinking water and fish consumption for several PFAS compounds.
- Minnesota Pollution Control Agency (MPCA): The agency tested for PFAS in lakes and streams as early as 2004.

Current Uses of the Clean Water Fund

State agencies currently use the Clean Water Fund to investigate PFAS.

- **Contaminants of Emerging Concern (CEC) Program**: The Minnesota Department of Health administers this program, which provides health-based values for contaminants that are not currently federally regulated. Of the more than 100 contaminants evaluated, five are PFAS

[3] https://3msettlement.state.mn.us/

compounds. MDH reports that this process (including possible re-evaluation as new data emerge) can take up to two years. Each year the CEC Initiative seeks nominations of contaminants to evaluate. In FY2021, 14 of 24 nominations were for PFAS compounds. The initiative has also developed the Alternative Risk Assessment Methodology (ARAM) Project to use alternative risk assessment methods that appears effective with shorter-chain PFAS compounds when there is scant toxicology information available. (Blueprint, p. 53)

- **Fish Contamination Assessment**: The DNR has sampled for PFAS on a sporadic basis in fish tissue. More routine assessment that will allow for statewide fish consumption guidelines will not be possible without additional funding. It appears that PFAS contamination in fish is pervasive. According to the Blueprint, "84% of the Metro lakes and 22% of the Non-metro lakes sampled to date had fish with detectable levels of PFOS. Of the lakes with a known PFAS source nearby, all lakes had fish with detectable levels of PFOS, in both Metro and Nonmetro waters."
- **Ambient Groundwater Well Network**[4]: This program is supported by the Groundwater Assessment program at MPCA, and sampled for PFAS in 2013 and 2019. It provides "an early warning system for PFAS migration into drinking water aquifers." The MPCA monitors for contaminants of emerging concern at about 40 wells annually.
- **River and Lake Monitoring:** The MPCA and MDH coordinated efforts for a Statewide PFAS Monitoring Program in 2020-2021 with partial funding from the CWF and an EPA Multi-Purpose Grant. According to the Blueprint:

  > This project specifically targets drinking water systems located near potential PFAS emission sites and vulnerable to contamination…. Funding from the CWF allowed the MPCA to install shallow monitoring wells in key areas where existing wells were not available, such as residential areas that use subsurface sewage treatment systems for wastewater disposal, and commercial or industrial areas. This funding also allowed the MPCA to expand the list of chemicals it routinely analyzed in water samples to include CECs. MPCA has also been able to do some specific, non-routine, sampling for PFAS. In 2013, with limited targeted follow-up in 2017, MPCA was able to include 13 PFAS analytes in the analysis of groundwater samples. The results of PFAS monitoring are available in a report on MPCA's website. This report shows that PFAS were detected in most groundwater in the state….

Solution

Additional funding in FY24-25 from the Clean Water Fund would increase the capacity to monitor and assess PFAS in Minnesota.

- **Contaminants of Emerging Concern (CEC):** The Department of Health has requested an increase in CWFs for FY24-25 to $10.4 million over the FY22-23 appropriation of $2.4 million. This increased capacity of the CEC Initiative would allow for more evaluation of PFAS compounds for health-based values.
- **Fish Contaminant Assessment**: The DNR currently samples fish tissue in 178 lakes and 12 rivers for mercury and PCBs at the FY22-23 appropriation of $350,000. The Clean Water Council has

[4] Groundwater monitoring | Minnesota Pollution Control Agency (state.mn.us)

recommended an increase to of $910,000 for FY24-25 to allow DNR to sample fish routinely for PFAS.

- **Groundwater Monitoring**: The MPCA has been able to sample for PFAS on an *ad hoc* basis in 2013 and 2019, but additional funding would allow continued and consistent support for the effort over time. The Clean Water Council has recommending spending $2.0 million over the FY22-23 appropriation of $1.9 million.
- **River and Lake Monitoring**: The MPCA sets aside a portion of River and Lake Monitoring CWF appropriations for partner requests. In FY24-25, the Clean Water Council is recommending an increase in funding for this program to add targeted PFAS monitoring and additional lake monitoring in lake-heavy watersheds at local partner request. The goal would be to determine if Class 1 waters are meeting their designated use. PFAS monitoring costs $300-400 per sample.

