

2024 Water Quality Standards Report

New or revised water quality standards (WQS) and amendments in rulemaking:

Group 1: Current and active WQS projects

Status	Topic	Description of progress
In Rulemaking	<p>Revisions to lake eutrophication WQS.</p> <p>Lake aquatic life and recreation Minnesota Pollution Control Agency (state.mn.us)</p>	<p>This revision includes several elements needed to update and modernize the WQS for lakes. They include: 1) revising the northern lake eutrophication standards by adding standards for a shallow lake type, 2) reviewing protections for cold water fish species including lake trout, lake whitefish, and cisco and developing standards where needed, 3) review and designation of cold water lakes, 4) adoption of a Tiered Aquatic Life Use (TALU) framework for lakes, and 5) minor corrections and housekeeping revisions.</p> <p>A Request for Comment (RFC) was published on September 18, 2023, that was open through November 3, 2023. The RFC and comments received are available on the rule webpage. MPCA is working to develop the SONAR and anticipates publishing a Notice of Intent to Adopt Rules (NOI) to adopt rules in 2025.</p> <p>Lead scientist: Will Bouchard</p>
In Rulemaking	Red Lake eutrophication site-specific standards	<p>The Red Lake Nation and MPCA are proposing site-specific eutrophication standards for Upper and Lower Red lakes. These lakes have unique characteristics that cause the lakes to not fit into the existing regional lake eutrophication standards framework. Site-specific standards are needed to address this discrepancy.</p> <p>An RFC was published on April 22, 2024, that was open through June 14, 2024. Comments were considered, and the Technical Support Document (TSD) is being revised before submittal to EPA for approval. The standards are expected to be finalized in 2025.</p> <p>Lead scientist: Will Bouchard</p>

Technical review/Pre-rulemaking development	Revisions to aquatic life and recreation use Classes 2A (cold waters) and 2B (cool and warm waters) and Class 7 (limited resource value waters) .	<p>This revision makes updates and corrections to Class 2 (aquatic life and recreation) and Class 7 (limited resource value waters) beneficial use designations or classifications for streams and lakes. These corrections and updates are mostly related to implementation of the Tiered Aquatic Life Use (TALU) framework, which added new Class 2 beneficial use tiers for aquatic life. In addition, cold (Class 2A) and warm/cool (Class 2Bd and 2B) water use designations will be reviewed and corrected, if necessary, as part of this rulemaking.</p> <p>This is the third set of revisions related to implementation of the TALU framework. It is anticipated that an RFC for this rulemaking will be published in late 2025 or early 2026.</p> <p>Lead scientist: Will Bouchard</p>
In Rulemaking	<p>Revisions to Class 1 (domestic consumption) use designations and associated WQS including PFAS for surface water and groundwater.</p> <p>https://www.pca.state.mn.us/water/amendments-water-quality-standards-use-classification-1</p>	<p>These revisions are intended to provide updates to Minnesota rules applying to Class 1 waters (Minn. R. ch. 7050.0221), which have changed very little since first adopted in 1967. Key revisions include adopting more appropriate water quality standards (WQS) to protect the domestic consumption use; and reviewing and updating Class 1 designated waters, including the addition of surface waters that impact the quality of groundwater. Other revisions are focused on addressing ambiguities, inconsistencies, and gaps in Minn. R. chs. 7050 (Waters of the State), 7052 (Lake Superior Basin Water Standards) 7053 (State Waters Discharge Restrictions) and 7060 (Underground Waters), as well as Minn. Stat. ch. 103H (aka the 1989 Groundwater Protection Act).</p> <p>Minnesota Pollution Control Agency (MPCA) published a RFC in 2021 to provide more detail regarding the revisions under consideration and obtain feedback from the public on these issues.</p> <p>MPCA published a second RFC on August 28, 2023, to solicit comments on rules establishing WQS for per- and polyfluoroalkyl substances (PFAS) as directed by Minnesota Session Law – 2023, Chapter 60, Article 3 Section 33. This public comment period ended on October 30, 2023.</p> <p>MPCA anticipates publishing a third RFC and draft TSD in 2025.</p> <p>Lead scientist: Laura Lyle</p>

