Policy Committee Meeting Agenda
Clean Water Council
May 19, 2023
9:30 a.m. – 12:00 p.m.
WebEx Only

2023 *Policy Committee: John Barten, Rich Biske (Chair), Kelly Gribauval-Hite, Raj Rajan, Victoria Reinhardt (Vice Chair), Peter Schwagerl, Jordan Vandal, and Marcie Weinandt*

9:30 Regular Business

- Introductions
- Approve today's agenda
- Approve minutes of previous meeting(s)
- Chair update
- Staff update
    - Legislative Update

9:45 Drainage with Jeff Strock

- University Extension, Southwest Research and Outreach Center at Lamberton

10:45 Break

11:00 (DISCUSSION) Where Can the Council Be Most Helpful in Promoting Drainage Water Management for Water Quality?

- Review State Water Plan goal on drainage
- Public input

12:00 Adjourn

Policy Committee Meeting Summary
Clean Water Council (Council)
February 24, 2023, 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 the January 27 meeting agenda moved by John Barten and seconded by Peter Schwagerl. Motion approved by vote unanimously.
- Chair update
- Staff update

Groundwater Follow-Up Discussion: Sustainability Standard for Groundwater Appropriations, Katie Smith, Director, Ecological and Water Resources Division, and Dan O'Shea, DNR
- This is a follow up discussion on the sustainability standard for groundwater appropriations. There is a *Report to the Minnesota State Legislature: Definitions and Thresholds for Negative Impacts to Surface Waters* executive summary is in the meeting packet. In addition, the bill introduced at the Legislature (HF1680) is included in the meeting packet for anyone who wants to look at the bill language.
- Due to Minnesota's climate and geography, rainfall is not always available in the quantities needed, in the timeline needed. Businesses and communities need to have reliable water supplies. While water levels fluctuate throughout the year, and across multiple years, the intensive water appropriation can push the low levels lower, which significantly reduce stream flows which puts ecosystems at risk.
- There is a proposal for statutory revisions. There were several extensive stakeholder sessions over several months. It defines "negative impact", "ecosystem harm", and "sustainable diversion limit". The bill would recognize that many Minnesota surface waters are hydrologically connected to groundwater resources.
- The surface water provisions in Minn. Stat. 103G.287 are related to direct appropriations of surface water and can be managed by suspending permits under certain conditions. The delay between action and response in water flows is too slow, so they are trying to help address it.

Questions/Comments:
- John Barten: Would this have resolved the White Bear Lake issues and kept it out of court? *Answer:* It is hard to say, but there would have been more clarity. We think we would have used the same data-driven evidence. However, it would have been a cleaner and transparent pathway.
- Jim Stark: Would cold water streams be treated differently than warm water streams? *Answer:* We would want to take specifics into account, to make those considerations when setting the limits. Site-specific situations often have to do with where the groundwater wells are in the watershed. It is not just type of stream (because the process would be the same). That groundwater pumping affects the surface water is a new concept to people.
- Victoria Reinhardt: I'm from White Bear Lake. there would not have been a lawsuit with White Bear Lake if this was in place. I think there were a lot of missteps. A change in the high-level marks is needed, so no more came off the lake. No one is blameless. There was a need to keep our businesses and communities open. I would hope this legislation is not to just fix that problem, because you mentioned taking things case-by-case. Everyone needs to be a water warrior. When looking at solutions, all the partners need to be at the table.
- Peter Schwagerl: I am encouraged to see a site-specific approach. Are you able to discuss any of the concerns heard from stakeholders? Where are you anticipating concerns on this? *Answer:* The Irrigators Association and chamber were present. They feel that the new definitions are not clarifying enough and lack metrics to measure impacts. So, they don't know if this gets us in a better position than before. There were some

suggested edits. We will continue to on this as we move forward. We want to be proactive. We appreciate the actions others have already taken to decrease pressure on our waters.

- Rich Biske: Will the modeling be limited to the groundwater management areas, or in the absence of those models will there be any test pumping prior to allocations? Will they prevent ecosystem harm? *Answer:* As far as individual permits, I am not as familiar in that area, so I am not qualified. It is done now. The modeling is to help in certain areas of the state where the water pumping is intense. We can follow up.
- Rich Biske: Can the DNR enforce in the proposed language? Answer: Yes. Right now, we can issue administrative penalty orders, but it is prescriptive regarding the amounts. The penalties must be forgiven if the violations are corrected within thirty days. There is a proposal at the Legislature which would give the DNR a variety of compliance tools, depending on the situation.

Legislative Platform from Subcommittee on Minnesota Water Policy (SWMP), by Jim Stark, Executive Director, SWMP *(Webex 00:53:00)*

- New members are being identified for the SWMP this session. The SWMP process involves stakeholder meetings over the summer, looking at certain issues, getting feedback from state agencies, taking surveys, and working on bills. Topics are whittled down to a short list.
- Group 1: Defining sustainable groundwater limits using technological advances, voluntary private well testing, ensuring the safety of private wells (identify and monitor vulnerable aquifers).
- Group 2: Improve water and agriculture, tax credit for private riparian buffer lands, and water safety plans for cities (a pilot).
- Group 3: Reinstate Legislative Water Commission and the Wastewater Advisory Council, complete land management preservation and water quality goals for the Upper Mississippi, and enhanced groundwater recharge.
- Group 4: Water retention – urban stormwater, testing for and remediation of lead in drinking water at certain facilities, increase levy limits for watershed districts, and avoiding oversalting.
- Other bills: adjust appropriation priorities for commercial entities with conservation plans, carbon capture in mine waste rocks policy, and keeping our lakes clean (littering on ice covered lakes).