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 of Minnesota implement the following actions 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.

Data Privacy Statutes Relevant to Well Testing

28 Oct 2022

13.3805 PUBLIC HEALTH DATA.

Subd. 4.Drinking water testing data.

Data maintained by the Department of Health or community public water systems that identify the address of the testing site and **the name, address, and telephone number of residential homeowners of each specific site** that is tested for lead and copper as required by the federal Safe Drinking Water Act, the United States Environmental Protection Agency's lead and copper rule, and **the department's drinking water protection program are private data on individuals or nonpublic data**.

13.741 POLLUTION CONTROL; ENVIRONMENTAL QUALITY DATA.

Subd. 4.Electronic submittal data.

Preliminary data entered or uploaded into the Pollution Control Agency online data submission system are classified as private or nonpublic data. The data is public once electronically transmitted through and received by the Pollution Control Agency from the online data submission system, unless otherwise classified by law.

18B.10 ACTION TO PREVENT GROUNDWATER CONTAMINATION.

The commissioner may, by rule, special order, or delegation through written regulatory agreement with officials of other approved agencies, take action necessary to prevent the contamination of groundwater resulting from leaching of pesticides through the soil, from the backsiphoning or backflowing of pesticides through water wells, or from the direct flowage of pesticides to groundwater.

With owner consent, the commissioner may use private water wells throughout the state to monitor for the presence of agricultural pesticides and other industrial chemicals in groundwater. The specific locations and land owners shall not be identifiable. The owner or user of a private water well sampled by the commissioner must be given access to test results.

13.643 AGRICULTURAL DATA

Subd. 7. **Research, monitoring, or assessment data.** (a) Except as provided in paragraph (b), the following data created, collected, and maintained by the Department of Agriculture during research, monitoring, or the assessment of farm practices and related to natural resources, the environment, agricultural facilities, or agricultural practices are classified as private or nonpublic: names, addresses, telephone numbers, and e-mail addresses of study participants or cooperators; and location of research, study site, and global positioning system data.

The following data are public:

location data and unique well numbers for wells and springs unless protected under section 18B.10 or another statute or rule; and

location data and well numbers are public for fertilizers but private for pesticides data from samples collected from a public water supply as defined in section 144.382, subdivision 4.

The Department of Agriculture may disclose data collected under paragraph (a) if the Department of Agriculture determines that there is a substantive threat to human health and safety or to the environment, or to aid in the law enforcement process. The Department of Agriculture may also disclose data with written consent of the subject of the data.

MDA aggregates private well data into these reports:

- For nitrate: Township Testing Program | Minnesota Department of Agriculture (state.mn.us) – see bottom of webpage, and

- For pesticides: Private Well Pesticide Sampling Project: Results and Work Plans | Minnesota Department of Agriculture (state.mn.us) -see bottom of webpage

MDH verified that the initial water quality sample results for nitrate and arsenic that come to MDH are available through the Minnesota Well Index.

PFAS data from MPCA's database are available here, under the Groundwater Monitoring Results subtitle: Groundwater monitoring | Minnesota Pollution Control Agency (state.mn.us) .

DEPARTMENT OF ADMINISTRATION
DATA PRACTICES

Informed Consent

What is informed consent and when is it required?

Informed consent is written permission from an individual to allow a government entity to release the individual's private data to another government or non-government entity or person, or to use the individual's private data within the entity in a different way (Minnesota Statutes, section 13.05, subdivision 4).

