

Drainage Work Group (DWG) Meeting

October 9, 2025

Following the welcome and introductions, Tom Gile, Board of Water and Soil Resources (BWSR) gave an overview of the agenda. Information was provided about the following drainage-related events.

- MADI fall meeting – scheduled for September 10 - 11 in St. Cloud
- Minnesota Watersheds Drainage Workshop – December 4 in Nisswa

Replumbing Minnesota's Landscape and Petition to MPCA

Jay Eidsness, attorney for MCEA and Andrew Hillman, Water Resource Specialist for MCEA gave a PowerPoint presentation regarding the Replumbing Minnesota's Landscape report and their petition for rulemaking to the MPCA.

Points made in the presentation:

- Intensified subsurface drainage since about 1976 has increased river flows beyond precipitation trends, which were linked to cropping changes and expanded tiling.
- Heavily drained watersheds (LeSueur River was given as an example) show about a 50% higher yield, creating flashier rivers, more sediment, erosion, and rising infrastructure costs, including the partial failure of the Rapidan Dam.
- In the Greater Blue Earth River Basin there are 168 impairments. Altered hydrology is a primary stressor.
- The state strategy calls for tile water management on three million acres, while less than 35,000 acres have implemented tile water management.
- Public systems (Fairmont and Mankato were given as examples) face nitrate spikes tied to tile drainage.
- Solutions: saturated buffers, restored/constructed wetlands, two-stage ditches, and drainage water management.
- Cost-benefit analysis in drainage projects overlook cumulative downstream impacts.
- MCEA recommends stronger regulation on tile drainage projects paired with voluntary programs.
- MCEA and partners petitioned MPCA to start rulemaking for a general drainage permit under existing statutory authority. This is outside the jurisdiction of the DWG.
- The model proposed by MCEA is an MS4 style permit, that would be standards-based. Drainage authorities would be the permittees. The process could also be similar to the Red River Basin model.
- MCEA's intent is to require permits for new drainage systems and drainage improvement projects. Repairs are excluded. Laterals may be covered depending on how MPCA proceeds with the permit requirements.
- MCEA believes that the permitting process should set goals and provide local flexibility in BMP selection. Local plans similar to Storm Water Pollution Prevention Plans (SWPPP) would specify BMPs to align with 1W1P and WRAPS priorities.
- MCEA does not believe there should be end-of-pipe monitoring or farm-level enforcement.
- MPCA's response is due in late October.

Stakeholder Concerns

- Drainage authorities are already required to have SWPPPs in project plans.
 - MCEA's response: They are not asking that SWPPPs be required but are suggesting that as a model MPCA could follow.
- MS4 permits are already required. Are you looking to change water quality parameters that may come from several miles away?

- MCEA response: MS4 could be considered as a model for the permit process. The focus would be on near-project BMPs, not upland practices like cover crops.
- Why is MCEA suggesting a new layer of regulation instead of incentivizing or financial awards?
 - MCEA response: Voluntary efforts have been insufficient to make improvements in water quality. Questions like this get into a permit structure that MPCA has not yet initiated.
- This is a localized issue (Minnesota River) that is considering statewide impacts when partnerships already exist. The petition is an attack on drainage. MCEA is acting like this is no big deal. There are other ways that could be pursued.
 - MCEA response: We believe this approach is needed. We want to make sure local experts have local control. One size fits all is not appropriate.
- The presentation states that if we start to account for downstream impacts, that will better facilitate drainage. Cost-benefit analysis is already done for drainage projects.
 - MCEA response: The replumbing report outlines a number of policy suggestions. MCEA is trying to get the cost-benefit analysis to include downstream costs.
- If a drainage project creates a benefit downstream, public investment and an investment of public funds is necessary. The goal should be to make agriculture more sustainable. The state made a tremendous investment years ago. Agriculture provides a huge benefit to the state economically. Perhaps it is time for the state to make another investment. From the producer standpoint, the petition is a direct attack on their livelihoods. That is the emotional response to the MCEA petition.
 - There was no response from MCEA.
- The presentation and petition are based on water quality concerns. Aside from some comments about nitrates or nutrient reduction, most of the slides focused on volume and duration of flow. Unless you are calling the water a pollutant, how do you reconcile that part of the ask with the Chapter 115 and Rule 7050?
 - MCEA response: The state already considers altered hydrology as a pollutant. MCEA reads statutes to fall within that. Increased flows cause instream erosion, which causes critical water quality concerns.
- A comment was made about buffers not working well, that MCEA believes the existing system for drainage isn't working, and we need something new.
 - MCEA response: Buffers don't do much for drain tile, not for benefiting the water. The buffer program a great success for surface water.
- Farmers and landowners want to do more to improve their land and water quality. The main barrier is the financial aspect. The concern is that with financial assistance, there will not be enough to go around and an individual landowner will have to figure out a way to pay for the BMPs. Disagree that permit is the way to go. Cost is the heart of the issue.
 - There was no response from MCEA.