Questions/Comments:

- Rich Biske: Regarding the defining sustainable groundwater limits using technological advances, some of the work is funded by Clean Water Funds (CWFs) in terms of the county atlas, One Watershed One Plan (1W1P), and Groundwater Restoration and Protection Strategies (GRAPS). Could it be a pilot under existing programs. *Response:* It could be. The idea is to put together the county atlas system by meshing them together, to provide a structure for a model. The idea is to have a prototype for programs that would support 1W1P.
- Rich Biske: Is there a fiscal note on the buffer tax credit? Is the intention for the buffer required under rule, or new ones? *Answer:* It is for the ones that exist along public water courses. There is a fiscal note from last year.
- Marcie Weinandt: The trash on the lake is concerning, and a social science issue. I don't understand how fishermen can dump trash onto lakes they are fishing from. *Response:* There are some dedicated groups working on this item. It is mind boggling. Thankful to the local folks and governments working on it.

Minnesota's Climate Action Framework (Emphasis on Resiliency & Working Lands) by Dana Vanderbosch, Assistant Commissioner for Water and Agriculture Policy, Minnesota Pollution Control Agency (MPCA) *(Webex 01:20:45)*

- Climate change is not a far-off possibility. Minnesotans are suffering from its effects right now, and it will get worse, but we can all be a part of the solution. There is cause for optimism. Addressing climate change presents us with a historic opportunity to strengthen our economy, improve our health, and create a more equitable Minnesota.
- Minnesota developed a Climate Action Framework. It identifies near-term actions to take to achieve our long-term goal of a carbon-neutral, resilient, equitable future for Minnesota. These are specific recommendations for actions we can do in various categories.
- Climate targets – align with the best science from the Intergovernmental Panel on Climate Change (IPCC):
  - Reduce greenhouse gases by fifty percent by 2030.
  - Net-zero emissions by 2050
  - Prioritizing resilience investment over the next ten years.

  - There is a need for action by all levels of government, businesses, nonprofits, and individuals.
- Framework goal areas: clean transportation, clean energy and efficient buildings, climate-smart natural and working lands, healthy lives and communities, resilient communities, and clean economy.
- Climate-smart natural and working lands:
  - The vision: Absorb and store more carbon, produce food and other products; sustain local economies, enhance climate resiliency; and improve the quality of life for all Minnesotans.
  - Measures of progress: By 2035, have an increase by twenty-five precent the amount of carbon sequestered and stored annually in natural and working lands, compared to 2014-2018 average levels. By 2035, reduce annual greenhouse gas emissions in the working lands sector by twenty-five percent from 2018 levels. By 2030, all state-funded or sponsored land, water, and species management plans identify actions to increase adaptation. The intention is to drive a lot of focus over the next ten years.
  - Priority actions in the next 10-15 years: expand climate-resilient agriculture and forestry, increase water storage and infiltration, manage drainage, invest in new markets, prioritize groundwater and drinking water, manage ag lands to reduce greenhouse gas emissions, promote local and community-based ag, store more carbon, restore/expand habitat complexes and corridors, and accelerate forest, grassland, and wetland restoration. For every priority action, there is a grid in the appendix with specific action steps related to each one. Being able to measure those goals are being worked on as well, trying to measure accurately.
  - The state plays a key role. Each action team looked at the priority action to move forward. This was forwarded to the Governor for inclusion in his budget proposal: Soil Health Equipment Grants ($4M), Bioincentive Program ($2.5M), AgBMP Revolving Loan Program ($2M with $3M per fiscal year thereafter), Mitigation and Resiliency for RIM Easements ($7.1M and $480,000 thereafter), Private Lands Grassland/Working Land Restoration Easements ($22M, with $400,000 thereafter), and Habitat Enhancement Landscape Program ($9M, with $1M thereafter). Some of these actions have multiple benefits as well, secondary ones.
  - The MPCA does put out a report on greenhouse gas emissions, tracking progress over time. One was released recently. It revealed that there have been some big reductions coming from the transportation industry (dropped like 23 precent). In the forestry arena, they can reflect carbon sequestration in those systems. All the recommendations are for the general fund. There is a need to accelerate in the agricultural world. There is concern about emerald ash borer, and its impact over the next thirty years. We can grow new trees and treat current ones.
- Resilient communities:
  - The vision is for communities across Minnesota to have the resources and support to plan for and implement projects to build a more resilient future for themselves. Air pollution is reduced, especially in communities most affected by it. Also, physical infrastructure, natural systems, and communities are more prepared for climate impacts and can recover form extreme events.
  - Measures of progress: By 2030, one hundred percent of Minnesotans live in communities with plans that identify climate risks and actions to build resiliency. By 2026, at least twenty-five adaption projects that increase community resiliency are fully funded. Achieve a thirty percent overall tree canopy cover in Minnesota communities by 2030 and forty percent by 2050.
  - Priority actions in the next 10-15 years: Work on climate smart communities, like provide technical assistance, maps and tools, as well as deliver necessary funding. Focus on healthy community green spaces and water resources. This includes expanding tree planting and preservation (i.e., thinking about the ash trees and the emerald ash borer issues), plant beneficial veg on urban land. Additionally protect and improve water quality and quantity. Another action is building resilient buildings, infrastructure, and businesses. This would include expanding green infrastructure and stormwater management. There would also be a need for funds for resilient infrastructure and critical facilities.
  - Governor recommendations: Resilient Communities Grants and Technical Assistance ($174M and $1.1M thereafter), Tribal Governments Technical Assistance ($4M and $2M thereafter), GreenSteps Cities and Tribes Program ($380,000 and $190,000 thereafter), Community ReLeaf Program ($15.2M, with $402,000 thereafter), and Strengthen Minnesota Homes ($32.5M and $1.2M thereafter).
- What's next:
  - FY 2024-25 Governor's Budget Recommendations/Minnesota Management and Budget (MMB) (mn.gov)