A government entity must obtain an individual's informed consent in the following situations:

- When the individual asks the entity to release his/her private data to another entity or person
- When the government entity wants to release the individual's private data to another entity or person (government entity created the private data or government entity collected the private data from someone other than the individual)
- When the government entity wants to release the individual's private data to entities or persons other than those listed in the Tennessen warning notice the government entity gave the individual when it collected the data
- When the government entity wants to use the individual's private data in a way that is different than what the government entity explained in the Tennessen warning notice the government entity gave the individual when it collected the data

The informed consent requirements apply to Minnesota government entities subject to the Data Practices Act (Minnesota Statutes, Chapter 13) and, in some cases, to third party contractors (Minnesota Statutes, sections 13.02, subdivision 11 and 13.05, subdivision 11).

For information about informed consent when government is releasing data to an insurer, see Minnesota Statutes, section 13.05, subdivision 4a.

What is valid informed consent?

Minnesota Rules 1205.1400, subpart 3, requires that individuals giving informed consent have sufficient mental capacity to understand the consequences of their decision to give consent. Minnesota Rules 1205.1400, subpart 4, requires that a valid informed consent must:

- Be voluntary and not coerced
- Be in writing
- Explain why the new use or release is necessary
- Include any known consequences for giving informed consent
- If the individual is a minor or has a legally appointed guardian, the entity may also need the signature of the individual’s parent or guardian depending on the situation or the entity’s policy.

What is the connection between a Tennessen warning notice and an informed consent?

When a government entity collects private or confidential data from an individual about the individual, the entity must give the individual a Tennessen warning notice (Minnesota Statutes, section 13.04, subdivision 2). The Tennessen warning notice must include how the entity intends to use the data and which outside entities or persons are authorized to have the data. Once the entity gives the notice, the entity may use or release the data in the ways described in the notice.

After giving a Tennessen warning and collecting private data from an individual, a government entity may wish to use the data differently than it described, or may wish to release the data to an outside entity (government or non-government) or person other than it described. In either of these situations, the government entity would need to obtain informed consent from the individual.

Sample Informed Consent Forms

- Release Request by Individual (PDF) (/admin/assets/consent1_tcm36-310142_tcm36-310142.pdf) - Also available in Microsoft Word format
- Release Request by Government (PDF) (/admin/assets/consent2_tcm36-310141_tcm36-310141.pdf) - Also available in Microsoft Word format
- Request for New Use (PDF) (/admin/assets/consent3_tcm36-310140_tcm36-310140.pdf) - Also available in Microsoft Word format
- Sample Request for Education Data (/admin/assets/consented_tcm36-310139_tcm36-310139.pdf)
- The Minnesota Standard Consent to Release Health Information (https://www.health.state.mn.us/facilities/notices/index.html)

DEPARTMENT OF ADMINISTRATION
DATA PRACTICES

Tennessen Warning Notice

What is a Tennessen warning notice?

The government must give individuals notice when collecting private or confidential information from them. This is referred to as a "Tennessen warning notice." Government may also call it a "privacy notice," a "notice of collection of private/confidential data," or something similar. The purpose of the notice is to enable people to make informed decisions about whether to give information about themselves to the government. (See Minnesota Statutes, section 13.04, subdivision 2.)

What must the notice include?

- The reason government is collecting the data,
- How government plans to use the data,
- Whether the person is legally required to provide the data or may refuse to do so,
- Consequences if the person provides the data,
- Consequences if the person does not provide the data, and
- The identities of people and entities that have access to the data by law. (For example, all notices should include that data may be shared upon court order or provided to the state or legislative auditor.
- Note regarding private data on minors: Entities must provide minors with notice that they have the right to request that parental access to private data be denied. Entities may consider including this notice in the Tennessen Warning notice when collecting the data (See Minnesota Rules 1205.0500 (https://www.revisor.leg.state.mn.us/rules/?id=1205.0500)).

When does a government entity not have to give a Tennessen warning notice?