The MPCA response is due by late October. If accepted, a full public rulemaking process will begin. Tom will share the PowerPoint presentation.

Multipurpose Drainage Management Grant Program Practices

Tom Gile explained that the purpose of the MDM grant is to fund practices in, on, or adjacent to drainage system that deliver water quality benefits. Other benefits include increased habitat, flood reduction, and reduced maintenance. Money for the program comes from the Clean Water Fund. The change to quarterly batching has significantly increased the funding demand for this program. It is explicit about the practices are eligible under the program. Eligible practices include grade stabilization, grassed waterway, water and sediment control basin, open tile inlet replacement, wetland creation or

restoration, drainage water management plan, structure for water control, saturated buffer, and denitrifying bioreactor.

Discussion was held regarding ideas for additional practices that could be funded through the MDM grant. Suggestions included ditch resloping, two-stage ditches, stream re-meandering, culvert sizing, grade control structures, phosphorus removal systems, and drainage water recycling. A concept to offer perpetual easements on marginal, flood-prone land was also discussed. It was noted that lack of funding, not different practices, is the biggest barrier to practice implementation.

For a new practice to be considered, it should have design standards that provide consistent, defensible water quality outcomes. Ideas for new practices should be sent to Tom.

Disclaimer Language for Federal and State Wetlands - Minnesota Public Drainage Manual

Tom explained that the Clean Water Act Section 404 and WCA rules are changing. In past discussion at the DWG there was agreement to post disclaimers in the MPDM due to ongoing federal and state changes.

Tom drafted and posted the following disclaimer language

- **"NOTE: This section of the manual includes information on Federal Clean Water Act and State Wetland Regulations which are currently undergoing legal changes and the information in this document may not be up to date with proposed administrative or legal changes. Please consult with appropriate program staff or legal counsel to ensure correct processes are being followed under the most current rules or regulations while we consider proposed revisions to this section."**

The language is included in the Administrative and Legal Issues and Engineering and Environmental Considerations of the MDM. The MDM can be found at this [link](#). Suggested language changes should be sent to Tom.

Disclaimer for Outlet Adequacy Technical Report

Tom will be posting the Outlet Adequacy Technical Report on the BWSR website. The following disclaimer will also be posted.

- This document was developed through a technical subgroup of the DWG and presented to the full DWG for consideration. This document is not a formal DWG product and lacks consensus of the full DWG.

Topics

Tom reviewed the *Prioritized Discussion and Information Topics* chosen by the DWG in July. The majority of the topics have been covered during the year.

Following the August DWG meeting, representatives of the Izaak Walton League, MCEA, Minnesota Watersheds, AMC, and Corn Growers met to discuss notice modernization. At this point, there is disagreement to move forward. He is not optimistic that this topic will come back to the DWG. He will reach out to the group to schedule another meeting.

Road crossings and the nutrient reduction strategy update as it relates to drainage were new suggested topics.

Next Meeting

The next meeting is scheduled for Thursday, November 6 at 11:00 a.m. in St. Cloud. It may be held virtually.