Status	Topic	Description of progress
In Rulemaking	<p>Revision of numeric WQS for protection of aquatic life based on EPA 304(a) Ambient Water Quality Criteria for ammonia.</p> <p>https://www.pca.state.mn.us/get-engaged/ammonia-water-quality-standard</p>	<p>This revision will update Minnesota's existing WQS for ammonia by incorporating current science. The U.S. Environmental Protection Agency's (EPA's) national recommended ambient water quality criteria for ammonia will be adopted as part of this revision (EPA, 2013).</p> <p>MPCA published an RFC on August 1, 2022, that was open through September 15, 2022. The RFC and comments received are available on the rule webpage.</p> <p>MPCA is currently working to develop the Statement of Need and Reasonableness (SONAR). MPCA anticipates publishing a Notice of Intent to Adopt Rules (NOI) in 2025.</p> <p>Lead scientist: Robert Dietz</p>
Technical review/Pre-rulemaking development	<p>Addition of numeric WQS for protection of aquatic life for nitrate.</p>	<p>Technical development for this WQS resulted in a 2022 draft TSD that is available for review: https://www.pca.state.mn.us/sites/default/files/wq-s6-13.pdf.</p> <p>MPCA, in coordination with its partners, has been pursuing a holistic, stepwise approach to help reduce nitrogen levels statewide prior to adopting a new nitrate aquatic life water quality standard. This included:</p> <ol style="list-style-type: none"> 1) Developing a detailed Wastewater Nitrogen Reduction Strategy with targeted actions to reduce nitrogen coming from 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. <p>This statewide strategic work has been progressing, paving the way to move forward with the nitrate standard. An updated review of toxicity information since the draft nitrate TSD will be completed prior to publishing an RFC.</p> <p>Lead scientist: Phil Monson</p>

New or revised WQS and amendments that are priorities to develop:

Group 2: In technical development

Status	Topic	Description of progress
Technical development	Revision of numeric WQS for protection of aquatic life for aluminum and copper .	<p>EPA 304(a) Ambient Water Quality Criteria are available for aluminum (2018), and copper (2007). MPCA plans to revise existing WQS for aluminum and copper using EPA's updated criteria to maintain currency with newer science. This work will commence as staff are available.</p> <p>Lead scientist: To be determined (TBD)</p>
Technical information outstanding	Addition of numeric WQS for protection of aquatic life for clothianidin and imidacloprid .	<p>The Minnesota Department of Agriculture (MDA) named clothianidin and imidacloprid as pesticides of concern in surface water in 2020. These pesticides were detected at concentrations of concern to aquatic life in rivers and streams relative to a water quality reference value (i.e., EPA benchmark values). Minnesota does not have WQS for these pesticides.</p> <p>Lead scientist: Phil Monson</p>

New or revised WQS that need to be developed:

Group 3: Tracking and evaluation

Status	Topic	Description of progress
Tracking and evaluation	Revisions to numeric WQS for total suspended solids (TSS) to protect aquatic life.	This revision is under consideration to address a potential gap in the existing TSS WQS, which may not appropriately consider Minnesota rivers that have naturally high TSS and also high-quality biological communities. Lead scientist: TBD
Tracking and evaluation	Revisions to numeric WQS for dissolved oxygen (DO) to protect aquatic life.	This revision is under consideration to address a potential gap in the existing DO WQS, which may not appropriately consider streams that have naturally lower DO concentrations. Current DO standards do not take natural factors such as wetland influence, ecoregion, stream gradient, etc., into consideration. A DO framework that better addresses natural conditions would better serve the assessment process. Lead scientist: TBD
Tracking and evaluation	Revisions of numeric WQS for protection of aquatic life for chloride .	EPA is working to develop a more complex ion criteria that would include chloride, sulfate, and other major ions. This ion model would utilize more robust science, and MPCA plans to wait and incorporate this model for chloride and sulfate. EPA indicated it anticipates producing draft criteria in 2025. Lead scientist: TBD
Tracking and evaluation	Additions of numeric WQS for protection of aquatic life for sulfate .	EPA is working to develop a more complex ion criteria that would include chloride, sulfate, and other major ions. This ion model would utilize more robust science, and MPCA plans to wait and incorporate this model for chloride and sulfate. EPA indicated it anticipates producing draft criteria in 2025. Lead scientist: TBD
Tracking and evaluation	Revision of numeric WQS for protection of aquatic life for cadmium .	The EPA criteria adopted for cadmium in 2016 was vacated on August 18, 2023 by order of the U.S. District Court, District of Arizona (for more information see: https://www.epa.gov/wqc/aquatic-life-criteria-cadmium). Cadmium may be updated at a later date, depending on future developments relative to the now vacated 2016 criterion. Lead scientist: TBD

New or revised WQS that need to be developed:

Tracking and evaluation	Addition of numeric WQS for perfluoro-octane sulfonate (PFOS) in fish tissue , employing updated human-health based WQS methods (these methods were adopted into Minn. R. chs. 7050 and 7052 on March 16, 2015).	MPCA expects to develop a WQS for PFOS in fish tissue to address the increasing number of water bodies across the state in which fish have been impacted by PFOS. Currently, updated site-specific criteria for PFOS in fish tissue are available for certain water bodies in the Twin Cities Metro Area. For more information about MPCA's approach to addressing per - and polyfluoroalkyl substances (PFAS), see: the PFAS Blueprint and https://www.pca.state.mn.us/waste/water-quality-criteria-development-pfas . Lead scientist: Nicole Neth
Tracking and evaluation	Lower Mississippi River sulfate site-specific standard – wild rice	Vegetation data for segments of the Lower Mississippi River indicates increased wild rice growth over the past 15 years, even in the presence of sulfate higher than 10 mg/L. MPCA is evaluating whether the beneficial use of production of wild rice is met at ambient sulfate levels in the river and its backwaters. If confirmed, the MPCA will develop an appropriate site-specific standard that protects the beneficial use while recognizing the unique environmental context of this area. Lead scientist: Robert Dietz

Completed WQS:		
Status	Topic	Description of progress
Completed	<p>Revisions to aquatic life and recreation use Classes 2A (cold waters) and 2B (cool and warm waters) and Class 7 (limited resource value waters).</p> <p>https://www.pca.state.mn.us/water/2021-amendments-water-quality-standards-use-classification-2</p>	<p>This revision made updates and corrections to Class 2 (aquatic life and recreation) beneficial use designations or classifications for streams and lakes. These corrections and updates were mostly related to implementation of the (TALU) framework, which added new Class 2 beneficial use tiers for aquatic life. In addition, cold (Class 2A) and warm/cool (Class 2Bd and 2B) water use designations were reviewed and corrected, when necessary, as part of this rulemaking. This was the second set of revisions related to implementation of the TALU framework.</p> <p>(MPCA) published a Notice of Intent to Adopt Rules (NOI) on December 12, 2022, that included a hearing that was held on February 3, 2023. A notice of adopted rules was published in the State Register on June 26, 2023, and the rule amendments became effective July 3, 2023. EPA issued its approval of the amendments on October 16, 2023.</p> <p>Lead scientist: Will Bouchard</p>
Completed	<p>Addition of numeric WQS for PFOA, PFOS, PFNA, HFPO-DA, PFHxS and PFBS for protection of domestic consumption.</p>	<p>To protect the health of Minnesotans, Minnesota Session Law – 2023, Chapter 60, directed the MPCA to adopt rules establishing WQS for these six PFAS. The deadline for establishing the WQS for these chemicals is July 1, 2026. In response to this directive, the MPCA published a Request for Comment (RFC) in August 2023, specifically asking for comments related to developing Class 1 WQS for these six PFAS.</p> <p>EPA issued National Drinking Water Regulation for these six PFAS under the Safe Drinking Water Act, establishing new Maximum Contaminant Levels (MCLs) in 2024. All EPA MCLs are incorporated by reference as Class 1 WQS in Minnesota, so these MCLs became Class 1 WQS on their effective date of June 25, 2024. The federal implementation, and incorporation by reference into Minnesota WQS met the requirements of the Minnesota Legislature Session Law. There are pending legal challenges to the federal action, but currently they remain in effect in Minnesota.</p> <p>Lead scientist: Laura Lyle</p>