- The individual volunteers the data - the entity did not ask for it;
- The data are not about the individual being asked;
- The data about the individual are public; or
- The individual is asked to provide criminal investigative data to a law enforcement officer under Minnesota Statutes, section 13.82.

What happens if the government does not provide the notice?

With limited exceptions, a government entity may not collect, store, use, or disseminate private or confidential data for any purpose other than those specified in the Tennessen warning notice, or per section 13.05, subdivision 4. (Advisory Opinion 95-028) If an entity fails to give the Tennessen warning notice, the entity may not use or store the information received for any purpose or must obtain informed consent.

Other Considerations

- A government entity should seek legal advice when developing Tennessen warning notices.

- A government entity should not try to develop an all-purpose Tennessen warning notice; each notice should be tailored for the specific program or reason for collecting the data.
- Notices do not need to be in writing. However, government should ask the individual to sign and date the notice, and give her/him a copy as a best practice. (An e-form could provide a way for the recipients to indicate that they have read and understood the notice.)
- "Reverse Tennessen warning." While government does not need to give notice when collecting public data, it might consider doing so in some circumstances. For example, data about a member of the public requesting access to public data are public and an entity could explain that to a data requester.
- Government may only collect data on individuals if it is necessary to administer a program specifically authorized or required by law (see Minnesota Statutes, section 13.05, subdivision 3).
- Government entities must give a Garrity warning notice when conducting some personnel investigation interviews. This may be combined with a Tennessen warning notice.

Source: MPCA

GOAL 2:

Manage landscapes to protect and improve water quality

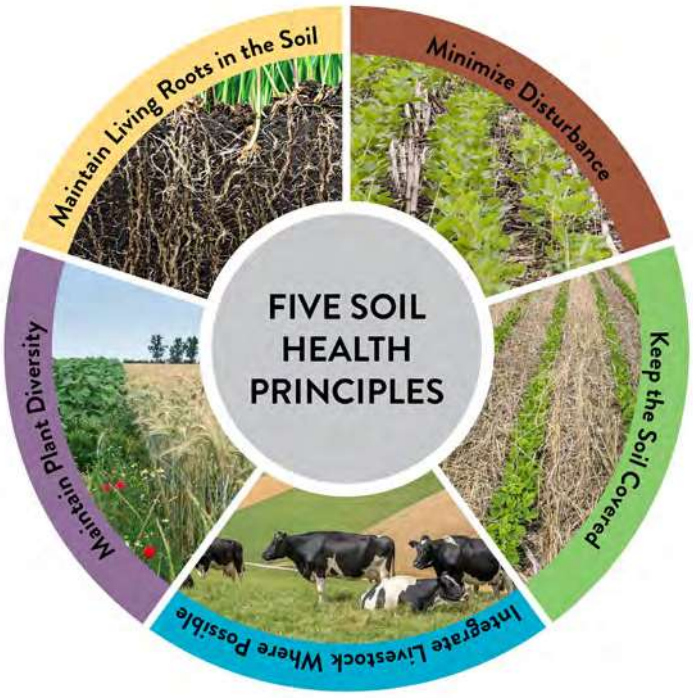
Source: Courtney Celley/USFWS

Increased intensity and duration of rain due to climate change can reduce surface and groundwater quality by increasing nutrient and sediment runoff. Water quantity is also expected to be impacted, with more erosion and flooding (see Goal 4). Healthy soil provides many benefits:

- It contains organic matter that retains water, reducing runoff and the need for structural water storage.
- It increases the availability of water to plants, which can increase yield and improve resilience to dry spells, reduce the need for supplemental irrigation, reduce the speed and volume of runoff, and reduce nutrient losses into surface water and groundwater.
- It can store large amounts of carbon, which means that soil health improvements have great potential to reduce greenhouse gas emissions across Minnesota's 20 million acres of cropland.

Agricultural BMPs that contribute to soil health include no till or reduced tillage, cover crops, crop rotations that include perennials, responsible manure application and installation of vegetative buffers along streambanks and lakeshores. Minnesota's Nutrient Reduction Strategy calls for one or more of these practices to be newly adopted on approximately one-third of cultivated lands to achieve interim goals for surface water quality.

