

Fond du Lac Band of Lake Superior Chippewa

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Administration
Conservation
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Administrative Law Judge Eric Lipman
Office of Administrative Hearings
Submitted online only

February 24, 2021

Re: Comments on Proposed Amendments to Rules Governing Water Quality Standards, Minnesota Rules chapters 7050 and 7053; Revisor ID No. 4335; OAH Dkt. No. 65-9003-37102.

Honorable Judge Lipman:

The Fond du Lac Band of Lake Superior Chippewa (“Band”) appreciates this opportunity to provide our comments to the Minnesota Pollution Control Agency (“MPCA”) on proposed amendments to rules governing water quality standards for industrial (Class 3) and agricultural and wildlife (Class 4) designated uses. The Band is a federally recognized Indian tribe that retains hunting, fishing, and other usufructuary rights that extend throughout the entire northeast portion of the state of Minnesota under the 1854 Treaty of LaPointe¹ (the “Ceded Territory”). Within the Ceded Territory, all the signatory Bands have a legal interest in protecting natural resources. Further, the Mille Lacs and Fond du Lac Bands retain usufructuary rights under the 1837 Treaty with the Chippewa, and the 1837 Ceded Territory stretches across east central Minnesota into Wisconsin.²

For the Bands to fully exercise these rights, abundant and unpolluted natural resources must be maintained, including water that meets tribal and state water quality standards. The state recognizes a government-to-government relationship with all Minnesota tribes,³ and state agencies in Minnesota co-manage 1837 and 1854 Treaty resources with signatory tribes.⁴ This relationship is fostered through

¹ Treaty with the Chippewa, 1854, 10 Stat. 1109, in Charles J. Kappler, ed., *Indian Affairs: Laws and Treaties*, Vol. II (Washington: Government Printing Office, 1904), available on-line at <http://digital.library.okstate.edu/kappler/Vol2/treaties/chi0648.htm> (last visited March 15, 2016).

² See *Minnesota, et al. v. Mille Lacs Band of Chippewa Indians, et al.*, 526 U.S. 172 (1999) (confirming off-reservation usufructuary rights under the 1837 Treaty); see also Great Lakes Fish and Wildlife Commission (“GLIFWC”), *A Guide to Understanding Ojibwe Treaty Rights* (2018), available at <http://www.glifwc.org/publications/pdf/2018TreatyRights.pdf>; MN DNR, Main Treaties Page, available at https://www.dnr.state.mn.us/aboutdnr/laws_treaties/index.html.

³ See, e.g., Gov. Walz Exec. Order 19-24, “Affirming the Government to Government Relationship between the State of Minnesota and Minnesota Tribal Nations: Providing for Consultation, Coordination, and Cooperation” (Apr. 4, 2019).

⁴ Federal agencies have a legal responsibility to maintain all tribal, treaty-reserved natural resources. See, e.g., Memo. on Tribal Consultation and Strengthening Nation-to-Nation Relationships (Jan. 26, 2021), affirming Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (stating “the United States has recognized Indian tribes as domestic dependent nations under its protection . . .,” there is a “trust

adequate state consultation with the tribal nations, and taking into account tribal comments as a vital part of rulemaking changes. Tribal government requests should be accommodated whenever possible to reflect this government-to-government relationship.

Additionally, the Band has federally delegated water quality regulatory authority under §§ 303(c) and 401 of the Clean Water Act (CWA), and has comprehensive water quality standards (WQS) approved by the US Environmental Protection Agency (EPA) that are applicable to the waters of the reservation. The Band implements our water quality standards to be as protective as possible of the beneficial uses we have designated for our surface water resources, including aquatic life, cultural, recreational, industrial, agricultural, wildlife, ceremonial and subsistence uses, and to maintain their existing high quality.

If these revised Class 3 and 4 state water quality standards are adopted, the predictable outcome would be significant impairment to the health and integrity of Minnesota waters. That injury will be disproportionately experienced by the state's tribal citizens, who rely on wild rice, fish, and other treaty-protected resources for subsistence at rates higher than the rest of the population, and who are already subject to disparate impacts from widespread water pollution. To be blunt, these proposed rule changes are in direct violation of the state's environmental justice commitments. Specific aspects of the rule change appear to be an indirect attempt to remove CWA protection measures for the state's wild rice waters—undermining this body's rejection of a more direct regulatory rollback of state wild rice WQS in 2018. Further, despite the MPCA's assertions otherwise, these proposed changes are also the outcome of inadequate state consultation with the tribes.

This proposed rulemaking, which weakens or outright eliminates numeric criteria for dissolved salts for the beneficial use classes assigned to Industrial (Class 3), Agriculture and Wildlife (Class 4), is offered to the general public - to the extent they can even decipher the ramifications of the agency's action - as esoteric but generally benign "modernizations". In fact, MPCA assures us in the Statement of Need and Reasonableness (SONAR)⁵ that:

*"The MPCA does not expect the proposed rule changes to have negative environmental consequences. The proposed rules are designed to be as protective of the industrial and agricultural beneficial uses as the currently applicable Class 3 and 4 water quality standards. **All the Class 3 and 4 water quality standards continue to apply statewide, and as a general or default classification to all waterbodies.**"*

relationship with Indian tribes," and "[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments."), available at <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/26/memorandum-on-tribal-consultation-and-strengthening-nation-to-nation-relationships/>.