Meeting notes by Jan Voit



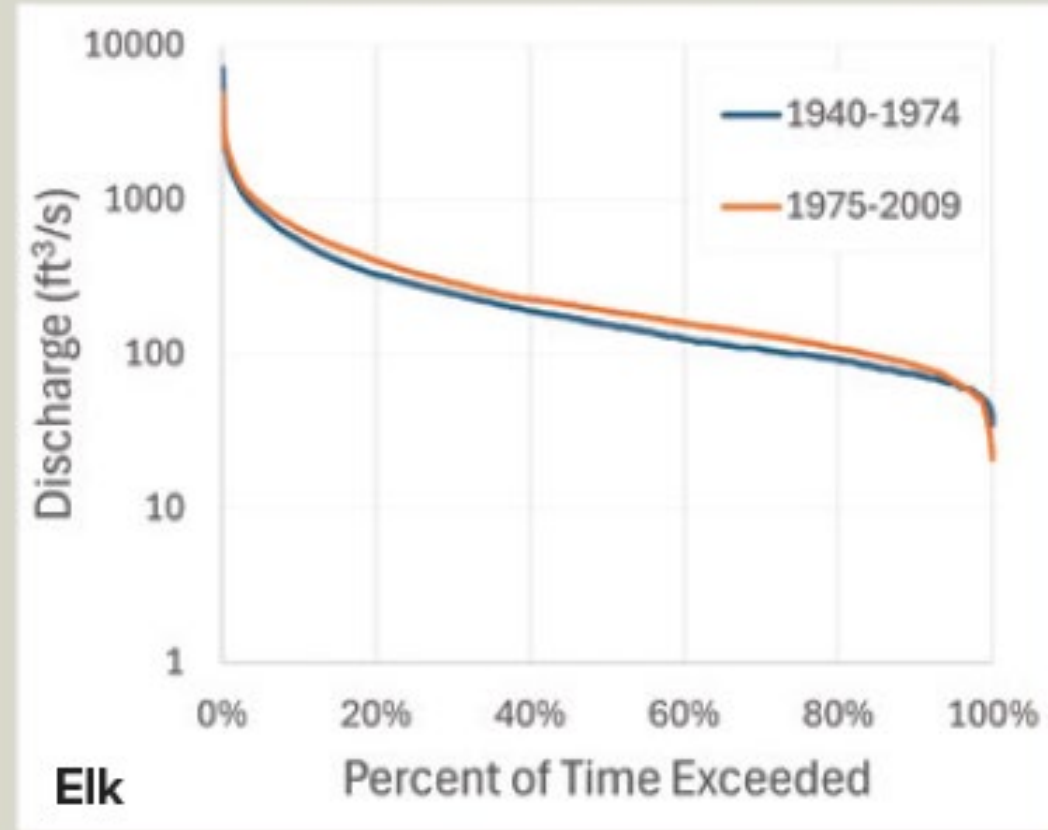
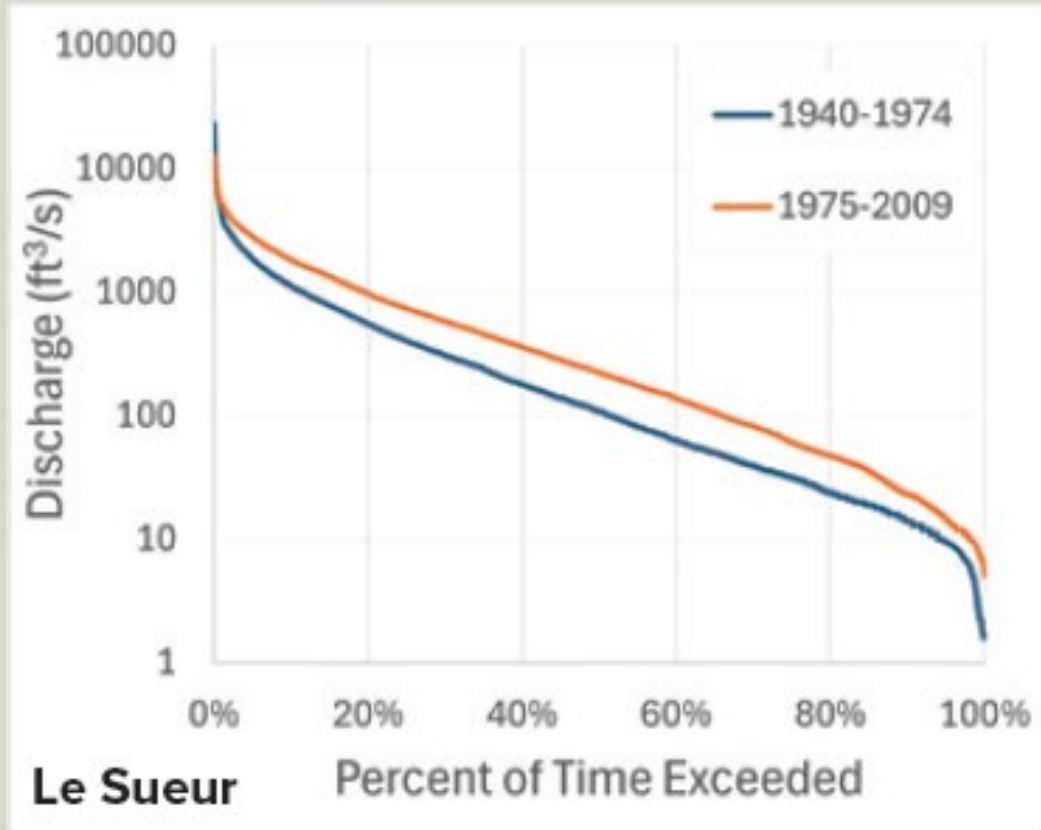
Replumbing Minnesota's Landscape