While public investment may be needed to incentivize practices that boost soil health, such practices should eventually begin to pay for themselves because they are marketable, add value to the product or service provided, and can result in higher yields and/or lower inputs.



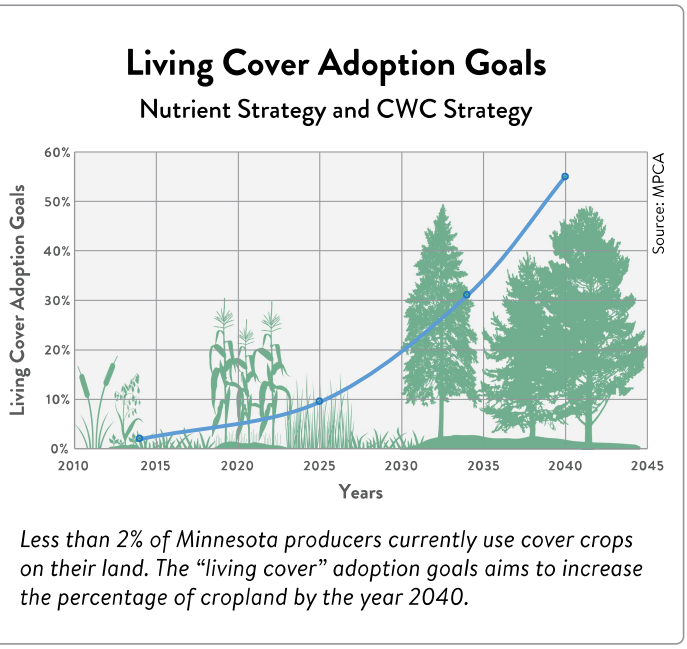
"I think agriculture has really evolved. In my father's and grandfather's time, you plowed the soil and planted your crop. I think due to technology and what we've learned, we can practice no-till, strip-till, vertical tillage, where we're leaving more residue on the soil. We don't need to leave it exposed. We can use cover crops so we have the ability to retain and keep that soil in place so that we don't have runoff. So we keep the nitrogen and nutrients in place to make sure that our surface water does stay clean."

–Randy Spronk, Edgerton

STRATEGY 1: Increase soil health.

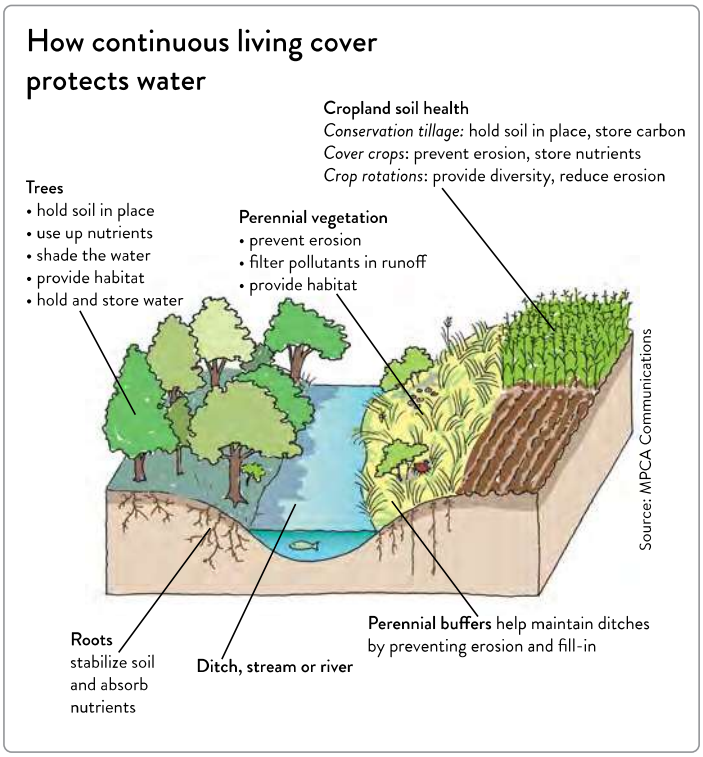
Action 1.1: Work to meet state goals for expanding the acreage of cover crops and continuous living cover.