⁵ State. of Need and Reasonableness, In the Matter of Proposed Revisions of Minnesota Rule Chapters 7050 and 7053, Relating to Water Quality Standards – Use Classifications 3 and 4; Revisor ID No. 04335 (Dec. 12, 2020) ("SONAR") at 178, available at <https://www.pca.state.mn.us/sites/default/files/wq-rule4-17k.pdf>.

However, in direct contradiction to that assertion, the MPCA also maintains throughout the technical support documentation for these rule revisions that ***these standards only apply where and when there is an appropriator for that use***. This is fundamentally in conflict with how water quality standards are to be implemented. Standards intended to protect designated beneficial uses apply *to the waterbody*, and must be attained by any entity seeking to *discharge pollutants* to that waterbody. Waterbodies themselves have no inherent “responsibility” to meet the needs of a potential consumer. Consumers or users of water resources, however, do have a responsibility to ensure that their use, including any pollutant load they may add to the water as a result of their use, does not exceed water quality standards when discharged. However, by the agency’s stated intention of only applying the new Class 3 and 4 standards to a point of intake of water, these revised standards for all intents and purposes do NOT protect all waters of the state for these uses. They only serve to protect *documented* existing use; they do nothing to protect unknown users or future users, and most certainly do not serve to protect wildlife.

MPCA has admittedly not been fully implementing the existing Class 3 and 4 standards to date, and under their proposed changes will do even less. The agency has never monitored or assessed the waters of the state to determine if they meet existing criteria, nor do they propose to do so in the future. They have imposed limits in permits held by some industrial and municipal dischargers, but the Band is not aware of a single instance where there has been enforcement of those limits when a permittee has exceeded them. We are aware, however, of specific waterbodies where there is clearly an impaired use that has been plainly linked to high salinity discharges⁶, and we are aware of numerous waterbodies where industrial dischargers grossly exceed existing standards. ***Instead of working to bring those dischargers into compliance, the agency is weakening the standards.*** This is not how the Band approaches implementation of our WQS under the CWA, and we do not believe it is reasonable, legally supportable, or in keeping with what the citizens of Minnesota assume their state water quality regulatory agency is doing.

Moreover, the Band fully understands that Class 3 and 4 standards are not intended to protect aquatic life uses; those relevant criteria are associated with Class 2 water quality standards. But Minnesota tribes have consistently and urgently advised the MPCA to promulgate protective aquatic life use (Class 2) standards for these same parameters *before* taking this action of removing or weakening criteria for the salty parameters that apply to Class 3 and 4 waters. MPCA maintains that they do not have the data or information needed to do so at this time, but vaguely suggest they might consider it in the future. This position is neither reasonable nor supported. In fact, in 2020 EPA Region 5 approved the Band’s proposed specific conductance aquatic life use criterion, *which was derived from MPCA’s data* following EPA guidance.⁷ This federal approval came about despite the Band’s receiving an extraordinary deluge of critical comments from industrial and municipal dischargers (and their attorneys) upstream of the reservation during our public comment period.

⁶ See, e.g., MPCA, St. Louis River Watershed Stressor Identification Rep. (Dec. 2016), at <https://www.pca.state.mn.us/sites/default/files/wq-ws5-04010201a.pdf>

The Band details the following concerns about MPCA's proposed Class 3 and Class 4 rule revisions and the scientific and regulatory justifications the agency uses to support them. Our primary objection is that the proposed changes would violate the Clean Water Act (CWA) and its implementing regulations.

I. MPCA fails to maintain water quality standards that protect all uses.

Changes to federally approved water quality standards (WQS), such as Minnesota's existing Class 3 and Class 4 designated uses, are only permissible if the new standard "shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of" the Clean Water Act. 33 U.S.C. §1313(c). Limits in state-issued permits must control "all pollutants or pollutant parameters...[which] are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."⁸ *Any changes to existing WQS must also prevent the degradation of water quality or biological condition in those waters to which the changes apply* (emphasis added).

Minnesota Rules Chapter 7050.0450, regarding multiple use classifications of state waters, assures that "all surface waters of the state are classified in more than one class and all the water quality standards for each of the classes apply. If the water quality standards for particular parameters for the various classes are different, the more restrictive of the standards apply." What MPCA is proposing is a de facto removal of water quality standards without replacement with a more protective standard. By removing the existing numeric criteria found in Class 3 and Class 4 waters, without an equally or more stringent standard in place under another designated use class, the agency is clearly failing to protect all designated uses for waters of the state.