How Agricultural Drainage Alters Rivers and Degrades Water Quality

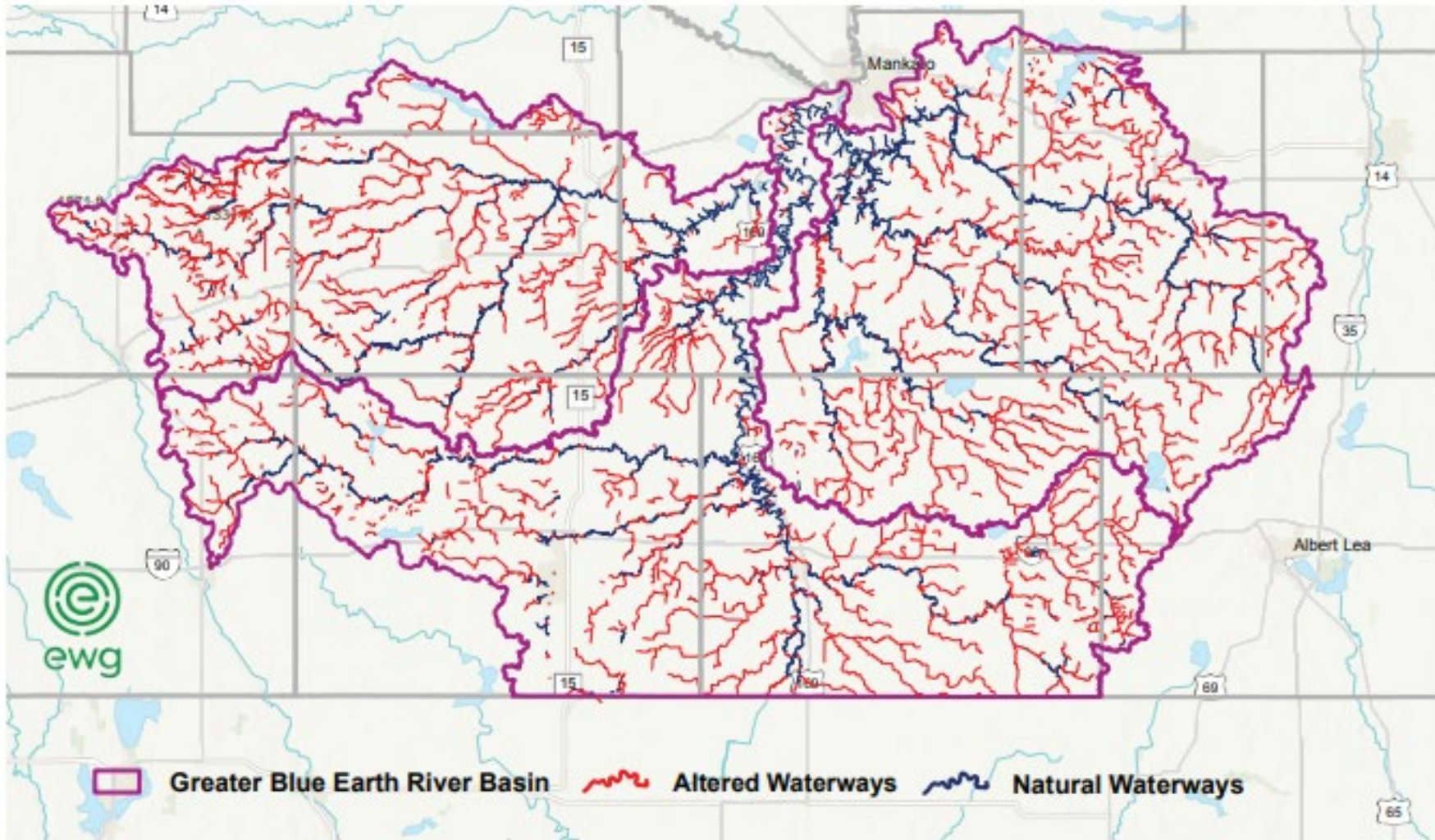
Drainage Work Group

October 9, 2025

More water over time

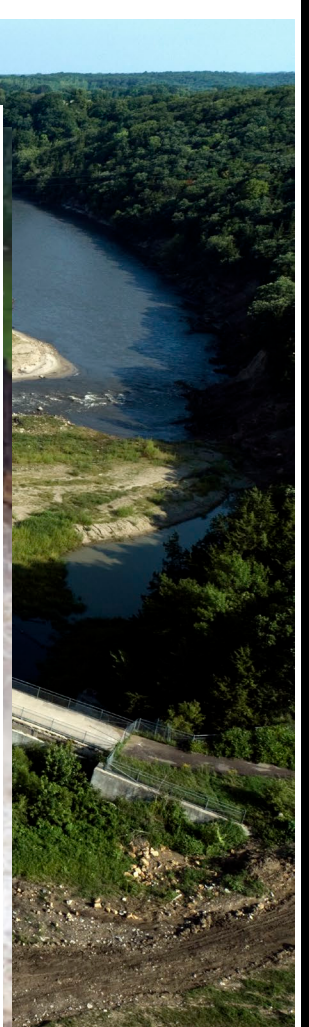


Flow duration curves allow us to compare the full range of flows for any two time periods. These plots show that the entire range of flows has increased in magnitude (i.e., the entire curve shifted up) for the 1975-2009 time period in the watershed that has been extensively tiled (Le Sueur, shown at left) much more dramatically than the watershed that has minimal tiling (Elk, shown at right).



