Minnesota Pollution Control Agency

Request for comments on planned amendments to rules governing Water Quality Standards—Use Classifications 3 and 4, *Minnesota Rules*, chapters 7050 and7053; Revisor's ID Number 04335

NOTICE IS HEREBY GIVEN that the Minnesota Pollution Control Agency (MPCA) is requesting comments on planned amendments to water rules, *Minnesota Rules*, chapters 7050 and 7053. This rulemaking is referred to as the Water Quality Standards—Use Classifications 3 and 4 rule. Comments should be submitted in writing as described in the *Public comment* section below.

Subject of rules. The MPCA requests comment on possible amendments to rules governing water quality standards for industrial (Class 3) and agricultural and wildlife (Class 4) usage. The MPCA classifies water bodies according to the multitude of ways that waters are used, and sets water quality standards that protect Minnesota's waters based on those beneficial uses. A water quality standard often includes a narrative description of the conditions necessary to protect water quality for a beneficial use and may also include a numeric value in rule reflecting the highest or lowest concentration of a substance, chemical, or other type of pollutant that will protect the beneficial use. Both narrative and numeric standards may result in the need for an effluent limit in National Pollutant Discharge Elimination System/State Disposal System permits. Through this rulemaking, we plan to update Class 3 and 4 water quality standards as well as the ways we apply them.

In a previous Request for Comments (RFC) on this rulemaking published on February 8, 2016, the MPCA asked for comment regarding the following potential changes to Class 3 and Class 4 of the water quality standards:

- replacing numeric standards for existing subclasses 3A–3D with a single narrative standard;
- limiting the Class 3 designation to only surface waters subject to the Minnesota Department of Natural Resources (MDNR) water appropriations permitting program for specific industrial uses;
- updating numeric standards for Class 4A (irrigation) and Class 4B (wildlife and livestock watering) to reflect current science; and
- limiting the Class 4A standards with application only on a seasonal basis (during the growing season) and only to waters with active MDNR water appropriation permits.

The original RFC also sought comment on whether additional aspects of the rules should be considered for amendment and noted that this rulemaking would *not* address the Class 4A wild rice sulfate standard, which was the subject of a separate rulemaking effort at the time. The wild rice rule revision was withdrawn in May 2018, and the MPCA does not intend to address rules related to wild rice in this project.

After considering the available data and comments received[1] in response to that RFC, the MPCA has developed a more detailed list of policy and implementation considerations for improving and updating these standards summarized in the *Updated draft proposal* section. The MPCA is also publishing charge questions to be included in a peer review process focusing on the rationale and technical data behind the draft amendments and plans for implementing them in wastewater permits.

---

[1] PDF of comments received in response to the 2016 RFC available at https://www.pca.state.mn.us/sites/default/files/wq-rule4-17b.pdf

We encourage all parties with an interest in or information about Class 3 and Class 4 use designations in Minnesota's water quality standards to submit comments.

Updated draft revisions. The MPCA is considering changing the existing rules to revise and update the standards related to industrial consumption, irrigation, and wildlife and livestock watering. Details about the MPCA's planned rule revisions are contained in the draft Technical Support Document (TSD) for the rulemaking, which can be viewed at www.pca.state.mn.us/water/amendments-water-quality-standards-use-classifications-3-and-4. In summary, the changes being considered will:

- replace numeric standards for existing subclasses 3A–3D with a single narrative standard, condensing the subclasses into a single industrial consumption use class;
- replace numeric Class 4A standards for bicarbonate, boron, pH, specific conductance, total dissolved salts and sodium with a narrative standard and include a process to translate the narrative standard into a numeric effluent limit or limits for permitted dischargers;
- update numeric standards for Class 4B to reflect current science;
- remove the Class 4C designated use (protection of wetlands for agriculture and wildlife) and designate wetlands as Classes 4A and 4B instead of 4C;
- move wetland standards for chloride and settleable solids from Classes 3D and 4C to Class 2D, and move the narrative Class 4C standard to 7050.0186, to more appropriately reflect the uses being protected; and
- maintain applicability of the Classes 3, 4A, and 4B uses on all waters of the state.

The MPCA is especially seeking specific comments on:

- whether the processes for determining protective numeric effluent limits from the Class 3 and Class 4A narrative standard should be included in rule or developed after the rule is published;
- how to address the difference in toxicity from ingestion of sulfate by livestock and varied types of wildlife; and
- the need for any additional numeric values to protect livestock and wildlife.