For instance, multiple EPA studies and peer-reviewed literature document that salts or ionic pollutants at highly elevated concentrations are toxic to benthic macroinvertebrates and fish, and may also be harmful to wildlife.⁹ Specific conductance (often referred to as conductivity) is an accurate, low cost, easily-measured water quality parameter that is directly related to salinity, a measure of the combined effect of all ions in water. Under most conditions, measuring specific conductance is relevant for identifying ionic conditions in surface water that have been shown to adversely affect aquatic life. Ambient or "normal background" ion concentration levels are necessary to aquatic life, but negative effects from anthropogenic ionic toxicity have been clearly and repeatedly linked to higher specific conductance levels. The elimination of specific conductance numeric criteria would constitute backsliding on a water

⁸ 40 C.F.R. §122.44(d)(1)(i).

⁹ See e.g., EPA, A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams, Final Report, EPA/600/R-10/023F, March 2011; S.A. Mitcham & G. Wobeser, Effects of sodium and magnesium sulfate in drinking water on mallard ducklings, J. Wildlife Diseases, Jan. 1988, Vol. 24, No. 1, pp. 30-44."

quality standard that is already excessively high for protecting aquatic life in some ecoregions in the state with naturally very soft water, such as northeastern Minnesota.

II. The Clean Water Act and its enacting regulations provide no legal authority for a state to convert enforceable numeric standards into subjective narrative standards.

The CWA requires states and authorized tribes to establish water quality standards that are “sufficient to provide for the protection and propagation of fish, shellfish, and wildlife, as well as recreation in and on the water.”¹⁰ These standards must include the designated uses of a waterbody, along with the “water quality criteria necessary to protect those uses.”¹¹

Accordingly, a state’s water quality criteria must be based on “sound scientific rationale.”¹² When waters have multiple use designations, as do most waters of the state, criteria “must support the most sensitive use.”¹³ Only where a state’s water quality criteria has met the Act’s requirements can EPA approve the criteria.¹⁴

The consequence of MPCA’s proposed WQS changes will be little to no regulation of salty pollutant discharges into Class 3 & 4 waters that are currently protected under existing standards. The changes would erase the existing specific numeric criteria and replace them with narrative standards. This action directly contradicts CWA regulations requiring states and authorized tribes to either establish numerical values based upon EPA guidance or “other scientifically defensible methods,” or “establish narrative criteria or criteria based upon biomonitoring methods *where numerical criteria cannot be established or to supplement numerical criteria.*”¹⁵ There is no legal basis for MPCA’s attempt to remove all Class 3 & 4 numeric standards.

The proposed changes are not supported by “current science,” as the agency claims. MPCA defends the revised standards by claiming that “the diversity of water quality needs for industrial and irrigation use means that identifying protective numeric values for each potential pollutant necessary to protect various wide-ranging industrial and irrigation uses is unreasonable to complete on a statewide basis.”¹⁶ The agency further asserts that the changes “move away from the existing one-size-fits-all numeric standard to a narrative standard coupled with a robust implementation approach that takes advantage of available information and tools to implement the WQS as location-specific protective values.” Given this logic, a reasonable person might wonder why the agency isn’t proposing to eliminate *all* numeric criteria for *all* uses, and undertake *solely* site-specific analyses. The simple explanation is that this approach would be entirely contrary to the unambiguous language of the CWA, and it would be an unreasonable burden to the agency’s admitted capacity.

¹⁰ 33 U.S.C. § 1313(c)(2)(A).

¹¹ *Id.*

¹² 40 C.F.R. §§ 131.5(a)(2); 131.11(a).

¹³ 40 C.F.R. § 131.11(a).

¹⁴ 40 C.F.R. § 131.5(a).

¹⁵ 40 C.F.R. §131.11(b) (emphasis added).

¹⁶ SONAR at 1

III. The MPCA has failed to conduct a Use Attainability Analysis, required when designating a beneficial use or removing a use that is not an existing use.

Under 40 C.F.R. 131.10 (g), a Use Attainability Analysis (UAA) is required to either “designate a use, or remove a use that is *not* an existing use” — the latter of which is precisely what the MPCA is doing with these proposed rule changes. EPA guidance specifically affirms that a “UAA must be conducted for any water body when a state or authorized tribe designates uses that do not include the uses specified in section 101(a)(2) of the Act or when designating sub-categories of these uses that require less stringent criteria than previously applicable.”¹⁷ The uses at section 101(a)(2) are commonly summarized as “fishable/swimmable” uses. MPCA has not performed this legally required scientific assessment, or UAA, to determine if the current, more stringent Class 3 & 4 criteria can be achieved.¹⁸

EPA’s primary water quality standards guidance clearly lays out the process under which a state or authorized tribe may consider the removal of a designated use:

2.7.1 Step 1 - Is the Use Existing? If a designated use is an existing use (as defined in 40 CFR 131.3) for a particular water body, the existing use cannot be removed unless a use requiring more stringent criteria is added (see section 4.4, this Handbook, for further discussion of existing uses). However, *uses requiring more stringent criteria may always be added because doing so reflects the goal of further improvement of water quality.*