- Drive budget and policy development
- Measure and report progress
- Priorities for guiding action: impact, equity, economy, and health/environment.

Discussion:

- Paul Gardner: I am relieved to hear there are plans for us to move forward, and ones that have secondary benefits. The one-time cash infusion is exciting. It would be important to track where the CWFs intersect to help make sure the public can see that connection.
- Rich Biske: This is exciting. So many of these areas overlap with what the Council has been talking about. The multiple benefits and how they are implemented, will provide a lot of information moving forward too. Additionally, it was great to see equity in so much of the plans. *Answer:* Equity is woven into all the chapters. Climate change is impacting all Minnesotans, but it is affecting some Minnesotans more than others and the individual and community level. Low income individuals can suffer heat island stress (low-income housing, intercity living, with no air conditioning). They don't have access to community assets that would provide help. We are thinking about prioritizing resiliency funding to those communities and individuals. There has been some funding strictly for small communities. This is an area where the stakeholders are being especially helpful, for maximum impact and helping those who need it the most.
- Peter Schwagerl: Regarding the working lands, there were some very ambitious goals. It is exciting to see the investments in the Governor's budget. We are hitting some key programs. However, the Council should be aware of the investment that will be needed over the next several years, to make the transition happen. For example, on our farm, we are thinking of moving to a strip till system. This would help in this area, but to make that switch is $250,000-$300,000. This is just on a small farm. So, thinking about that across the farms in Minnesota, so it would be a massive investment. Perhaps, there is a need for greater investments. *Response:* There is federal funding and other state funding as well, so it all comes together. There is a limit to what can be used as once as well. It is exciting funding, to get going, and ramp up. There is a feeling that the future will need more attention to this area of funding.
- Rich Biske: Regarding fertilizer, manure, and greenhouse gases, is that a target reduction? Are there action steps articulated? *Answer from Jeff Berg, Minnesota Department of Agriculture (MDA):* No there are no specific targets. As a state, we need to work on this area, but we are taking action with the Nutrient Reduction Strategy and Nitrate Reduction Plan.

Policy Committee Meeting Summary
Clean Water Council (Council)
March 24, 2023, 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.

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Regular Business

- Introductions
- Motion to approve the March 24 meeting agenda and December 19 meeting minutes, moved by John Barten and seconded by Victoria Reinhardt. Motion approved by vote unanimously *(at Webex 01:16:45)*.
- Chair update
- Staff update
  - Legislative Update
    - Budget targets were set on Tuesday, which eventually will be followed by omnibus bills. Targets include $240 million for lead pipe removal. Additionally, the property tax division of the House Taxes Committee recommends support for Soil and Water Conservation Districts (SWCDs). It is the amount the Legislature took out of the Clean Water Funds (CWFs) for SWCDs in the past biennia, although the SWCDs requested $44 million ($20 million over previous request).
    - Regarding the Legacy Bill, there are no current concerns in the House. The Senate Legacy Committee will take up the bill on April 4.

Water Storage, by Rita Weaver, P.E., Board of Water and Soil Resources (BWSR) Chief Engineer/State Drainage Engineer *(Webex 00:17:00)*

- There are a few examples of water storage that may come to mind, when thinking about changing the landscape. In the southern part of the state, what comes to mind typically are more wetland restorations and smaller storage areas for flood reduction, habitat, and water quality treatment. In northern Minnesota, they may think more about larger areas of land, with the main goal of flood reduction, and provide habitat or water quality treatment. There are also extremes like dams. Additional, people do not think about healthy soil for storing water.
- For construction, they look at the overall goals and think about what problems to solve: flooding, water quality, erosion, as well as improve habitat. They often use a runoff hydrograph, to see how fast the water moves (usually over a storm event). They want to pay attention to the peak, as it is associated with flooding, and to the volume, which is associated with sustained flows. Unfortunately, it takes a lot of practices to make a difference. infiltration will have an impact. Planning and design is important, but it does matter where practices go in the watershed. For structural practices one project can make a big difference, but it will only change the peak flow and not the water volume.
- Other factors in picking a project:
  - Permitting for dams, wetlands, public waters, etc.
  - Public acceptance like safety or aesthetics.
  - Landowner acceptance of a lower production, maintenance, or equipment.
  - Site restrictions like the soils, topography, or site history.
  - The funding restrictions may also dictate the type of project.
- Water storage goals in 1W1P:
  - Goals are often expressed in runoff volume retained/captured (acre-feet) or depth or runoff retained/captured (inches).
  - Using depth (inches) allows us to better visualize the storage for each storm event, but it is harder to calculate the benefits.
  - Example storage goal requirements:

    - Buffalo-Red River 10-year goal: 42,750 acre-feet (approx. 0.45 inches runoff volume). Long-term goal: 171,000 acre-feet (approx. 1.79 inches runoff volume).
    - Shell Rock/Winnebago 10-year goal: 6,247 acre-feet. Long-term goal: reduce peak stream flows by 15 percent in Shell Rock River Watershed and 20 percent in the Winnebago River Watershed.
    - In a few plans the goal is expressed by selecting an average flow rate goal. Such as the Pine River: Maintain an average discharge of 306,945 acre-feet at the outlet of the Pine River Watershed.
- Tracking Water Storage Benefits
    - Structural storage areas (i.e., ponds, wetlands, reservoirs, WASCOBs, etc.) are easy to track. The volume held by each storage feature can be expressed as "acre-feet" storage.
    - Non-structural storage, or storage in our soil, is more difficult to measure. We have average values, but actual water retained is very site specific, and depends on weather and consistency of implementation.
- Current water storage programs:
    - Soil health: Competitive CWF Soil Health Program and the Soil Health Cost Share Program
    - Water quality and storage pilot program: One million each year in FY22-23. Additionally, $17 million in the Governor's budget, with $15 million in Senate/House bonding bills.
        - For FY22: Seven total applications for $3.8 million ask. There were two applications that were ineligible (did not include hydrographs), so three projects were chosen to be funded, with a total award of $843,851. In the statute language, the program is to control water volume rates to protect infrastructure, improve water quality and related to public benefits, and mitigate climate change impacts. They need to prioritize the Minnesota River and lower Mississippi River basins.
        - The project or practice must result in a reduction in peak flow rates and/or volumes. The applicant must show how the project improves flooding concerns, water quality issues, or addresses vulnerabilities to climate change. There needs to be a feasibility study because planning must be done. The project must have a 25-year lifespan, and a maintenance plan.
        - Examples: Lake Washington Patterson Watershed (79.75), Custer 7 and Sodus 32 Storage Projects (74.75), and Custer 10 floodwater retention (74.25).
    - They hope for a budget increase for FY24-25 but will wait to see funding amount before looking at any program changes. They will look at how to incorporate storage features that are constructed as part of the drainage project (as defined by 103E.101). Additionally, they are looking at water reuse/drainage water recycling projects. They are in coordination with other state that are implementing reuse, as well as with other agencies interested in reuse. They have a desktop analysis on what makes a good reuse area. They have a potential exhibition site in Dakota County.

Questions/Comments:

- John Barten: In the metro area, by building these stormwater detention ponds to maintain the peak flow at predevelopment levels, there is more water runoff because of the additional surface. So, water is stored upstream and the same thing happens. How do you factor it into the modeling and calculations? *Answer:* Ideally, everything that is tributary should be considered. By the time you get to the size of the Minnesota River, you have such a long peak and such a long retention time, that the issue you are mentioning is not as big of a concern. However, smaller than that, absolutely. There is a lot to think about regarding lengthening the hygrograph.
- Peter Schwagerl: Who is trying to give data to make the decisions to allocate resources for maximum impact? *Answer:* Some 1W1P have better data. Anywhere you do soil health practices work is helpful.
- Jason Moeckel: Anytime we can get active streams to reconnect to a floodplain, it is a tremendous way to help manage the energy.
- Rich Biske: How do the Minnesota Department of Natural Resources (DNR) wetlands fit into the storage within a watershed? How can the DNR be a part of this with the lands they manage? *Answer from Jason Moeckel, DNR:* I don't have an answer for you right now. DNR participates in 1W1P.
- Rich Biske: How is cost-benefit factored in? *Answer:* Reducing damage downstream is factored in. It is a separate issue and gray area.
- Rich Biske: If given funds, could you leverage federal funds? *Answer:* Yes. We did apply for CRPP funding. We applied last year unsuccessfully but got good feedback to apply this year.

Topics for the next three months *(Webex 01:18:00)*

- The meeting packet include the 2023 Council Meeting Topic Suggestions document. There will be about seven new Council members, likely in June.