- Keep fields covered with vegetation for much of the year. Practices such as cover cropping and incorporation of perennial vegetation (known as continuous living cover) protect soil from water and wind erosion and reduce nutrient loss to surface and groundwater. However, cover crops are grown mainly for soil health purposes rather than as a primary commodity crop and can take time and resources to establish. USDA farm census data indicate that less than 2% of Minnesota producers use cover crops on their land. The Clean Water Council Strategic Plan identifies a goal of 5 million acres of row crop agriculture using cover crops or continuous living cover by 2034. Minnesota's Nutrient Reduction Strategy scenarios identify cover crop needs of 1.9 million new acres by 2025 and over 10 million acres by 2040. When combined, goals for escalating these "living cover" practices in Minnesota look like the curve below.



Less than 2% of Minnesota producers currently use cover crops on their land. The "living cover" adoption goals aims to increase the percentage of cropland by the year 2040.

- Accelerate existing grant and cost-share programs (see next page). Priority lands should include:
  - drinking water source areas, as discussed under Goal 1
  - sloping land and highly erodible soils
  - subwatersheds or other areas identified as priorities in local watershed plans.



Action 1.2: Improve monitoring and metrics for soil health based on statewide research and modeling.

- Work with the Minnesota Office for Soil Health (MOSH) at the University of Minnesota to monitor and evaluate soil health statewide.
- Work with MOSH to develop standard metrics for soil health under a range of climate and soil conditions, including both laboratory tests (e.g., organic matter, biological activity) and in-field measurements (e.g., soil properties, earthworms).
- Increase resources for on-farm and regionally specific research on and demonstrations of conservation tillage, cover crop systems, crop rotations, management intensive grazing and other conservation practices in order to generate more regionally specific data.
- Determine how much the improvement of soil health at a subwatershed scale can reduce the need for water retention structures to hold water on the landscape.

Programs That Support Soil Health

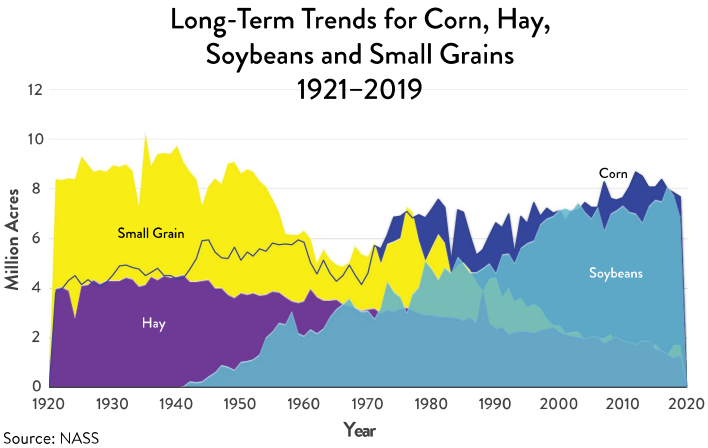
In addition to the many federal funding options available through the National Resource Conservation Service, Minnesota has established a number of pioneering programs supporting agricultural BMPs that advance soil health.