2.7.3 Step 3 - Is the Use Attainable? A State may change activities within a specific use category but may not change to a use that requires less stringent criteria, unless the State can demonstrate that the designated use cannot be attained.¹⁹

The agency freely admits it is not following this CWA mandate: “*To date, the MPCA has not assessed any of the narrative or numeric water quality standards that exist for the Class 3 and 4 beneficial uses.*”²⁰ MPCA rationalizes their dereliction by alleging limited resources, and noting that since the “prime goal” of the CWA is to protect fishable/swimmable uses, the agency “believes that resources should be focused on assessing water quality standards for those beneficial uses and those that protect human health (drinking water and aquatic consumption).”²¹

¹⁷ See EPA, UAA, at <https://www.epa.gov/wqs-tech/use-attainability-analysis-uaa>.

¹⁸ See 40 C.F.R. 131.10 (g) (listing requirement of a use attainability analysis to either “designate a use, or remove a use that is *not* an existing use”); see also US EPA, Use Attainability Analysis (UAA), at <https://www.epa.gov/wqs-tech/use-attainability-analysis-uaa> (“A UAA must be conducted for any water body when a state or authorized tribe designates uses that do not include the uses specified in section 101(a)(2) of the Act or when designating sub-categories of these uses that require less stringent criteria than previously applicable.”)

¹⁹ US EPA Water Quality Standards Handbook (Water Quality Standards Handbook) at 2.1 (emphasis added).

<https://www.epa.gov/wqs-tech/water-quality-standards-handbook>

²⁰ *Id.* at 15-16 (emphasis added).

²¹ *Id.*

Tribes have also raised questions about the wholesale changes to, and in some cases, eliminations of, use subclassifications. According to EPA guidance:

However, flexibility inherent in the State process for designating uses allows the development of subcategories of uses within the Act's general categories to refine and clarify specific use classes...(i)f States adopt subcategories that do not require criteria sufficient to fully protect the goal uses in section 101(a)(2) of the Act (see section 2.1, above), a use attainability analysis pursuant to 40CFR 131.10(j) must be conducted for waters to which these subcategories are assigned.²²

MPCA is attempting, in this rulemaking, to avoid doing the necessary work of a UAA, thereby sidestepping the requirement under the CWA to fully protect the goal uses in section 101(a)(2) of the Clean Water Act. The agency simply has no discretion to disregard the federal mandate of a UAA for these Class 3 & 4 rule changes. This defect alone should be fatal to the entire rulemaking. Nor has MPCA taken any steps to ensure that the most sensitive use in each Class is protected by the proposed amendments, as discussed further in these comments at Section V.²³

IV. MPCA has ignored federal anti-backsliding regulations

Federal regulations prohibit states, when reissuing National Pollutant Discharge Elimination System (NPDES) permits, from imposing less stringent provisions than appeared in the original permit except in limited circumstances:

...interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62.²⁴

MPCA's assertion that this rollback in water quality regulations is based upon the "best current scientific understanding about industrial, irrigation, and livestock and wildlife designated uses"²⁵ is undermined by the agency's own admissions about the failure of its own review process. MPCA has simply offered no legal basis upon which the OAH can approve these changes.

V. MPCA has failed to review the impact of these proposed changes on the Class 4A wild rice use.

The Band and other Minnesota tribes have consistently and repeatedly voiced concerns about this rulemaking, first and foremost that the proposed changes to Class 4A beneficial uses will adversely

²² *Id.*

²³ 40 C.F.R. § 131.11(a).

²⁴ 40 CFR § 122.44(1)(1).

²⁵ *Id.* at 3.

impact wild rice. MPCA's response to our concerns is to stipulate that its "intention" in this rulemaking is not to change the 10 mg/L wild rice sulfate standard or the wild rice narrative standard (which the agency characterizes as "contentious" and requiring a "separate rulemaking process"²⁶. The Band concedes that the rule changes do not *directly* attack the existing 10 mg/L sulfate limit for wild rice waters; instead, the agency simply refuses to acknowledge any potential impacts on wild rice waters that would result from this deregulation of Class 4 waters, which is a violation of the CWA, as stated in Section II.²⁷ MPCA regards the Class 4A 10 mg/L wild rice sulfate standard as entirely unconnected to the rest of Class 4A, saying that "the language related to the wild rice subclass is so entwined with the overall Class 4A language that amendments are necessary to differentiate the two."²⁸

Time and again over the past decades, the Band and Minnesota tribes have urged the MPCA to protect and restore the state's diminishing and threatened native wild rice waters using the full array of available CWA tools including water quality assessments, identification of impaired waters based on assessments (and listing of impaired wild rice waters), setting appropriate effluent limits in NPDES permits, and developing Water Quality Based Effluent Limits (WQBELs) for Total Maximum Daily Loads (TMDLs) that would bring impaired wild rice waters into compliance with water quality standards. Although the MPCA recognizes in the SONAR that these very tools are essential to protection of beneficial uses,²⁹ the agency has failed to apply any of them to wild rice waters.