Discussion:

- Rich Biske: I would be comfortable with a June or July break when we have new members. We can refresh future agendas then.
  - Kelly Gribauval-Hite: I would agree with Rich.
  - Victoria Reinhardt: I would agree as well. Take July or August off.
  - Rich Biske: Let's leaving June open to review the Legislative session.
- Marcie Weinandt: Let's discuss content for our upcoming field tour?
  - John Barten: A presentation on retention ponds, including ongoing research of their efficiency.
  - Rich Biske: MPCA's community resilience work. There is a tie with stormwater and watershed resilience.
  - Paul Gardner: Would you like to have more on carp? *Response from John Barten:* Minnesota Aquatic Invasive Species Research Center (MAISRC) is putting together a summary of the work and breakout sessions from the conference. It could be at the May or June meeting.
  - Rich Biske: Placement of solar fields, and placement of DWSMAs, which would take land out of production in sensitive areas. *Response from Margaret Wagner, Minnesota Department of Agriculture (MDA):* This is something they are working on with the Minnesota Department of Health (MDH), and the Great Plains Institute. There are still challenges but there is interest. The struggle is finding the right locations.
- Does the Policy Committee want to have a deadline on policy recommendations approved by the full Council?
  - *Answer from Glenn Skuta, MPCA:* I think it is in the fall. It fluctuates depending on the administration.
  - *Response from Paul Gardner:* It might be good to reach out to the state agencies and Governor's Office.
  - *Victoria Reinhardt:* Good idea.
  - *Rich Biske:* The intent is to have any updates to the platform to get to the agencies for a timely manner.
  - *Paul Gardner:* There is a monthly call to the Governor's Office, so we can connect on that item.

Support for Groundwater Legislation? *(Webex 01:54:00)*

- The past presentations to this committee did a good job revealing this work. Should Paul draft a letter for the full Council's consideration to support DNR's update on sustainability standard for groundwater withdrawals.
- John Barten: Would it be too late to bring it to the full Council for review? *Answer from Paul:* Too late. It may be part of an omnibus on Monday. Committees like to have public comment in one meeting shortly thereafter.
- John Barten: Under a time constraint, has the Policy Committee sent a letter without full Council approval? *Answer from Victoria Reinhardt:* I think we have always had the timing to have it go through the full Council. I think we would be pushing it if it came from the committee only. *Response:* It could still be sent as soon as possible. It could be sent out to the full Council still before a meeting, requesting feedback, to be able to get it out quicker. Not sure on the rules though. Could Paul check this out for us?
- Jason Moeckel, DNR: I will share the concerns we have heard from irrigation associations and their testimony. It has to do with the ecosystem harm definition. They are looking for additional language that gets at the permanency of an effect. Clarity and accountability are what they are looking for. We wanted to make sure the Council was informed on this, because of the number of organizations in the Council, it is an important stakeholder group to connect with.
- John Barten: We could send a general clarification – not to support a specific bill, but to support a concept.
- Rich Biske: Would the Council support more clarity around groundwater protections, without speaking to the bill specifically? Response from Victoria Reinhardt: I think Paul does a good job wording things.
- Paul Gardner: In review of the Council's Bylaws, this would fall within the "speaking on behalf of the Council."
- Rick Biske: I am reluctant to take any action without the full Council's approval.
- Peter Schwagerl: I agree with Rich and Victoria. This may be something we return to later, to clarify our stance, with full Council approval. I don't think it is worth it to jump in right now.
- Rich Biske: Perhaps the Council can add something around groundwater protection in our platform to support some of the goals in the updated plan. We can return to this topic at a future meeting.

Adjournment *(Webex 03:22:51)*

Policy Committee Meeting Summary
Clean Water Council (Council)
April 28, 2023, 9:30 a.m. to 12:00 p.m.

Committee Members present: John Barten, Rich Biske (Chair), Kelly Gribauval-Hite, Victoria Reinhardt (Vice Chair), and Peter Schwagerl.
Members absent: Raj Rajan, Jordan Vandal, Marcie Weinandt, Marcie Weinandt
Others present: Annie Felix-Gerth (BWSR), Justin Hanson (BWSR), Glenn Skuta (MPCA), Jeff Berg (MDA), Jen Kader (Met Council), Reid Christiansen (MDA), Brian Martinson (Association of MN Counties), Carly Griffith (MN Center for Environmental Advocacy), Jamie Beyer (Bois de Sioux Watershed District), Jan Voit (Minnesota Watersheds), Lori Cox, Molly Jansen (Nature Conservancy)

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Regular Business
- Introductions
- Unable to meet a quorum to approve the April 28 meeting agenda or past meeting summaries.
- Staff update
  - Legislative Update: In the House, all the finance bills have been passed off the floor and the Senate is close. There is about $12 million annually in funding for Soil and Water Conservation Districts (SWCDs) in a Senate bill right now for FY24-25, and every year going forward as base funding). The House has $22 million annually, but as a one-time funding for FY24-25, with $14 million annually going forward. The Legacy conference committee met this week to walk through the bill.
  - State agencies have expressed some concerns in an official letter to the Legacy conference committee. This includes the change to the Council submitting annual recommendations.

