

Summary

Proposed rule amendments

Protecting wild rice from excess sulfide



What is the issue?

Minnesota adopted a standard in 1973 to protect wild rice from excess sulfate, but recent questions prompted a review of the standard and new research. Independent, peer-reviewed agency studies begun in 2011 found that:

- Sulfate in wild rice waters enters the sediment in which wild rice is rooted, and bacteria converts it into sulfide.
- Higher levels of sulfide in the sediment create an environment that reduces wild rice growth and survival over time.

Sulfate is a naturally occurring chemical that can also be found in discharges from mining operations, wastewater treatment plants, and industrial facilities.

Why is it important?

Wild rice is an important natural resource in Minnesota. It's a cultural and spiritual resource to the Dakota and Ojibwe people and provides food for humans and waterfowl. But the cost to businesses and communities of limiting sulfate discharges can be significant. It's critical that the standard to protect wild rice be based on the best available science, and that there is flexibility in implementation to help address costs.

Proposed rule amendments

The MPCA's rule proposal to amend the sulfate water quality standard:

- **Sets a protective sulfide level of 120 micrograms per liter in the sediment where wild rice grows** — Bacteria in the sediment turns sulfate in the water into sulfide, but certain factors affect how quickly sulfate is converted to sulfide. Most significantly, higher levels of iron in the sediment can lead to less sulfide, and higher levels of organic carbon can lead to more sulfide. So while sulfate may create conditions that negatively affect wild rice, no single level of sulfate can be protective of wild rice in all bodies of water.
- **Sets up a process to translate the protective sulfide level into a sulfate standard for each body of water** — The MPCA proposes collecting sediment samples in wild rice stands and measuring iron and organic carbon concentrations, and then entering the data into an equation to determine the numeric sulfate standard for that wild rice water. An alternate process would involve directly measuring sulfide.
- **Specifically identifies approximately 1,300 lakes, rivers, and streams as wild rice waters, where the proposed rules would apply** — The existing standard is written to apply to "water used for the production of wild rice," but doesn't identify those waters. The MPCA used current and historical field surveys, harvest records, and documented oral accounts to identify about 1,300 waters where wild rice grows. The proposed rules

also outline a process for identifying additional wild rice waters in future rulemakings.

- **Provides details on implementing the standard, particularly at facilities with water discharge permits** — For instance, the sulfate standard must be met as an annual average and can only be exceeded once every 10 years.

Who is affected

The proposed rules benefit Minnesotans who value wild rice and its protection — particularly those who harvest, sell, or consume it — and who value the waterfowl that depend on it as food. The rules improve wild rice protection by clarifying where the standard applies and reflecting environmental variability and recent science.

Regulated facilities

Based on the wild rice waters identified in the proposed rule, the MPCA anticipates at least 130 permitted facilities (possibly more) will be evaluated for the possibility and feasibility of additional permit limits to protect wild rice. (Only about 250 of the 1,300 identified wild rice waters are potentially affected by permitted discharges.) The affected facilities will be evaluated over time as data become available and permits come up for reissuance.

How to get involved

The MPCA is soliciting public comments on the rule proposal now. Public hearings on the proposed rules are scheduled at locations around the state between October 23 and November 2. Comments will be accepted until at least five days after the last public hearing. (The comment deadline is determined by the hearing judge.)

To view all rule-related information, including details on the hearings, the list of wild rice waters, the draft rule language, and the supporting Statement of Need and Reasonableness and Technical Support documents, visit: <http://www.pca.state.mn.us/water/protecting-wild-rice-waters>

Comments must be submitted to the Office of Administrative Hearings via the web (<https://minnesotaoah.granicusideas.com/discussions>), by mail (Office of Administrative Hearings, P.O. Box 64620, St. Paul, MN 55164), or in person (600 N Robert St., St. Paul, MN). In your comments, you must include your name and address and identify the portion of the proposed rules you are commenting on, your support of or objection to it, and any change you are proposing.

Questions?

Contact Carol Nankivel (MPCA, 520 Lafayette Road North, St. Paul, MN, 55155-4194; 651-757-2597, 800-657-3864) or e-mail minnrule7050.pca@state.mn.us.