Altered Watercourses in the Greater Blue Earth River Basin

An "altered watercourse" is defined as any stream whose habitat has been compromised through hydrological alteration. This includes artificially constructed ditches as well as natural streams and rivers whose channels are visibly modified.



Nutrient Reductions Needed

Figure 2-31. TN yields delivered to subbasin outlets, derived from HSPF model results (except cross-hatched watersheds are from SPARROW).

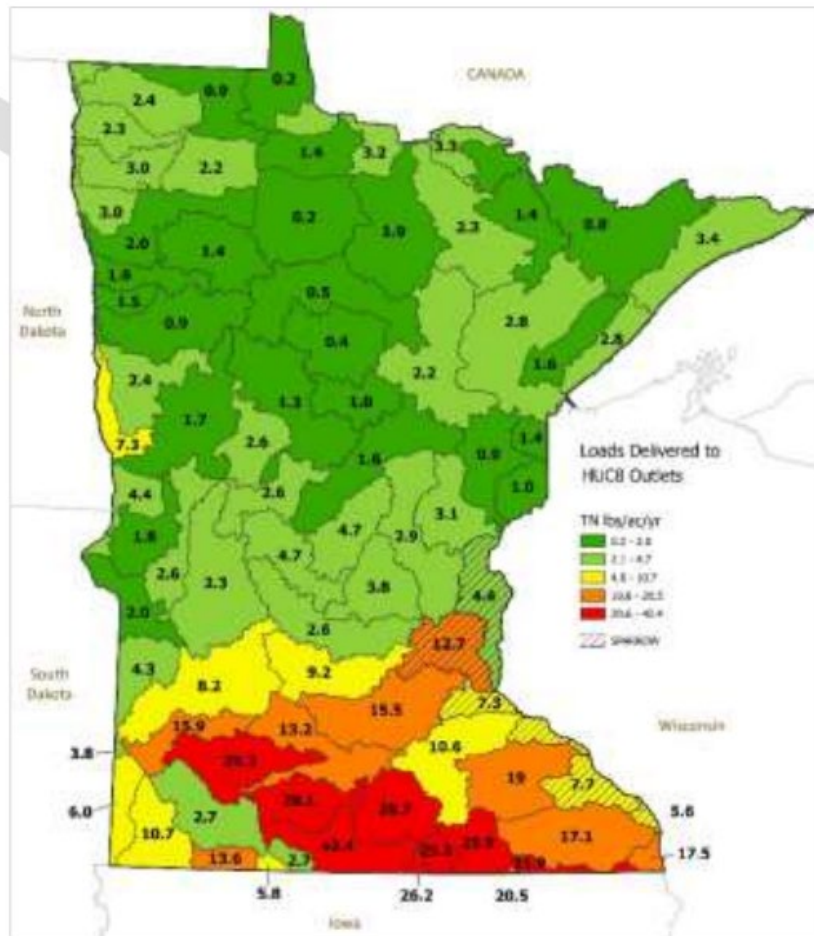
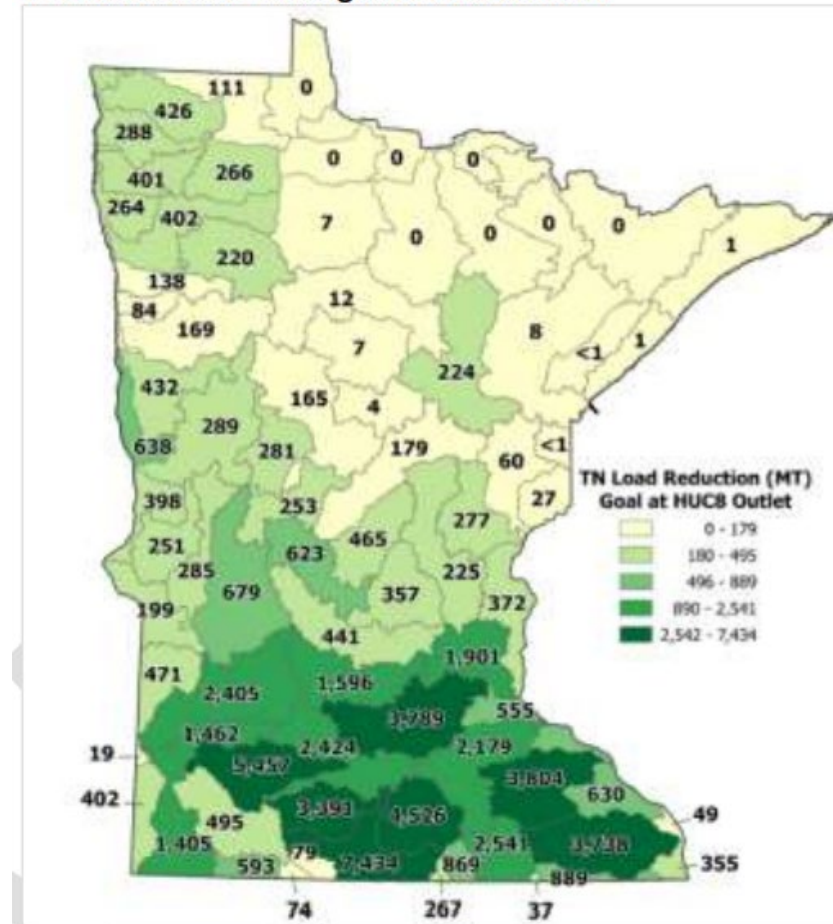


