

REPORT TO THE
LEGISLATURE

JANUARY 2023

NPDES/SDS permits, water quality standards, and municipalities

Year 2022 activities to implement water quality standard and classification requirements into National Pollutant Discharge Elimination System/State Disposal System permits held by municipalities.

Legislative charge

This report fulfills the requirement of Minn. Stat. § 115.44, subd. 9, which requires the agency to report on the activities of the previous calendar year to implement standard and classification requirements into National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) permits held by municipalities. This report includes:

- A summary of permits issued or reissued, including any changes to effluent limits due to water quality standards adopted or revised during the previous permit term.
- Highlights of innovative approaches implemented by the agency and municipalities to develop and achieve permit requirements in a cost-effective manner.
- A summary of standards development and water quality rulemaking activities over the previous calendar year, including economic analyses.
- A summary of standards development and water quality rulemaking activities anticipated for the next three years, including economic analyses.
- A process and timeframe for municipalities to provide input to the agency regarding their needs based on information provided.
- A list of anticipated permit initiatives in the next calendar year that may impact municipalities.
- The agency's plan for involving municipalities throughout the planning and decision-making process, including opportunities for input and public comment from municipalities on rulemaking initiatives prior to preparation of Statements of Need and Reasonableness (SONAR).

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Foreword

This report includes a description of activities that occurred during the previous calendar year to implement water quality standard and classification requirements into NPDES/SDS permits held by municipalities

Acronyms

EJ	Environmental Justice
EPA	Environmental Protection Agency
FY	Fiscal Year
LCCMR	Legislative-Citizens Commission on Minnesota Resources
MnDNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
NOC	Notice of Coverage
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PFBA	Perfluorobutyrate
PFHxA	Perfluorohexanoate
PFHxS	Perfluorohexane sulfonate
PFOA	Perfluorooctanoic Acid
PFOS	perfluorooctane sulfonate
RFC	Request for Comments
SONAR	Statement of Need and Reasonableness
SSC	Site-Specific Criteria
SSS	Site-Specific Standards
TSD	Technical Support Document
WQS	Water Quality Standard
WWTP	Wastewater Treatment Plant

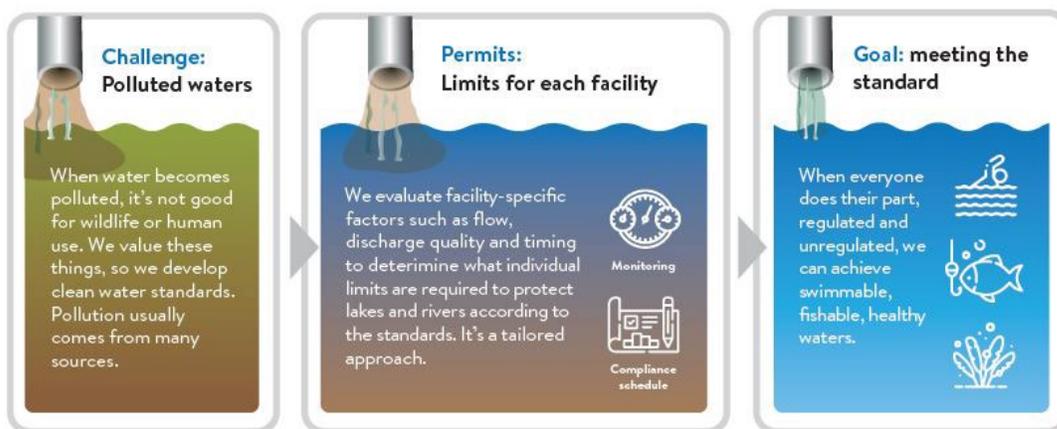
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Municipal wastewater permits, new effluent limits, and innovative approaches

This section includes a summary of permits issued or reissued during the previous calendar year, including any changes to permit limits (i.e. effluent limits) due to Water Quality Standards (WQS) adopted or revised during the previous permit term (Minn. Stat. 115.44, Subd. 9 (1)).