In this rulemaking, the agency completely excludes wild rice waters from any analysis of effects, despite lacking any legal authority to do so. The agency has ignored its own extensive data in the record confirming that these same salty pollutants, for which Class 4A standards are being rolled back in this proposed rulemaking, have negative impacts on wild rice. Sulfate is not the only parameter that can negatively affect wild rice waters, as discussed further in Section IV.³⁰

Minnesota's wild rice waters are also protected by a narrative standard stating that "[t]he quality of these waters and the aquatic habitat necessary to support the propagation and maintenance of wild rice plant species must not be materially impaired or degraded." Tribes have directly communicated to the agency in multiple face to face meetings and in previous comments on the

²⁶ SONAR at 62.

²⁷ SONAR at 62. The science confirms the need for the 10 mg/L sulfate limit for waters used for the production of wild rice. See Minnesota Chippewa Tribe Tribal Wild Rice Task Force Rep. (Dec. 15, 2018) at 23-27 (discussing science), available at <http://mnchippewatribe.org/pdf/TWRTF.Report.2018.pdf>, MN Governor's Task Force on Wild Rice (Jan. 3, 2019) at 32-34 (same), available at <https://www.eqb.state.mn.us/sites/default/files/documents/FINAL%20Governor%27s%20Task%20Force%20on%20Wild%20Rice%20Report%20January%203%202019%20v2.pdf>.

²⁸ SONAR at 62.

²⁹ SONAR at 10, 15, 117.

³⁰ Myrbo et.al., Sulfide Generated by Sulfate Reduction is a Primary Controller of the Occurrence of Wild Rice (*Zizania palustris*) in Shallow Aquatic Ecosystems, 2017; Myrbo et.al., Increase in Nutrients, Mercury, and Methylmercury as a Consequence of Elevated Sulfate Reduction to Sulfide in Experimental Wetland Mesocosms, 2017

draft SONAR that the elimination of numeric criteria for bicarbonates, pH, specific conductance, total dissolved salts, and sodium, and replacement with a general narrative standard will negatively affect wild rice, which may be the most sensitive beneficial and existing use in Class 4A waters. MPCA evades responding to this entire argument, claiming that they evaluated the possibility of using “a single conservative numeric water quality standard that protects irrigation under the most sensitive irrigation conditions that could occur” in the state, but “found it to be unreasonable.”³¹

This brush-off of the tribes’ well-founded concerns ignores both the science and the law, and deflects from the actual substance of tribal comments about wild rice waters. Section 3.14 of the EPA Water Quality Standards Handbook, “Criteria for Agricultural and Industrial Designated Uses,” provides that states and authorized tribes may also establish criteria specifically designed to protect designated uses and should ensure that they apply the criteria that are protective of the most sensitive use of the water body, as required by 40 CFR 131.11(a).³² Furthermore, the CWA requires, at a minimum, that existing uses be protected.³³ Wild rice is *both* an existing and designated use in Minnesota water quality standards and these proposed rule revisions will adversely impact wild rice.

MPCA contradicts itself, first stating that “[i]t does not appear that the numeric values established in the general Class 4A water quality standards are critical to the protection of wild rice.”³⁴ But then the agency discloses that its own scientists have investigated “Minnesota wetland plant response to salinity stressors: conductivity, chloride, and sulfate,” including wild rice,³⁵ and concluded that a preliminary concentration of conductivity expected to kill 95% of wild rice is 407 $\mu\text{S}/\text{cm}$ statewide.³⁶ However, the agency then supports a translator approach to rationalize allowing conductance concentrations up to 3,000 $\mu\text{S}/\text{cm}$ —*almost an order of magnitude higher than what the agency itself estimates would kill 95% of wild rice*. Without basis, MPCA then concludes that its “interim approach to protecting aquatic life should be sufficient for both macroinvertebrates and wetland plants,” including wild rice.³⁷ Astonishingly, the agency refuses to acknowledge its own analysis regarding specific conductance that proves these rule changes will have profound, direct, and negative impacts on wild rice. Wild rice is a Class 4A agricultural beneficial use. The Class 4A standards must remain protective of that use *now*—not under some interim or future Class 2 aquatic life beneficial use protection. Allowing concentrations of conductivity to exceed a concentration that is known to kill 95% of wild rice — *by an order of magnitude* - in a given waterbody is neither legally nor scientifically defensible.

³¹ SONAR at 40.

³² Water Quality Standards Handbook at 3.14

³³ 40 CFR § 131.3(e).

³⁴ SONAR at 190-191.

³⁵ *Id.* at 191. Specific conductivity (or conductance) means the volume of ions in water as measured by passing electrical current through a water sample, a simple and reliable testing method. It detects inorganic dissolved solids like chloride, nitrate, sulfate, phosphate, sodium, magnesium, calcium, iron, and aluminum. The higher the level of ions, the higher the toxicity of the water.

³⁶ *Id.* at 191. “ $\mu\text{S}/\text{cm}$ ” means micromhos per centimeter, a unit of ionic measure.