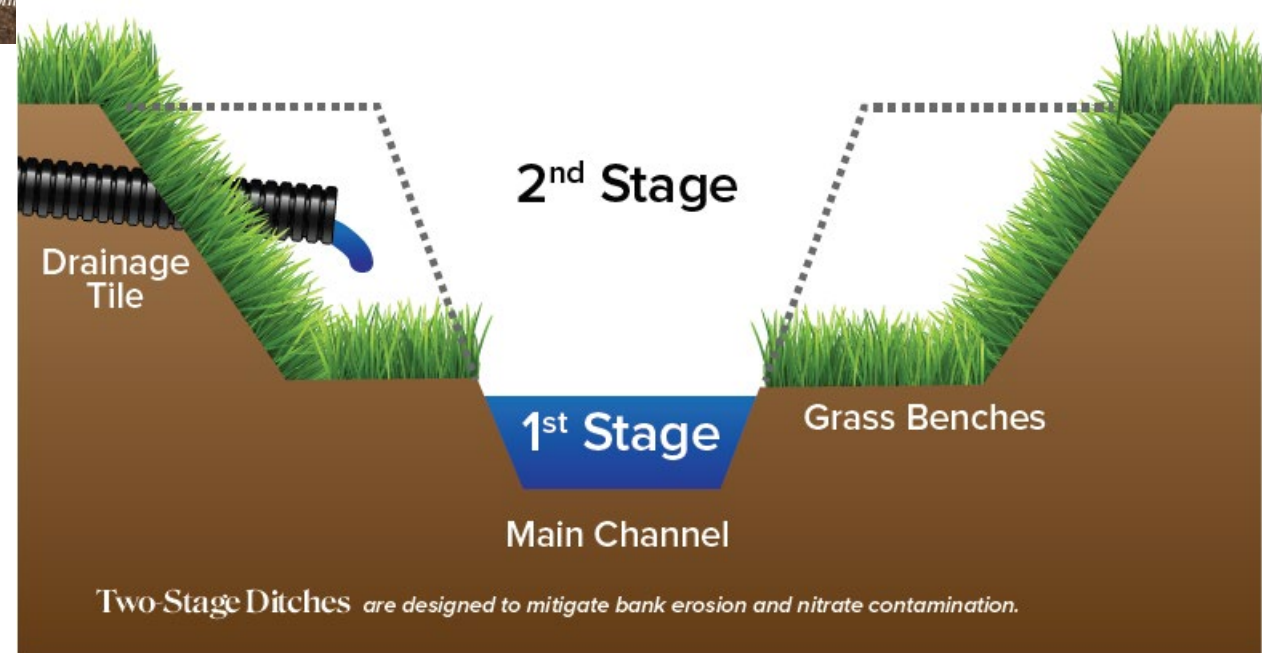
Figure 2-33. Approximate annual HUC-8 watershed TN load reductions (MT/yr) at the watershed outlet needed to meet the final load goals at state lines.