Drainage Work Group Topics, by Tom Gile, Board of Water and Soil Resources (BWSR) *(Webex 00:17:00)*
- The Drainage Work Group (DWG) is authorized through Minn. Stat. 103B.101 for the BWSR to work with drainage stakeholder to foster mutual understanding and provide recommendations for drainage system management and related to water management. Not all stakeholders agree.
- There is currently a bill in the House on a drainage registry portal; it is not a DWG recommendation, but the DWG discussed it. Regarding "outlet adequacy," there is ongoing DWG subcommittee discussions to refine the understanding and framework around this Minn. Stat. 103E concept. Additionally, there is ongoing discussion to better understand "early coordination" on drainage related projects.
- In 1858, Minnesota became a state and passed drainage laws.
- Drainage Authorities are a drainage system's governing body. They administer proceedings and procedures; approve petitions; hold hearings; make findings; issue orders; appoint engineer(s), viewers, and inspector(s); engage or retain attorney(s); and apportion costs. A drainage system means a system of ditch or tile, or both, to drain property, including laterals, improvements, and improvements of outlets, established, and constructed by a drainage authority. Today, drainage authority is typically either counties, joint county boards, or watershed districts. They act as the governing body for a given system. Drainage includes the improvement of a natural waterway used in the construction of a drainage system and any part of a flood control plan proposed by the United States or its agencies in the drainage system. There are also a lot of private tile systems, so you cannot assume because there is a drainage feature in the landscape that it is administered by, or that there is any influence over it, by a drainage authority. It is not all the same, it is not all managed in the same way.
- The drainage authorities: construct and maintain drainage systems; deepen, widen, straighten, or change the channel or bed of a natural waterway that is part of the drainage system or is located at the outlet of a drainage system; extend a drainage system into or through a municipality for a suitable outlet; and construct necessary dikes, dams, and control structures and power appliances, pumps, and pumping machinery as provided by law. They also have the ability to use external sources of funding, based on the benefits of the drainage system for the purposes of wetland preservation or restoration or creation of water quality

improvements or flood control. They may also be used outside of the benefits area but must be within the watershed of the drainage system. For example, in the Red River Valley, flood control is a lot of what they do. They can bring in outside funding to help facilitate things to help with flood control within their water district boundaries.

- Drainage proceedings and procedures include drainage projects and repairs. These follow a procedurally heavy process under Minn. Stat. 103E. When the drainage system is designed there is an assumed hydrologic benefit, the landowner has a right to that drainage. The drainage authority has an obligation to maintain it, on behalf of the landowners in the system. When they are doing that work, they are acting on behalf of the drainage system, the lands around the drainage system are private owned. Drainage can be complicated. All the different projects require different processes. There are a lot of criteria to follow. When working with drainage authority, they are bound by specific procedural steps, and some of them can take a long time.
- Every drainage system is its own system. All costs for constructed "drainage projects" must be apportioned to the benefited property owners in proportion to the monetary benefits for each land unit benefited by the project, as determined by the team of viewers, and approved by the drainage authority (i.e., pro rate based on benefits). The cost of a "repair" anywhere on a drainage system based on benefits of record or can be apportioned to all property contributing runoff to the drainage system based on relative runoff and relative sediment delivery to the drainage system.
- Regarding drainage authority decisions, there are many different hats they must wear. For example, if the watershed district is the drainage authority, or the county is the drainage authority, and act within that for the landowner's drainage system. It requires being very intentional. Not every tool is going to work everywhere.

Questions/Comments:

- John Barten: You showed the statute for environmental considerations. Are there specific limits on environmental conditions, which would preclude the construction of the drainage projects? *Answer:* The answer is it depends. The drainage authority needs to take in the other considerations as well. For example, wetland regulations or flood plain regulations. There is not a clear answer here.
- Rich Biske: How clearly defined is the public benefit? *Answer:* There is not a definition of public benefit within Minn. Stat. 103E. The benefits talked about here is specific to the drainage code.

Where Can the Council Be Most Helpful in Promoting Drainage Water Management? *(Webex 01:18:00)*
Review State Water Plan goal on drainage.

- How would you define an environmental consideration? There have been discussions on water storage goals, which vary on ambition and details. Do those water plans help provide greater clarity on what to consider for environmental impacts on a project? *Glenn Skuta, MPCA:* In terms of Watershed Restoration and Protection Strategies (WRAPS), they bring the science into the conversation. Groups working together look at what greater impacts may be needed and put in the local water plan. This is looking at everything water quality related like aquatic life etc. Altered hydrology is a big issue. This is how we have changed the landscape by land use in general (surface usage, drain tile, etc.), even climate change. There are goals and 10-year targets. There are watersheds that have set annual flow reduction goals, two-year peak reduction goals, and others. Some watersheds have chosen not to set goals related to flow but have focused more on increasing water storage instead. There is a full sweep of best management practices (BMPs) to help meet these goals.
- There is a One Watershed One Plan (1W1P) handout that includes the water storage goals of different comprehensive watershed management plans. Many of the goals are ambitious.

Discussion:

- Paul Gardner: There is talk about policy versus funding, and even persuasion for landowners to try something different. Is it better to try to get landowners to start making these changes, having that discussion to start something, is that more impactful? This is trying to find out where the Council's skillset is best used to help nudge people along. Answer from Tom Giles, BWSR: Even considering the WRAPS goals and broader 1W1P goals, it is important to consider the obligations of the drainage authority. Their focus is narrow, it is about the system. So, having these conversations, the drainage authority may not have a lot of a role to play.
- Rich Biske: How do we encourage those folks participating in the 1W1P to make those connections, so they are ready to act along side the drainage authority.