- The MAWQCP is a national demonstration project developed with the USDA in partnership with public and private collaborators, including Soil and Water Conservation Districts (SWCDs), BWSR, MDA, DNR, MPCA and private industry. Certification systematically identifies and mitigates risks to water quality on a field-by-field basis. Participants receive individualized technical and financial assistance to implement practices and improve soil health and may further obtain a soil health endorsement for exemplary management.
- BWSR's State Cost Share Program provides funds to SWCDs to share costs of conservation practices with producers for high-priority erosion, sedimentation or water quality problems. Structural or vegetative practices must be designed and maintained for a minimum effective life of 10 years.
- The Projects and Practices grant is a competitive grant supported by the Clean Water Fund that invests in projects and practices that will protect or restore surface water quality or protect groundwater or drinking water. Eligible activities include many agricultural BMPs that promote soil health.
- A Cover Crop Demonstration Grant program established in 2019 provides funds to five SWCDs to offer technical and financial assistance to new adopters of cover crops.
- The AgBMP Loan Program provides low-interest loans to farmers, rural landowners and agriculture supply businesses to encourage agricultural BMPs that prevent or reduce runoff from feedlots or farm fields and other pollution problems identified in local water plans.
- The Nutrient Management Initiative promotes cover cropping, manure crediting and other practices for corn and wheat producers. Participating farmers work with crop advisers to set up field trials.
- The Clean Water Research Program recently provided funds to MOSH to develop a guide for establishing cover crops in Minnesota based on local data. The program has also funded research on cover crop establishment and water quality benefits.
- Sustainable Agricultural Research and Education grants combine federal and state funds to help MDA, SWCDs and growers collaboratively assess the impact of cover crops on soil health.

Source: BWSR

Examples of crops used as a living cover to support soil health.

Action 1.3: Diversify crops and agricultural practices that support soil health.



Source: NASS

- Since about 50% of agricultural land is rented, target both landowners and producers with outreach and assistance on conservation contracts (including MAWQCP comprehensive conservation management contracts) to reflect the value of soil health practices and increase adoption.
- Promote the reintroduction of small grains—wheat, oats, barley and rye, which were once staple crops in Minnesota. Such short-season crops make it much easier to establish cover crops than is the case for corn and soybeans, and they can provide other soil health benefits. However, markets and supply chains for small grains need further development and support to make these crops economically viable.
- As discussed under Goal 1, continue to build markets and supply chains for crops that provide continuous living cover, such as those developed through the University of Minnesota's Forever Green Initiative. Emerging perennial crops, notably Kernza, and winter annual cover crops (camelina and pennycress) provide soil health and water quality benefits and are beginning to gain footholds in the marketplace.

Action 1.4: Reduce social and financial barriers to implementation of soil health practices.

- Encourage and support programs such as the Minnesota Soil Health Coalition that offer farmer-to-farmer communication and mentorship to help farmers successfully transition to conservation-tillage and cover-crop systems, crop rotations, continuous living cover crops, and other soil health practices.
- Support the establishment and work of local soil health teams and networks. Numerous teams are providing demonstrations and field days at county, multi-county or watershed scales, but they need further financial and personnel support.
- Invest in regional equipment purchasing and sharing programs for agricultural cooperatives or SWCDs to reduce the burden of investing in cover crop and perennial/small grain planting and harvesting equipment.

Action 1.5: Establish soil health demonstration watersheds.

- Fund incentives, local promotion and water monitoring related to intensively adopting soil health practices in selected small subwatersheds to identify how barriers can be overcome and demonstrate multiple benefits.
- Use demonstration watersheds to promote soil health and living cover practices to other watersheds.
- Facilitate farmer-to-farmer sharing of learning experiences and ways to overcome technical, financial and social barriers.

CASE STUDY: Statewide Soil Health Database

The Mower and Stearns county soil and water conservation districts (SWCDs) are collaborating with the University of Minnesota on a statewide soil health project measuring soil properties under contrasting management systems. The project, which is funded by a Conservation Innovation Grant from the NRCS, will collect soil health indicator data from 26 working farms in Mower County, the Minnesota River Valley, Stearns County and the Red River Valley. At the end of the project, the partners will have a database of regional soil health measurements, a suite of case studies highlighting farmers who have adopted soil health practices, and a detailed economic analysis of soil health management systems on 10 farms.

Source: MDA