Bioreactor

Two-stage ditch



TO:

Commissioner Katrina Kessler
The Minnesota Pollution Control Agency
520 Lafayette Road N
St. Paul, MN 55155-4194

DATE:

August 28, 2025

**MINNESOTA STATUTE SECTION 14.09 AND MINNESOTA RULE 1400.2500
PETITION FOR RULEMAKING TO THE MINNESOTA POLLUTION CONTROL
AGENCY**

Name and Address: Minnesota Center for Environmental Advocacy, Coalition for a
Clean Minnesota River, CURE, Friends of the Minnesota Valley, Green Crew,
Minnesota Division of the Izaak Walton League of America, Minnesota River
Collaborative, Minnesota Valley Chapter of the Izaak Walton League of America,
and Minnesota Well Owners Organization (collectively "Petitioners")

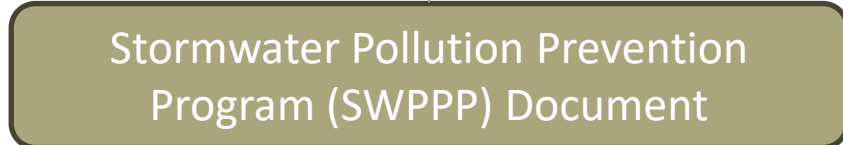
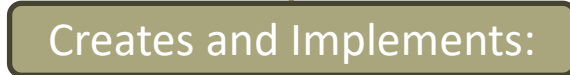
Represented by: Minnesota Center for Environmental Advocacy, 1919 University
Ave. W; Ste. 515, St. Paul, MN 55104



Why the MS4 General Permit?

- **This is just a proposed idea for a permit structure that we presented with the petition**
- **Any actual details of any permit resulting from this process would be the result of a long MPCA rulemaking process, which involves public comment and stakeholder engagement**
- **The MS4 General Permit provides a useful reference when thinking about a meaningful, yet achievable and flexible permitting program.**

MS4 Permit Structure



- **SWPPP**

- Detailed plan on how the permittee will address the goals outlined in the general permit. This document becomes an enforceable part of the permit after MPCA approval



Applicability to Drainage?

- **Drainage Authorities (DAs) would be the permittees**
 - **Counties**
 - **Watershed Districts**
 - **Some counties and watershed districts already are under the MS4 General Permit**
- **MS4 Permits are NOT prescriptive in terms of practices to meet general permit stormwater management goals!**
 - **MS4 Permit outlines stormwater runoff goals**
 - **Up to each permittee to determine what practices should be required, prioritized**
 - **Some practices are better than others depending on the geology, topography.**
 - **Flexible for local context and expertise**
- **Same would be true for drainage. Permit would outline the goals; DAs would have flexibility in what to require and how (subject to MPCA approval).**
 - **Improvements and new projects**

How might this look in practice?

- **Constructed Practices**
 - DAs could require certain constructed BMPs along network
 - Constructed/treatment wetlands
 - Two-stage ditches
 - Increased storage
 - others
- **Public improvement projects could fund private BMP adoption**
 - Drainage Water Management
 - Bioreactors
 - Saturated Buffers
- Each DA would have a lot of flexibility in how it wants to do this
- Process could look similar to what was done in the Red River
- WRAPS and 1W1P as guides
- Practice and standards-based permits are much more amenable to the agricultural context than effluent-based numerical permits

Drainage Work Group
Prioritized Discussion and Information Topics List and Status
 July 2025, Tom Gile, BWSR