³⁷ *Id.*

VI. The rule fails to study the potential impacts on aquatic insects under Class 2B.

MPCA also failed to study the potential impacts on benthic invertebrates (aquatic insects), many species of which are very sensitive to salts. Allowing increases in chloride and other salts in upstream Class 3 & 4 waters could kill the aquatic insects there, which also kills the fish that eat those insects in downstream Class 2B waters. But despite tribal requests, there is no analysis of those impacts. This rulemaking is even more harmful because it is proposed at the same time MPCA is continuing to refuse to implement aquatic life conductivity criteria, despite the science being clear. MPCA's own 10-year assessments of watersheds monitoring and assessment database document just how specific conductance impairs aquatic life, and illustrate that these existing impairments have gone unaddressed without numeric protections.³⁸ MPCA has more than enough information to set numeric specific conductance values to protect aquatic life—it just refuses to do so because it is vehemently opposed by industry, as demonstrated by the Band's experience during our rulemaking.

The SONAR itself attaches the 2015 Johnson and Johnson report that determined that a protective specific conductance concentration for aquatic insects in northeastern Minnesota—meaning the maximum safe limit—would be approximately 300 $\mu\text{S}/\text{cm}$.³⁹ This same report was a critical element in the Band's technical support documentation for our proposed specific conductance aquatic life use criterion, along with an independent analysis by EPA. Additionally, MPCA's stressor identification study of the St. Louis River documented concentrations of specific conductance exceeding 2,000 $\mu\text{S}/\text{cm}$, and validated the substantial reductions in macroinvertebrate populations statewide at specific conductance concentrations at or above 500 $\mu\text{S}/\text{cm}$.⁴⁰

But instead of setting conductivity criteria that would be protective of aquatic insects, MPCA proposes to relax the only numeric conductivity criteria currently in state rules. Specific conductance would be allowed to increase from an instantaneous maximum of 1,000 $\mu\text{S}/\text{cm}$ up to 3,000 $\mu\text{S}/\text{cm}$ averaged over a 122-day period.⁴¹ This means the instantaneous maximum concentration could far exceed 3,000 $\mu\text{S}/\text{cm}$ —which essentially guarantees extinction of aquatic insects that can only tolerate maximum levels of 300 $\mu\text{S}/\text{cm}$ or less.

Additionally, MPCA's St. Louis River Watershed Stressor Report documents elevated sulfate concentrations as high as 751 mg/L. The report briefly discusses studies that have established direct sulfate toxicity to aquatic insects at concentrations as low as 124 mg/L in (soft) waters, such as those found in northeastern Minnesota.⁴² The report further opines that “[t]he lack of a water

³⁸ MPCA, St. Louis River Watershed Stressor Identification Rep. (Dec. 2016); MPCA, Minnesota's Impaired Waters and TMDLs, Approved TMDLs and Wraps (Jan. 2021) at <https://www.pca.state.mn.us/sites/default/files/wq-iw1-13c.pdf>.

³⁹ SONAR at Ex. S-10 at 272.

⁴⁰ MPCA, St. Louis River Watershed Stressor Identification Rep. (Dec. 2016) at 34 fig. 3, at <https://www.pca.state.mn.us/sites/default/files/wq-ws5-04010201a.pdf>.

⁴¹ SONAR at 67.

⁴² St. Louis River Watershed Stressor Identification Rep. at 41 at Table 9.

quality standard in Minnesota presents challenges in building a defensible case for or against sulfate as a stressor to fish and macroinvertebrate communities.”⁴³

But instead of developing a protective sulfate standard for aquatic life, MPCA has proposed a 600 mg/L sulfate standard in Class 4A that it claims would serve only to protect cows from the adverse impacts of high concentrations of sulfate—but is a level that kills aquatic insects. MPCA’s refusal to acknowledge the known impacts of such a profoundly high sulfate limit on aquatic insects is indefensible and must be rejected.

VII. MPCA fails to consider a multitude of adverse impacts related to excess sulfate

In this rulemaking, MPCA inexplicably ignores well-documented science, including peer-reviewed journal articles published by its own staff, regarding basic chemical and biological processes associated with sulfate. This common ion – a sulfur molecule surrounded by four oxygen molecules – is highly reactive in the deeper waters and sediments of Minnesota waterbodies where it is “reduced” by microbes (in environments without oxygen) to sulfide. These biochemical reactions lead to a number of very predictable adverse outcomes: accelerated decomposition of organic matter, the release of toxic hydrogen sulfide, the release of toxic metals, the release of phosphorus and nitrogen (which then leads to nuisance or even toxic algal blooms; putting wildlife, livestock and even pets at risk), acceleration of the rate of mercury methylation (which leads to more mercury accumulating in the aquatic food web, including fish; putting wildlife and humans at risk). The proposed 600 mg/L sulfate criterion is an extreme value, especially for areas of the state with naturally very low sulfate concentration, and far above the level that could be considered protective of the environment.