How permits help waters meet standards An implementation of strategies to reach the clean water goal



Permits actions and new limits

In calendar year 2022, 82 municipal NPDES/SDS permits were issued or reissued. Of these permits, two received new effluent limits derived from WQS developed within the previous permit term (5 years). Both, the Rochester Water Resource Recovery Facility and the city of Byron wastewater treatment plant (WWTP), received new total phosphorus limits which were derived from a site-specific WQS designed to protect Lake Zumbro. The Lake Zumbro site-specific WQS was finalized in 2018.

Innovative permitting approaches

This section includes a summary of the innovative permitting approaches implemented to achieve permit requirements in a cost-effective manner (Minn. Stat. 115.44, Subd. 9 (2)).

Variance update

Water quality standard variances: update

For up-to-date information on proposed and granted variances, see our Water Quality Standard Variances website at <https://www.pca.state.mn.us/business-with-us/water-quality-variances>.

Variations to chloride standard

No variations were brought forward for final EPA approval in 2022, but we expect several to be proposed for approval in 2023 (Figure 3). There are approximately twelve FY23 priority permits with chloride variance requests, twelve non-priority permits with chloride requests, and we expect to receive additional requests from dozens more communities as new effluent limits for chloride are identified during the permit reissuance process.

Variations to the mercury standard

The MPCA received, and is evaluating, three municipal variance applications from Minnesota's WQS for mercury. All three permittees are within the Lake Superior Basin; as such, the terms of these variations cannot exceed five years. The communities are:

- City of Grand Marais (MN0020010),
- City of Silver Bay (MN0024899), and
- Western Lake Sewer and Sanitary District WWTP (MN0049786).

These variations will not be brought to EPA for final approval during 2022, but we expect to propose all three for approval in 2023.

At this time we are not expecting additional variance requests for mercury.

New permit language offers flexibility for water quality trading

The cities of Mankato, Hutchinson, and Rochester are leading efforts to improve local water quality through trading. Trades allow for the offsets of pollutant discharges with a best management practices project that enhance water quality through pollution reduction. The MPCA included new trade language in each of their municipal permits to provide additional flexibility in achieving their required phosphorous reductions and encourage the communities to work over multiple permit cycles to develop water quality projects.

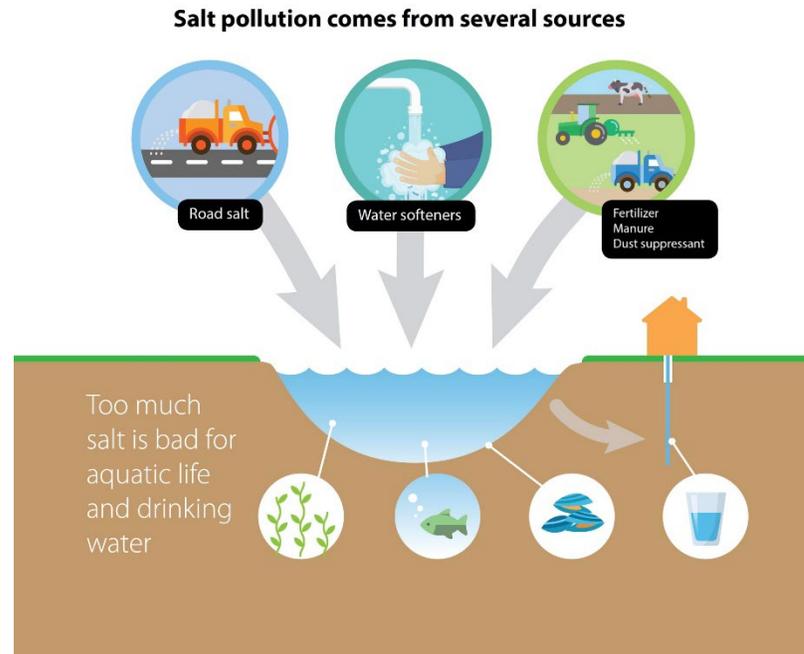


Figure 1

Summary of water quality standards developed over the last calendar year

This section provides a summary of the standards development and water quality rulemaking activities over the previous calendar year and a summary of the anticipated water quality rulemaking activities anticipated for the next three years (Minn. Stat. 115.44, Subd 9, (3), (4), & (6)).