Topics with Potential for Consensus Recommendations	Priority	Status
▪ Adequate Outlets - Engineers have begun using the Tech report to improve clarity in OA assessments. - Considering discussions around MN River Assessment idea to help provide a framework for water management that can inform watershed scale goals. -	H/M	DWG Technical subcommittee delivered OA report to DWG late 2023. Need for work may depend on how process is going and use of OA report.
▪ Clarifying and Aligning Notice Requirements DWG identified the following for future work to establish consensus on these items: - Subgroup needs to meet to determine the applicability of expanding notice to a statewide notice framework in the larger effort. - The DWG will consider application of the public notice framework to chapter 103E. - The DWG will bring any consensus recommendations proposing modification of 103E to the legislature.	H	Overarching framework is primarily set. Pending subcommittee discussions next step would be to move forward with drafting chapter revisions to implement.
Drainage Manual Sections related to WCA and 404 need revision. - WCA statute and rule changes drive some need for change - 404/federal guidance and process revisions drive some need for change - Federal position/program seems to fluctuate relatively frequently perhaps adjustments that are less “specific” and more general would be prudent? -	H	
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▪ 103E.067 Ditch Buffer Strip Annual Reporting - Repealed	DONE	Completed and approved.
▪ DNR guidance for public waters permit law and permission in drainage law - Coordinate with DNR for outreach to drainage authorities and their advisors, including when a permit or permission is or isn’t needed - Discuss experience to date with the guidance and concerns - Consider if, or what, DWG can do to address concerns - Some concern on inconsistency in data requested and application	L	DWG input to DNR 2014-2017; guidance published 2-28-18; DNR presented at AMC and MAWD 2018, with stakeholder input. This may be related to info topic below on DNR Reviews
▪ Transfer of drainage authority provision in Sec. 103D.625, Subd. 4 for establishment or improvement of a drainage system Consider how a watershed district might delegate drainage authority to a county or joint county drainage authority, if/where appropriate	L	Recent Supreme Court case may impact ideas for work. Will consult further with impacted folks.

▪ Drainage system Road Crossings - Who pays for road crossing repairs? - Is the statute clear or can it be tweaked to provide additional clarity Potential to remove...	L	This seems to come up from time to time but lacks general momentum to move into formal action.
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Information/Discussion Topics	Priority	Status
▪ Wetland Conservation Act Legislative updates and Rule Making - Update to DWG membership on next steps and opportunities for input. - Regular updates to DWG membership from appropriate staff	H	Interested in high level status update. Rule making is progressing and those interested can participate directly in that process.
▪ DNR Public Waters Definition and Public Waters Inventory - Update to DWG membership on next steps and opportunities for input. - Regular updates to DWG membership from appropriate staff	H	High level updated to consider potential impacts to 103E systems based on update would be of value.
▪ Storage initiative and potential impacts/needs to be addressed in Drainage - Stay informed about implementation planning - Ways to facilitate studies supporting storage - Early Coordination - Connections between this and Multi-Purpose Drainage Management CWF Grants	M	Separate But Related to Adequate Outlet Conversation
▪ CWC, LCCMR and LSOHC priorities and projects related to drainage - Stay informed about these and other potential sources of funding for multipurpose drainage management - Discussion on Multi-Purpose Drainage Management Grant Program	L	Haven't discussed for some time. Further discussion on potential options to improve/increase program applications
▪ DNR Review. - Early Coordination what can this look like? How do we promote it? -	L	Possible feedback from any Drainage Authorities or DNR on how the process has gone?
▪ Drainage management practices for agriculture, flood damage reduction, water quality, and wildlife habitat - Emphasis on hydrology management and water quality practices, including altered hydrology - Stay informed about drainage management practice research, development and implementation, as well as cost-share programs	L	Some Preliminary Conversations have taken place on some ideas for WQ on Drainage systems.
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▪ Separable maintenance in relation to tile drainage systems - Evaluate need to better define reasonably & consistently - Maybe moves to more of an outreach/education piece but can likely remove from "consensus items"	L	No detailed discussion to date. Stay aware and have some discussion.. Maybe Viewer discussion.
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Key Reference Documents		
Smith Partners LCCMR report – “Minnesota Drainage Law Analysis and Evaluation”, August 15, 2011		
“Minnesota Water Sustainability Framework”, January 2011		
BWSR/UMN ENRTF report – “Conservation-Based Approach for Assessing Public Drainage Benefits”, June 2014		
BTSAC Briefing Paper #2 – “Water Management Options for Subsurface Drainage”, April 9, 2012		
BTSAC Briefing Paper #3 – “Water Management Options for Surface Drainage”, September 15, 2014		
“Minnesota Public Drainage Manual”, October 2016		
“Understanding Minnesota Public Drainage Law”, 2002		
“Runoff and Sediment-Based Charge Method”, December 2016, International Water Institute		
BWSR-DWG “Recommendations for Accelerating Public Drainage System Acquisition and Establishment of Buffer Strips and Alternative Practices, February 1, 2018”		