Peer review. The MPCA will also initiate a process to obtain independent scientific peer review of the draft TSD for the Class 3 and Class 4 water quality standards. The purpose of the peer review is to insure that the TSD is technically sound through review by experts who have not contributed to its development.

The process, which is outlined in a July 2017 directive from former MPCA Commissioner John Stine, is required for new or revised numeric water quality standards, and is designed to expand awareness and increase transparency of the MPCA's peer review of technical documents. Although the potential Class 3 and Class 4A standards will be narrative standards, we are choosing to use the new peer review process for these standards, along with the planned Class 4B numeric standards, in the interest of greater transparency.

The MPCA is planning a letter review to evaluate technical questions associated with the Class 3 and 4 standards, and will seek reviewers with expertise in these areas:

- Industrial water treatment practices.
- Irrigation practices in Minnesota and irrigation source water quality influences on plant productivity and soils.
- Crops, climate and soil types in Minnesota.

- Veterinary and/or wildlife toxicity.
- Water quality standards development.

Although the MPCA hopes to cover the knowledge bases listed above, we do not expect that any individual reviewer will have expertise in all areas.

In a letter review, the MPCA seeks individual written peer-review comments from independent experts, typically in the form of correspondence to the agency from each peer reviewer. Each reviewer evaluates the draft TSD independently, without consulting other reviewers. In this case, we chose a letter review because the MPCA is not developing significant new science in the TSD. If the MPCA were presenting significant new science in the TSD, a more extensive peer review would be appropriate.

The MPCA has developed draft charge questions organized by topic area to guide the peer reviewers' evaluation of the draft TSD. We encourage comments and suggestions on our proposed charge questions, which are listed below; see the *Public comment and MPCA contact person* section for deadline and contact information.

- **Class 3 (industrial use).** In the draft TSD, the MPCA takes the position that it will be extremely difficult to develop a single numeric water quality standard for industrial consumption because industrial water appropriators in Minnesota have a wide range of water quality needs based on their specific industrial process requirements. Moreover, industrial appropriators have shown that they are capable and willing to install treatment systems to meet their specific industrial water quality needs. Therefore, for any given parameter, it would be difficult to develop a single numeric value that is not either overprotective or underprotective for the range of industrial water consumers in Minnesota.

    1. Has the MPCA clearly supported this position in the TSD? Why or why not?
    2. Has the MPCA clearly supported the contention that the existing Class 3A-3C numeric water quality standards for hardness and chloride are based on an outdated understanding of industrial water treatment theory or practice?
    3. Are you aware of professional or technical guidelines that support the continued use of any of the existing Class 3A-3C numeric values, or similar values, as necessary to protect industrial processes?
    4. The Class 3 narrative translator process outlined in the TSD ensures that water appropriated for industrial cooling systems will not have excessive calcium carbonate scaling attributable to increased calcium loading from an upstream wastewater discharger. Has the MPCA appropriately justified the focus on protecting industrial cooling systems from calcium carbonate scaling, in order to protect water for all industrial uses?
        a. If not, what additional types of industrial water use and/or water quality parameters should the MPCA consider?

- **Class 4A (irrigation).** MPCA plans to change from a numeric "one size fits all" set of irrigation standards to a generalized narrative rule statement maintaining the irrigation use designation for all waters of the state. Along with this change, MPCA envisions using a narrative translator approach to determine if a wastewater discharge has a reasonable potential to impair a water's use as a source water for irrigation purposes and, if so, to set an effluent limit to prevent such an impact. Through the implementation of this narrative translator approach, the MPCA proposes to evaluate on a case-by-case basis a number of factors that have an overall influence on irrigation water quality for downstream appropriators. These factors include crop type, soil

type, soil drainage management techniques, annual rainfall and general climate patterns, irrigation practices, presence of dissolved salt minerals in soils, and crop yield loss tolerances a given farmer is willing to accept to irrigate crops.

1. Are there any other factors that should also be considered when evaluating irrigation water quality? If so, please elaborate.
2. Does the narrative translator approach outlined in the draft TSD adequately address the above listed factors? If not, please explain why.
3. Does the rationale presented in the narrative translator section of the draft TSD support the use of Sodium Adsorption Ratio (SAR) and specific conductance values to characterize the quality of water for irrigation use?
4. Is the mechanism to support irrigation while considering localized conditions using the suggested SAR and specific conductance values soundly constructed? Are there additional parameters that should be considered? If so, please suggest what they are and cite the relevant literature.