No new WQS were enacted in 2022. However, three WQS projects have begun formal rulemaking and are in active development. One WQS project – the nitrate WQS – was put on hold. Note the [WQS Inventory](#) provides an overview of all new or revised WQS and amendments that are priorities to develop in 2021 - 2023. The inventory is updated with progress made annually in December.

Water quality standards projects in active development

Use designations for some stream reaches

The MPCA plans to amend [Minnesota Rules chapter 7050](#), which establishes designated uses for rivers, streams, and lakes. The proposed amendments affect Class 2 (Aquatic Life) designations. The MPCA has identified waters where the currently designated beneficial use does not accurately reflect an attainable use. It is important that the designated use is correct, because this affects many of the water quality protection and restoration efforts at the MPCA.

MPCA published a Notice of Intent (NOI) to adopt the rulemaking package rules in December 2022, along with a technical support document (TSD) and a statement of need and reasonableness (SONAR) for comment through February 3, 2023. A public hearing will be held in connection with the NOI on Thursday, February 16, 2023. Note that the SONAR includes an economic analysis of the costs and benefits of this rulemaking.

More information is available on the project webpage. <https://www.pca.state.mn.us/get-engaged/use-designations-for-some-stream-reaches>

Standards for sources of drinking water

The MPCA plans to amend drinking water standards and the location of waters where these standards apply ([Minn. R. 7050.0221](#)). The planned amendments affect the Class 1 beneficial use, which protects waters (both surface and groundwater) that are or may be used as a source for domestic consumption. All groundwater and some specific surface waters are designated as having the Class 1 beneficial use.

MPCA published an request for comment in 2021 to provide more detail regarding the revisions under consideration and obtain feedback from the public on these issues. The comments received are available on the rule webpage. MPCA plans to publish a second request for comment and draft technical support document in spring 2023.

More information is available on the project webpage. <https://www.pca.state.mn.us/get-engaged/standards-for-sources-of-drinking-water>

Ammonia water quality standard

MPCA is currently in the process of revising Minnesota's ammonia water quality standards. This revision will update Minnesota's existing WQS for ammonia by incorporating current science as reflected in EPA's national recommended ambient water quality criteria for ammonia.

MPCA published a request for comment for this rulemaking on August 1, 2022, that was open through September 15, 2022. MPCA is currently working to develop the SONAR for this WQS, and anticipates publishing a NOI in spring or summer 2023.

More information is available on the project webpage. <https://www.pca.state.mn.us/get-engaged/ammonia-water-quality-standard>

Nitrate water quality standard placed on hold

MPCA has been working on developing a nitrate aquatic life toxicity water quality standard, but acknowledges that it is essential to have enhanced programs in place that are actively targeting nonpoint sources of nitrogen. As a result, MPCA, in coordination with its partners, is pursuing a holistic, step-wise approach to help reduce nitrogen levels statewide in advance of adopting a new nitrate aquatic life toxicity water quality standard. This includes:

1. Developing a detailed Wastewater Nitrogen Reduction Strategy with targeted actions to reduce nitrogen coming from wastewater treatment plants (WWTPs) to protect drinking water, aquatic life, and meet the Nutrient Reduction Strategy's point source goals.
2. Completing a 10-year revision of the Nutrient Reduction Strategy, updated with enhanced strategies and actions designed to achieve reductions in nonpoint and point sources of nitrogen.

MPCA's technical development work for this WQS has resulted in a draft technical support document that is available for review <https://www.pca.state.mn.us/sites/default/files/wq-s6-13.pdf>.

For further information on the Wastewater Nitrogen Reduction Strategy, please contact [Suzanne Baumann](#), Municipal Wastewater Section Manager. For more information on the revision of the Nutrient Reduction Strategy, please contact [Dave Wall](#), Research Scientist.

Site-specific standards

No site-specific standards (SSS) were developed in 2022. However, several external SSS proposals were received. These include a few for the Class 4B wildlife sulfate standard from Minntac and two for the Class 4A wild rice sulfate standard at Hay Lake (Keetac) and Perch Lake (Cliffs). The MPCA is currently in the process of researching the development of wild rice sulfate SSSs for pools in the Lower Mississippi River.