VIII. Class 4B Waters wildlife amendments disregard federal water quality standards guidance.

Under Minnesota Rule 7050.0224 at subpart 3, the beneficial use is described as simply “use by livestock and wildlife,” and includes a narrative standard that the water quality is such that livestock and wildlife can use the water “without inhibition or injurious effects.” In EPA’s Water Quality Standards Handbook, the guidance around use classification stipulates that in addition to the Section 101(a)(2) “fishable/swimmable” aquatic life uses, water quality standards should “consider the use and value of State waters for public water supplies, *propagation of fish and wildlife*, recreation, agriculture and industrial purposes, and navigation.”⁴⁴ This clearly conveys that the CWA principle behind establishing a wildlife use is to *broadly* protect wildlife health and sustainable populations. However, MPCA specifies in this rulemaking that the Class 4B wildlife use is *narrowly* intended to apply only to water that is “consumed” by livestock and wildlife. MPCA’s redrafting of federal law is improper.

MPCA recognizes that wildlife has the potential to use any water in the state. The agency asserts that “the livestock and wildlife designated use protects waters for current and future use by

⁴³ *Id.* at 435

⁴⁴ US EPA Water Quality Standards Handbook at 2.1 (emphasis added). <https://www.epa.gov/wqs-tech/water-quality-standards-handbook>

terrestrial animals.”⁴⁵ MPCA subsequently states “[g]iven that the data available for wildlife species is limited, it is reasonable to use these livestock data as surrogates for wildlife data. The MPCA is reasonably choosing a value that protects the most sensitive livestock species.”⁴⁶

This is an unjustifiable supposition. The almost total lack of wildlife-specific data precludes any confidence in the agency’s assumption. Furthermore, if the standards associated with the uses are only applied when and where there is a water appropriations permit, they simply cannot be assumed to protect wildlife across the state from the discharge of these parameters at concentrations that put wildlife species at unknown risk. Again, by only applying standards to water at a point of intake, these revised standards by definition *do not* apply statewide unless an appropriator also has to meet these standards in their permitted discharge. There is no scientifically defensible basis for the claim that these revised standards are protective of wildlife.

IX. The proposed rule changes fail to take into account wildlife impacts from mercury methylation.

MPCA maintains that Class 2 mercury limits are protective of wildlife in their “consumption of aquatic organisms,” seemingly suggesting there is no need to include mercury criteria in Class 4. This narrow rationale directly contradicts EPA guidance, which mandates:

Development of water quality criteria to protect wildlife may be important because terrestrial and avian wildlife species that are dependent on the aquatic food web may be exposed to aquatic contaminants via dietary exposure. This exposure pathway can be particularly important for bioaccumulative pollutants, which accumulate in tissues of aquatic organisms at levels greater than water column concentrations. Bioaccumulation is defined as the accumulation of chemicals in the tissue of organisms through any route including ingestion or direct contact with contaminated water.⁴⁷

In other words, the potential for exposure is *not* to be measured solely through “consumption” of aquatic organisms.

MPCA’s failure to regulate mercury contamination and bioaccumulation within the Class 4 Wildlife standards is inconsistent for Minnesota waters within the Lake Superior Basin, to say the least. EPA’s Water Quality Guidance for the Great Lakes System describes a methodology applicable to the Great Lakes System for developing criteria for the protection of avian and mammalian wildlife from “adverse effects resulting from the ingestion of water and aquatic prey.”⁴⁸ The Great Lakes

⁴⁵ SONAR at 47.

⁴⁶ *Id.* at 48.

⁴⁷ US EPA Water Quality Standards Handbook at 3.11.

⁴⁸ 40 CFR 132 at App’x D, Sec. I(A), Great Lakes Water Quality Initiative Methodology for the Development of Wildlife Criteria, available online at <https://www.epa.gov/gliclearinghouse/great-lakes-initiative-technical-support-documents>.

Initiative, or GLI, methodology is similar to the methodology used to derive non-cancer human health criteria, in that “separate wildlife values are derived for birds and mammals using taxonomic class-specific toxicity data and exposure data for five representative Great Lakes wildlife species (bald eagle, herring gull, belted kingfisher, mink, and river otter), which are likely to experience the highest exposures to bioaccumulative contaminants through the aquatic food web in the Great Lakes.”⁴⁹ In addition, the EPA published the Great Lakes Water Quality Initiative Technical Support Document for Wildlife Criteria (1995), which includes the methodology for deriving wildlife values for pollutants with limited toxicological data to derive a value for only one of the two taxonomic classes specified (birds and mammals).⁵⁰ Yet MPCA has followed none of the mandatory GLO methodology for the Great Lakes System.

The agency asserts that it is “reasonable for Minnesota to include standards that are more similar to states that also intend the standards to protect for livestock and wildlife drinking the water.”⁵¹ In Table 37 of the SONAR, the agency compares wildlife standards among states and tribes in Region 5 or bordering Minnesota. Grand Portage and Fond du Lac, who have federal Treatment-in-the-Same-Manner-as-a-State and promulgate their own water quality standards, include the GLI wildlife criterion for mercury in their water quality standards. MPCA offers no basis for failing to do so, too.