- **Class 4B (livestock and wildlife uses).** The MPCA is proposing to maintain numeric standards for wildlife and livestock protection.

1. Are the numeric standards presented in the draft TSD (pH, total dissolved solids, sulfate, and nitrate) to protect wildlife and livestock built on a sound application of the scientific information and literature?
2. If necessary, please suggest additional parameters to consider – or parameters that do not need to be included – for numeric standards. Provide citations for references to support the numeric standards for those parameters and address the assumptions and uncertainties in your analysis.
3. To what extent is the information in the TSD related to the effects of total dissolved solids, sulfate and nitrate on livestock and wildlife complete and relevant to the determination of protective water quality standards for those parameters? Please identify any important information missed by the MPCA that would change the TSD's presentation of the effect of total dissolved solids, sulfate, and nitrate on livestock and wildlife.
4. The TSD provides information regarding the literature that explores the sensitivity of livestock and wildlife to sulfate, and how sensitivity varies based on the diet, especially related to the percentage of forage in the animal's diet. Has the MPCA appropriately considered and analyzed the differences in sensitivity to sulfate between ruminants that consume differing amounts of forage?

Plain-language summary of an RFC. This RFC is the MPCA's legal notice of its intent to begin the rulemaking process and obtain input from the public to help shape the new rule amendments as we draft them. There will be several opportunities for public comment and input on this rule project. At this stage, we do not have a complete draft rule; we want your feedback to inform us about the ideas described in the *Subject of rules* and *Updated draft proposal* sections above. If you have other ideas or data related to this rulemaking that we need to consider, please submit them in writing. Submitting your ideas and information at this early stage in rulemaking allows us more time to address issues that may come up, and helps to ensure informed decision-making on our part.

Parties affected. Amendments to these rules are likely to affect municipal and industrial dischargers to surface waters; local and statewide lake and river associations; the agricultural

community; and members of the general public with an interest in the protection of Minnesota's waters. Because the revisions under consideration are applicable to all surface waters, any person in Minnesota may potentially be affected by changes made to these rules.

Statutory authority. *Minnesota Statutes* section 115.03, subd. 1 and *Minnesota Statutes* section 115.44, subd. 2 authorize the MPCA to establish standards necessary to protect beneficial public uses. *Minnesota Statutes* section 115.44, subd. 2 authorizes the MPCA to adopt rules for grouping designated waters of the state into classes considering the best usage in the interest of the public.

Public comment and MPCA contact person. Interested parties may submit comments or information on these possible rules in writing until **4:30 p.m. on April 22, 2019**. Send your written comments, questions, and requests for updates on this or other proposed rulemaking to Katie Izzo, Minnesota Pollution Control Agency, 520 Lafayette Road. North, St. Paul, MN, 55155-4194; email katie.izzo@state.mn.us; or telephone 651-757-2595, toll-free 1-800-657-3864.

The MPCA will not publish a notice of intent to adopt the rules until more than 60-days have elapsed from the date of this RFC.

The MPCA does not anticipate that the rule amendments will require a local government to adopt or amend an ordinance or other regulation under *Minnesota Statutes* section 14.128. Local governments may submit written information to the contrary.

The MPCA requests any information pertaining to the cumulative effect of the rule amendments with other federal, tribal or state regulations related to the specific purpose of the rule. *Cumulative effect* means the impact that results from incremental effects of the proposed rule in addition to other state, tribal government or federal agency rules.

Rule drafts. As stated above, the MPCA has not yet drafted the rule amendments we are considering. We encourage all parties interested in being notified when a draft of the rules is available and of other activities relating to this (or other MPCA rulemakings) to register for our GovDelivery bulletins at http://public.govdelivery.com/accounts/MNPCA/subscriber/new?topic_id=mnpca_272.

Alternative format. Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make such a request, please contact Katie Izzo via the information listed above.

NOTE: Comments received in response to this notice will not necessarily be included in the formal rulemaking record submitted to the Administrative Law Judge (ALJ) if and when the MPCA starts a proceeding to adopt rules. The MPCA is required to submit to the ALJ only those written comments received in response to the draft rules after they are proposed. If you submit comments during the development of the rules and want to ensure that the ALJ reviews your comments, you must resubmit the comments after the rules are formally proposed.