- Justin Hanson, BWSR: The benefits of having Clean Water Funds (CWFs) involved in these drainage projects and drainage authority is the original drainage authorities are right at the table talking holistically about all these things together. It has opened a lot of opportunities to work more collaboratively.
- Rich Biske: Engineers play a big role here. Where are they in training and understanding of these designs and presenting them to the drainage authorities. *Tom Giles, BWSR:* Engineers who support these projects are capable to incorporate these into the projects. It is more about separation of a repair, and if it is within authority to change things. If it is associated with a repair, any cost past what is needed to fix the repair is on the landowner to do that. If you are going to do an improvement to a drainage system, there is another set of requirements to adhere to as well. There is a monetary calculation that takes place. Even time and money to explore a different repair – there are institutional impediments to consider. Costs all count if tied to a drainage project. If the costs exceed benefits, it dies. It is about being intentional, to find the dialog. The engineers are good at finding ways to incorporate water quality benefits, but there are a lot of considerations.
- John Barten: I see acres of tile drainage being placed, and all that water will run into the drainage systems and alter that hydrology more. Is there anything we can do with CWFs that helps manage this water from entering these stream systems and prevent the negative impacts? Is there a way to better manage these tile drainage systems? *Tom Giles, BWSR:* That is the million-dollar question. How do we find the right niche? One of the challenges is that some of the BMPs are suited to upland land management. Also, are there opportunities to add tools to the toolbox for the drainage authority when an opportunity presents itself?
- Rich Biske: Some of these practices have been around for a while. Looking at why they have not adopted them would be good to pinpoint where these decisions are being made. The practices exist, they are not incredibly complicated. How often are these used? *Tom Giles, BWSR:* I don't know. It may depend on having a specific feature, the landowner needs to be willing, it is more of an opportunity that presents itself. There is a lot of procedure to make it part of the drainage system. That is one of the challenges. This is scratching the surface, there will be a need for work and collaboration to get there.
- Paul Gardner: Occasionally statutes and rules need to be redone to promote change. Could water quality elements help create fewer procedural hoops because there is more certainty? Perhaps the Council would like to look at the Minnesota Agricultural Water Quality Certification Program as a potential area to investigate, if something around drainage could be prompted here? There is no draw for those farmers with the current certification process. Perhaps before the next recommendations come out.
    - Rich Biske: We can bring this forward for review.
    - Lori Cox (They are on the Ag Water Certification Advisory Board): The limitation with that program is the tool itself. Nothing is built into the tool to certify a farm, related to drainage or water storage, you cannot integrate it into the program. Unless, you suggest for drainage or water storage, and somehow get that moved into the tool. The tool is there so that it is objective result versus a subjective result.
    - Paul Gardner: I was thinking that was something that would have to be added in. Also, thinking about how far that would really impact in these measurements.
    - Rich Biske: This context within drainage law, the limitation and opportunities will be helpful to continue the conversations in this area. Perhaps looking more at the barriers to this larger implementation of practices. We may be looking at a policy recommendation in the future.

Adjournment *(Webex 02:15:42)*

Gardner, Paul (MPCA)

From: Carly Griffith <cgriffith@mncenter.org>
Sent: Thursday, May 18, 2023 8:00 AM
To: Rich Biske; Barten, John
Cc: Gardner, Paul (MPCA)
Subject: Re: Clean Water Council Policy Committee packet for Friday

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Dear Policy Committee Chairs,

My name is Carly Griffith, I'm the Water Program Director at the Minnesota Center for Environmental Advocacy (MCEA). Thank you for the time on the agenda this Friday for public input, I plan to attend and have some thoughts to share on behalf of MCEA. I also wanted to reach out to summarize my concerns and share research in support of those concerns ahead of Friday's call.

In heavily impaired watersheds like the Minnesota River Basin, which has an 80-90% sediment reduction goal under 2015 MPCA's Sediment Reduction Strategy, I strongly feel that greater attention should be paid to 1.5-2 year flood events, which are the primary driver of near-channel erosion. Schottler et al. (2010) have determined that non-field sources (i.e., near-channel sources) contribute approximately 60-85% of the fine sediment load to the Minnesota River Basin. Therefore, management actions should prioritize fluvial wetland construction--undertaken at a watershed scale to select optimal upper watershed locations--in addition to field management. Hansen et al. (2021) analyzed the Le Sueur watershed in Minnesota and found that near-channel management, in particular fluvial wetlands in optimal locations on river and stream networks (not on an ad hoc project basis), are the most cost-effective watershed management action for budgets over $300,000 per year.

Secondly, until individual drainage project decisions by local drainage authorities *consistently* account for the impact of 1.5-2 year flood discharges, as well as added flow volume over time, Clean Water Fund investments will continue to be undercut by the cumulative impact of drainage projects across impaired watersheds like the Minnesota River Basin. A more comprehensive stream gauge network, especially at key sites below the outlet of major public drainage systems in impaired watersheds, would be a strong data collection tool to "ground truth" hydrological models for individual drainage projects and ensure that they adequately account for more frequent peak flow discharges.

Thank you,
Carly

On Wed, May 17, 2023 at 2:59 PM Gardner, Paul (MPCA) <Paul.Gardner@state.mn.us> wrote:

> Greetings, Policy Committee members, agency/university staff, and interested members of the public.
>
> I am attaching the packet for Friday's 9:30 a.m. meeting. It is by Webex only. We didn't have a quorum last time so we have minutes from several previous meetings attached. Len Kremer from the Minnesota River Collaborative also asked me to pass along some written input on drainage, which is attached. (There is also time on the agenda for public input from others.)