Despite MPCA’s characterization of their Class 3 & 4 standards as being reasonable and necessary for protecting wildlife, because the new rules do not incorporate the derived protective mercury wildlife criterion in Class 4, they are not supported by significant body of peer-reviewed science, or longstanding EPA guidance.

X. The proposed Aquatic Life Use Narrative Standard Translator is not a substitute for a protective numeric standard

The MPCA’s response to tribal and citizen concerns for risks to aquatic life under the proposed Class 3 and 4 revisions was to deflect:

“The MPCA agrees that additional water quality standards are needed to fully protect Class 2 aquatic life beneficial uses from the impacts of certain pollutants – particularly ionic or salty parameters. There is active research around the appropriate magnitude or level of those Class 2 standards, specifically around chloride and sulfate, that MPCA anticipates being the foundation for a future Class 2 rulemaking. Because this present rulemaking is to revise Class 3 and Class 4 standards to protect industrial consumption and agriculture beneficial uses, the consideration of aquatic life beneficial use protection is not relevant.”⁵²

⁴⁹ *Id.*

⁵⁰ Great Lakes Water Quality Initiative Technical Support Document for Wildlife Criteria (1995)

⁵¹ SONAR at 165.

⁵² SONAR at S-5: Implementing the Aquatic Life Use Narrative Standard

While we have established in previous sections that this conclusion is not legally supported, the Band believes it is important to identify problems with the agency's inadequate interim response to the need for Class 2 rulemaking. MPCA lays out a proposed "translation" for the existing Class 2 narrative water quality standard to protect aquatic life:

"For all class 2 waters...the normal aquatic biota and the use thereof shall not be seriously impaired or endangered, the species composition shall not be altered materially, and the propagation or migration of aquatic biota normally present shall not be prevented or hindered by the discharge of any sewage, industrial waste, or other wastes to the waters."⁵³

MPCA proposes multiple lines of evidence for determining whether a waterbody is adversely affected by specific conductance: the state's calculated MIBI or macroinvertebrate index of biotic integrity, a conditional probability model that was developed to highlight the link between a reduced MIBI score and higher specific conductance, and regional benchmarks for specific conductance (derived similarly to the Band's specific conductance standard) which define concentrations where sensitive species are lost or extinct from a waterbody. How these lines of evidence are used is critical; for instance, the agency uses the conditional probability model, when no biological data is available, to evaluate whether a waterbody would meet the state's *General Use* MIBI scores (under the Tiered Aquatic Life Use or "TALU" framework). This approach is not protective of higher quality waters and their more sensitive aquatic life, and would allow for water quality degradation that is inconsistent with CWA antidegradation requirements.

Further, using MIBI scores to screen for potential degraded aquatic life use condition, if only applied at the full WID or waterbody ID scale, could easily miss more localized adverse impact from pollutant sources (at a reach scale). Fundamentally, this narrative standard translation approach is screening at best, and does not ensure that protective permit limits would even be identified as being necessary. Vaguely worded (and unenforceable) next steps include:

- If available indicators point to a potential problem with specific conductance for a waterbody, then a plan needs to be developed for approaching permitting for sources that discharge to those waters.
- The next step is to identify dischargers and determine which dischargers are likely to be discharging levels of ionic pollutants that are contributing to high levels of specific conductance.
- The MPCA has developed an initial list (Attachment 2) of facilities that are discharging to waterbodies that are potentially impacted by specific conductance and that may have effluent characteristics that mean they are likely contributing to the levels of specific conductance.
- In these cases, a permitting plan will be developed to, as needed, refine our understanding of the sources and impacts of specific conductance in the waterbody and determine what actions need to be taken to help improve conditions. Once the MPCA has identified a facility with the potential to discharge salts that may negatively impact aquatic life, further evaluation and appropriate permit conditions will be considered during the process of the next permit issuance.⁵⁴

⁵³ Minn. R. 7050.0150, Subp. 3.

⁵⁴ SONAR at S-5 8

The sheer number of qualifiers in these statements, coupled with the known and unknown data gaps and undefined timeframes, leaves any expectation that the MPCA will issue any permit with protective limits for aquatic life use outside the realm of any reasonable person's assurance.

Conclusion

Upon review of the MPCA's proposed rule revision, specifically the weakening or elimination of numeric criteria for conventional pollutants such as specific conductance, total dissolved solids, and sulfate, the Band can only conclude that these proposed revisions to state WQS would not meet the purposes of the CWA or be protective of the waters of the state.

The expectation or assumption that narrative Class 2 standards would protect aquatic-life and recreation if existing numeric water quality standards for industrial, agricultural and wildlife beneficial uses were removed is fundamentally flawed. These rule revisions should be rejected, and the agency should prioritize the promulgation of protective aquatic life use (Class 2) standards before reconsidering CWA-compliant changes to Class 3 and 4 standards.

Sincerely,



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