Site-specific criteria

MPCA plans to release site-specific criteria (SSC) for multiple "forever chemicals" in waters around the East Metro area prior to the end of 2022. These chemicals include Perfluorooctanoic Acid (PFOA), Perfluorobutyrate (PFBA), Perfluorohexane sulfonate (PFHxS), Perfluorohexanoate (PFHxA), and Perfluorobutyrate (PFBA).

Stakeholder engagement and outreach

This section includes a summary of the current and future permit initiatives that may impact municipalities, and the outreach and stakeholder engagement activities (Minn. Stat. 115.44, Subd 9, (5) & (6)).

Quarterly wastewater webinar series

In April 2022, MPCA began a series of quarterly webinars on wastewater topics. The goal of these webinars is to provide permittees with opportunities to learn and ask questions about topics related to

wastewater permitting, permit compliance, or related topics of interest to permittees. Topics covered over the previous calendar year included:

- Public financing for wastewater infrastructure,
- Maintaining service line laterals and sewer extensions,
- How effluent limits are established.

Our next topic will focus on how WWTFs can manage significant industrial users and pretreatment. These webinars are recorded and available for review for those who are unable to attend the event.

MPCA plans to develop a 2023 quarterly series and municipalities will have an opportunity to provide input on the selection of topics for the 2023 quarterly wastewater webinar series.

PFAS working group

MPCA received an appropriation of \$600,000 from the 2021 Legislative Session to study source reduction of PFAS compounds in solid waste and wastewater conduits. The legislation required MPCA to “develop and implement an initiative to reduce sources of PFAS in the environment that are eventually conveyed to municipal wastewater treatment facilities and contained in solid waste that are disposed at solid waste facilities.” This appropriation is established in Laws of Minnesota 2021, 1st Special Session Chapter 6, Article 1, Section 2, Subd. 2(k). To date, MPCA has:

- Worked with the stakeholder advisory group to scope the project,
- Engaged a contractor to accomplish the scope of work, and
- Provided updates to the stakeholder group at benchmarks in the workplan.

The project is on schedule and is projected to be completed at or about May 30, 2023 and will include a toolkit for wastewater and solid waste personnel, as well as strategies to identify sources of PFAS and recommendations for product replacement.

Municipal NPDES Permittee Listening Sessions

MPCA has found value in meeting face-to-face with the staff who operate the WWTFs it permits. In 2016, the agency conducted a massive outreach effort with a large group of staff, over seven cities, meeting with hundreds of people. This year, the MPCA conducted a series of listening sessions, however on a smaller scale. The Municipal Division Director, Municipal Liaison, and respective regional supervisors met with municipal WWTF permittees over the summer and into the fall to learn how what we do can better support their success. We met in the following cities:

- Rochester region
- Detroit Lakes region
- Marshall region
- Brainerd-Metro (hybrid),
- Eveleth region

Overall, MPCA received 97 comments from wastewater operators who attended these events on topics of which:

- 32 percent related to training and certification
- 21 percent related to operations
- 17 percent related to compliance and enforcement
- 13 percent related to permitting issues
- 11 related to environmental concerns
- 6 related to public financing of wastewater construction projects
- 1 percent related to engineering and plan review activities

These comments generally fall into categories of things we can address over the “long-term,” “short term,” or comments that are “good for us to know.” All comments are useful to understand their needs and how we can help municipalities achieve success.

Methods for treatment of mercury

In 2019, the MPCA received \$250,000 from the LCCMR to study low-level mercury treatment at municipal wastewater treatment plants in partnership with University of Minnesota Duluth. The study

Figure 2. MPCA Division Director Nicole Blasing and SE/SW Regional Supervisor Paul Kimman listen to wastewater operators in the southeast region on June 21, 2022.



received a one-year extension because of COVID and is on track to complete in June 2023. The primary conclusion of the study is that low-level mercury treatment is technically possible, but requires advanced tertiary treatment.