Completed water quality standards and amendments: these WQS projects were completed since the 2021 Triennial Standards Review.

Explanation of group designations:

New or revised water quality standards (WQS) and amendments in rulemaking are **Group 1 projects that are in active development**. These WQS projects are in rulemaking or are expected to enter rulemaking before the next triennial review (within two to three years).

Group 1 projects in rulemaking have had a request for public comment published and there is a projected timeline for adoption into state law. The MPCA is focused on responding to any changes needed due to peer review (where applicable), finalizing the technical support document (TSD), and developing the SONAR and final rule language. The need for peer review will influence how long it takes to complete a WQS.

Group 1 projects in development are in the process of preparing supporting documentation (the TSD), and there is a basic concept of what will be included in rule language, but no request for comment has been published. Draft TSDs for new or revised numeric WQS go through an initial public comment period and an independent peer review process.

New or revised WQS and amendments that are priorities to develop include **Group 2 and 3 projects**. These WQS projects were selected as priorities for development in the 2021-2023 Triennial Standards Review and have not yet advanced into rulemaking; their progress during 2024 is provided here.

Group 2 projects that are in technical development are those for which all necessary supporting studies and other information from outside the MPCA is available. The information is sufficient to conduct a basic evaluation of how the standard will address environmental or programmatic concerns, and to assess the resources needed to promulgate and implement the standard. An important consideration in whether and when a WQS project moves into Group 1 is whether MPCA programs can accommodate the added work to develop policy and implement the new WQS, and still maintain regular permitting and related work. Group 2 projects that are currently under technical development are likely to move into Group 1 with an in-development status within one to two years.

Group 2 projects with technical information outstanding lack some needed information, such as a scientific study, that prevents completion of technical development. The work being done can involve many different tasks, such as: compiling and reviewing scientific literature about a pollutant; collecting and reviewing Minnesota-specific data; designing and undertaking one or more studies; and reviewing an EPA criteria document. Months to years may pass before the information needed to complete basic technical development is available.

Group 3 projects are being tracked. Group 3 projects are those that MPCA has not started developing, either because of missing technical information, a lack of capacity, or both. Group 3 projects may remain in Group 3 with no significant progress made throughout the next three-year triennial period.

Opportunities for public comment:

Opportunities for public input on water quality standards occur with the adoption of standards into Minnesota rule. In addition, all of Minnesota's water quality standards are open for public review and comment every three years as part of the Clean Water Act required Triennial Standards Review. The next Triennial Standards Review is anticipated to be put on public notice in December 2024 or early 2025.

Specific information about upcoming opportunities to comment on standards proposed for adoption (Group 1) is available here: <https://www.pca.state.mn.us/get-engaged/proposed-rules>. **Note: The easiest way to stay current with water quality standards development and adoption** is to sign up for GovDelivery notices. The link to sign up is near the top of the same webpage. Follow the instructions and look for "Water Rulemaking."

This report fulfills the requirement of Minn Stat. 115.035 paragraph (g).