The Webex link is below.

Webex: Upcoming Policy Committee meeting - May 19 (9:30 a.m.)
Meeting number (access code): 2499 398 7504; Password: PUzjp3ixr85
Join by phone: +1-415-655-0003; access code: 2499 398 7504

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https://www.pca.state.mn.us/clean-water-council

https://www.legacy.mn.gov/clean-water-fund

Pronouns: He/Him/His

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CUMULATIVE EFFECT OF AGRICULTURAL LAND USE AND ARTIFICAL DRAINAGE, Minnesota River Basin (10/2/2022 update) Len Kremer

In the last 50 years the hydrology of the Minnesota River watershed has changed dramatically. The mean discharge at Jordon has doubled from 3100 cubic feet per second for the period 1936 through 1977 to 6100 cfs for the period 1978 through 2007. There has also been a three fold increase in rare and extreme flows. Flow duration curves at Jordon show that frequent channel forming flows have also changed significantly. During the period 1934 through 1949, a discharge of 1000 cfs was exceeded only 5 percent of the time for the period after 1949, 1000 cfs was exceeded more than 20 percent of the time. This change in the hydrology has been shown to be the result of the conversion of agricultural production from small grains and forage crops to soybeans and the more intense artifical drainage associated with the conversion.

The dramatic change in the hydrology of the watershed has had a significant effect on the water quality in the Minnesota River and its tributaries. Water quality data collected in the Minnesota River watershed indicates that the river and its tributaries have excessive sediment and phosphorus loads, elevated nutrient concentrations, high bacteria counts and other contaminants. The high bacteria count, principally caused by failing septic systems and the excessive sediment and nutrient loads, caused by increased runoff are of particular concern. According to a Minnesota Pollution Control Agency 2017 study, none of the 14 segments of the Minnesota River met the water quality standard for aquatic life in 2017, and only six of the 14 met the standard for aquatic recreation. Recent studies have determined that the principal causes of the increased runoff and sediment loading has been due to the cumulative effect of artificial drainage associated with the land use changes in the watershed.

Based on MPCA data sediment loads from the Minnesota River watershed to the Mississippi River have more than doubled over the period 1980 through 2005 from approximately 0.6 million tons per year to approximately 1.2 million tons per year. According to research conducted by the MPCA as part

of the the South Metro TSS TMDL, Lake Pepin is expected to be filled with sediment in 340 years at the current deposition rate. The MPCA research indicated that it would have taken 4000 years at the 1970's sediment deposition rate. The increased sediment loads have been shown to be caused principally by severe bank erosion due to the longer duration of channel forming flows. Because of the increased sediment loads barge traffic on the upper reaches of the Mississippi have had to reduce the size of their tow which has increased river transportation costs.

There have been suggestions that these increases in runoff and river flows have been due to increased precipitation, but that assertion has been proven to be insignificant by many investigations including the M PCA, Belmont, Schottler and many others. Their research has shown that the change in water yield, the percentage of rainfall that runs off and is tributary to the river has nearly tripled from 7 percent in the 1930's to over 20 percent at the present time.

Recent studies by Schottler and Kelly of the effects of artificial drainage projects have clearly demonstrated that each project has impacts on the watershed hydrology and that the significant increase in Minnesota River flow has been caused by the cumulative effect of those projects. The increased river flow has had a devastating effect on both the magnitude and duration of flooding, the extent of riverbank erosion, downstream water quality, aquatic life and downstream aquatic recreation. Recently, extensive riverbank riprapping projects have been completed by the City of Mankato to stop erosion of the banks of the river and protect municipal infrastructure and by the City of Savage to protect a future city park from riverbank erosion.

The drainage coefficient most frequently used for the design of improvements to agricultural drain tile systems in the Minnesota River watershed is 0.5 inches of subsurface runoff versus historical agriculture drainage of less than about 0.3 inches of subsurface runoff (in a 24-hour period). The current recommendation is typically about double the historic drain tile system capacity and results in increased peak discharge and runoff volume from the tile system which closely correlates with the increased mean discharge for the Minnesota River.

The change in subsurface runoff standards causes the runoff to occur faster and results in higher sustained channel forming flows downstream. Extensive research conducted by the MPCA as part of the SedIment *Reduction Strategy for the Minnesota River* has shown that the volume of sediment due to erosion from frequent channel forming events, 1.5 -2 year events, is much greater than the volume of sediment from infrequent events. Therefore, the MPCA's Sediment Reduction Strategy focuses on reductions in the both the magnitude and the duration of flow resulting from a two-year event.

Developed communities throughout the watershed have determined that flood control efforts will be needed to protect infrastructure and development from increased river flows. Increased river flows have created a need for reinforcement of muncipal flood control projects constructed in the past in order to provide continued protection. In addition, riverbank erosion has caused the destruction of public infrastructure and private residential properties and the sedimentation that results from the bank erosion has impeded downstream commercial riverborne shipping and recreational boating, increased sediment deposition in commerical and recreational marinas and destroyed floodplain lakes adjacent to the river. Many once successful agricultural production facilities in the vicinity of the river are currently subject to frequent crop losses. All of these impacts have been principally due to the effects of the change in upstream land use and more intense artificial drainage.